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Colorado Water Conservation Board

Water Plan Grant Application

Instructions

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

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

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

Education & 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.

This "Intent to Apply" will help CWCB prioritize Projects that are not ready for fully completed Water Plan Grant Application due to the initial timeframe and deadlines required.

Water Project Summary

Name of Applicant	Open Water Foundation
Name of Water Project	TAP-IN

CWP Grant Request Amount	$54,000
Other Funding Sources: Denver Water	$5,000
Other Funding Sources: Colorado State University	$5,000
Applicant Funding Contribution	
Total Project Cost:	$64,000

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Applicant & Grantee Information	
Name of Grantee(s)	Open Water Foundation
Mailing Address	320 E. Vine Drive, Suite 203 Fort Collins, CO 80525
FEIN	
Organization Contact	Louann DeCoursey
Position/Title	CEO
Email	Louann.decoursey@openwaterfoundation.org
Phone	970-372-8126
Grant Management Contact	Louann DeCoursey
Position/Title	CEO
Email	Louann.decouresy@openwaterfoundation.org
Phone	970-372-8126
Name of Applicant (if different than grantee)	
Mailing Address	
Position/Title	
Email	
Phone	

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Description of Grantee/Applicant
Provide a brief description of the grantee's organization (100 words or less).
TAP-IN is a collaborative initiative designed to bring innovation into the water sector to solve Colorado's water challenges. The Colorado Water Conservation Board, Denver Water, Colorado State University, Office of Economic Development and International Trade, and Open Water Foundation partnered to develop the project in the fall of 2016. With the help of many other partners statewide, TAP-IN launched in April 2017. The mission of TAP-IN is to provide the platform for Coloradans to "tap in" to the creative current that flows throughout our state to solve our greatest water challenges. TAP-IN starts with the real-world problem and calls upon our diverse innovation community to collaborate and partner to solve it. The Open Water Foundation (OWF) is the fiscal agent for TAP-IN and applying for the grant on behalf of TAP-IN. OWF was formed to focus on developing and supporting open source software for water resources in order to make better decisions. OWF has adopted a two pronged approach of solving wicked water problems by recognizing that water is an important public resource and its management/ administration benefits from commonly-available open data and tools and the innovative ways that problems can be solved. OWF understands water problem should be addressed through a transparent, collaborative, quadruple helix approach (partnership of academic institutions, nonprofits, private sector, and public sector).

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Type of Eligible Entity (check one)	
	Public (Government): Municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
	Public (Districts): Authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises.
	Private Incorporated: Mutual ditch companies, homeowners associations, corporations.
	Private Individuals, Partnerships, and Sole Proprietors: Private parties may be eligible for funding.
X	**Non-governmental organizations (NGO):** Organization that is not part of the government and is non-profit in nature.
	Covered Entity: As defined in Section 37-60-126 Colorado Revised Statutes.

Type of Water Project (check all that apply)	
	Study
	Construction
	Identified Process or Program
X	Other: Engagement & Innovation

Category of Water Project (check all that apply)		
	Supply and Demand Gap Projects - Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap. (Applicable Exhibit A Task(s) _____)	
	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. (Applicable Exhibit A Task(s) _____)	
	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) _____)	
X	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 Scope of Work)	
	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:

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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	The State of Colorado
Latitude	
Longitude	

Water Project Overview

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

The vision for TAP-IN is to be the hub for innovation in the water sector in Colorado and connect people to people and to supportive resources to solve problems, essentially to create a high-impact water innovation ecosystem. An ecosystem is a network of traditional and non-traditional people, groups, and organizations that possess the resources and expertise needed to address challenges and "mitigate barriers and limitations to innovation, entrepreneurship, and breakthrough technology deployment" (EPA, Clusters: Overcoming Barriers to Water innovation in the US). TAP-IN's goal is to help create and connect this network in Colorado.

TAP-IN's programs are designed around a three-pronged approach:

- think about and view problems in new ways
- bring disconnected communities together and facilitate creative partnerships
- mobilize people and resources to actually solve problems and produce results

TAP-IN is the first of its kind water reverse pitch innovation challenge in Colorado, and was born out of Colorado's Water Plan.

The CWCB grant funding will be used to support TAP-IN's programs in 2018. These programs include a water-focused Trout Tank Pitch Accelerator in partnership with the Denver Metro Chamber of Commerce, Denver Water, and Colorado State University; two reverse pitch events; a water investment/financing training and dialogue event; and a water innovation symposium and solutions showcase. This funding will help support marketing, communications, and outreach for each program/event, as well as data collection to measure success/impact and improve future offerings.

Measurable Results

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Measurable Results		
To catalog measurable results achieved with the CWP Grant funds, please provide any of the following values as applicable:		
NA	New Storage Created (acre-feet)	
NA	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive	
NA	Existing Storage Preserved or Enhanced (acre-feet)	
NA	Length of Stream Restored or Protected (linear feet)	
NA	Efficiency Savings (indicate acre-feet/year OR dollars/year)	
NA	Area of Restored or Preserved Habitat (acres)	
NA	Quantity of Water Shared through Alternative Transfer Mechanisms	
NA	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning	
	Other	Explain: Significantly improve the level of public awareness and engagement regarding water issues by 2020 and engage Coloradans statewide on at least five key water challenges that should be addressed by 2030 (Education, Outreach, Innovation measurable objectives, Colorado's Water Plan)

Water Project Justification
Provide a description of how this water project supports the goals of Colorado's Water Plan, the most recent Statewide Water Supply Initiative, and the applicable Roundtable Basin Implementation Plan and Education Action Plan. The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g. document, chapters, sections, or page numbers). The proposed water project shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan Framework for State of Colorado Support for a Water Project (CWP, Section 9.4, pp. 9-43 to 9-44;)
Background about TAP-IN's pilot year in 2017 Thus far in 2017, TAP-IN held one community dialogue event and one reverse pitch event. Two other reverse pitch events are planned for August and October. The community dialogue event, *Water Entrepreneurs: How They Did It & What They Learned*, was held on May 11 at Galvanize – Golden Triangle. There were over 50 attendees and three featured water entrepreneurs – Rachio, TERSUS, and Water Sage. The Denver Botanic Gardens and Galvanize sponsored the event. The first reverse pitch event, *TAP-IN: Source & Cycle*, was held on June 21 at the Denver Metro Chamber of Commerce. *Source & Cycle* called upon end users in working rainwater, stormwater, potable water, groundwater, reclaimed and reused water, wastewater, and sustainable/green infrastructure to submit a proposal to pitch at the event. Six end users were chosen and completed a "pitch coaching" session with an entrepreneurial mentor to craft and practice their pitch prior to the live pitch event. The keynote speaker and moderator was Scott Bryan from Imagine H2O, who traveled from California. The other two featured speakers were Steve Farabaugh from Isle Utilities and John Chahbandour from Hydro Venture Partners who discussed the water market and trends in water innovation. There were 130 attendees. The room was comprised of water experts, entrepreneurs, business professionals, and community supporters who engaged in a dialogue about water innovation locally, nationally,

Water Project Justification

and globally. The Denver Metro Chamber of Commerce, Denver Metro Small Business Development Center, and MillerCoors sponsored the event.

The reverse pitch event on August 24, *TAP-IN: Cultivate & Produce,* will focus on end users working in the industries of agriculture, food, beverage, and brewery. It will be held at the Innosphere in Fort Collins. One sponsor is the City of Fort Collins. The October reverse pitch is still in the planning phase, but is called *TAP-IN: Play & Protect* and will focus on outdoor recreation and watershed health. It will be held in Grand Junction.

TAP-IN & Colorado's Water Plan (CWP)

CWP was released in November 2015 and is built on these values:
• A productive economy that supports vibrant and sustainable cities, viable and productive agriculture, and a robust skiing, recreation, and tourism economy;
• Efficient and effective water infrastructure promoting smart land use; and
• A strong environment that includes healthy watersheds, rivers and streams, and wildlife. (Chapter 1, pg. 1-6)

TAP-IN is designed to support and enhance these state values as it draws Coloradans from diverse backgrounds and industries together around water issues. Its goal is to engage the communities and groups in the many sectors that intersect with water: agriculture, energy, bioscience, transportation, manufacturing, public health, outdoor recreation and tourism, business, education - all the key pillars of our thriving economy, environment, and society.

By using CWP as a guide, TAP-IN aligns water problems with solutions, talent, and industry intelligence to address the plan's measurable objectives, goals, and actions related to the supply-demand gap, conservation, land use, agriculture, storage, watershed health/environment/recreation, funding, and education/outreach/innovation. Many of the challenges described in CWP will require creative thinking and strategic partnerships, and a collaborative water innovation ecosystem will be essential to move these solutions forward. To even get to these solutions, our state needs to understand the specific, real world problems faced by end users and the obstacles and barriers that stand in the way of solutions – whether those are technological, regulatory, policy, legislative, or education related. TAP-IN provides the structure and place to do this.

This project directly aligns with the implementation of the actions identified in Chapter 9.5: Outreach, Education, and Public Engagement. The chapter calls for expanding efforts to "engage the public to promote well-informed community discourse and decision making regarding balanced water solutions" (Chapter 10; page 10-7). TAP-IN brings water professionals and new groups together to have this discourse.

TAP-IN is the initiative CWP called for under the 3rd action in Chapter 9.5: "The CWCB will work with stakeholders to identify five water challenges that Colorado's innovation community could help solve, develop an award program, and engage Coloradans in the challenge" and "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" (pg. 9-61).

As of the August 1 deadline, TAP-IN's programs drew 180 Coloradans, many of these are not the "usual suspects" in water, but those in the entrepreneurial, innovation, business, academic, and foundation community. Further, TAP-IN connected with over 1,000 Coloradans through its outreach (social media, engagement partners, newsletter, and blog). TAP-IN officially has 20 statewide partners, but there are many other organizations that contribute time, resources, and guidance to help make it successful. In addition, TAP-IN presented six challenges to the innovation community, with 12 more planned for the year through the next two reverse pitch events.

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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.

OWF followed the EPA's Cluster Creation Process to create an asset map of the water ecosystem across the state to identify assets and opportunities and understand gaps, as called for in CWP (pg. 9-61). The map focuses on innovation and categorized stakeholders and support organizations, and identified patent holders, publications, innovative technology companies and capabilities, lab facilities, researchers, and SBIR (Small Business Innovation Research) award recipients – all of which are essential to building a statewide, connected network. Coupled with the asset map is a survey conducted with 2,000 stakeholders identified in the mapping process. These two tools will help drive the strategic direction of TAP-IN to help tackle the challenges identified in each measurable objective.

There is a significant body of evidence supporting the development of collaborative water innovation ecosystems (or hubs/networks). Much of the research centers around clusters, which Michael E. Porter first defined as "geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (e.g., universities, standards agencies, trade associations) in a particular field that compete but also cooperate" (*Location, Competition, and Economic Development: Local Clusters in a Global Economy, Economic Development Quarterly, 2000).*

Additionally, a seminal piece of research came out of CSU -- *The Emergence of an Innovation Cluster in the Agricultural Value Chain along Colorado's Front Range* (G. Graff, A. Berklund, and K. Rennels, Colorado State University, November 2014). This study proposed that "a number of geographic, demographic, and economic factors are driving investment and engagement in innovation in the agricultural and food system, and the essential elements are in place along the Colorado Front Range for the emergence and growth of an innovation-led industry cluster in agriculture and food." This research identified a multitude of opportunities for collaboration/competition along the Front Range.

Much research has been done in the cluster development arena with some of the most important driving this project being:

Bingham, L.B., & O'Leary, R. (Eds.). (2008). Big ideas in collaborative public management. Armonk, NY: M.E. Sharp, Inc.

Brun, L.C., & Jolley, G.J. (2011). Increasing stakeholder participation in industry cluster identification. Economic Development Quarterly, 25(3), 211-220. doi: 10.1177/0891242411409208

Connell, J., & Kriz, A., & Thorpe, M. (2014). Industry clusters: An antidote for knowledge sharing and collaborative innovation? Journal of Knowledge Management, 18(1), 137-151. doi: 10-1108/JKM-08-2013-0312

Etzkowitz, H., & Leydesdorff, L. (1995). The Triple Helix of University-Industry-Government Relations: A Laboratory for Knowledge-Based Economic Development. European Association for the Study of Science and Technology Review 14, 14-19. Retrieved from http://ssrn.com/abstract=2480085

Fieldsteel, M.T., (2013). Building a successful technology cluster. United States Environmental Protection Agency. Retrieved from http://www2.epa.gov/sites/production/files/ documents/building_a_successful_technology_cluster.pdf

Gottschalk, R., & Kennelly, D., & Hansen, S. (2014). Water Council Leadership Vision. The Water Council. Retrieved from http://www.thewatercouncil.com/leadership-strategic-vision/

Agglomeration economies and firm performance: The case of industry clusters. Journal of Management, 36(2), 453-481. doi: 10.1177/0149206308329964

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Related Studies
Leydesdorff, L. (2012). The triple helix, quadruple helix, and an n-tuple of helices: Explanatory models for analyzing the knowledge-based economy? Journal of the Knowledge Economy, 3(1), 25-35. doi: 10.1007/s13132-011-0049-4 *Lindqvist, G., Ketels, C., Solvell, O. (2013) The Cluster Initiative Greenbook 2.0. Retrieved from http://www.cluster-research.org/greenbook.htm* *McKinsey & Company. (2001). Effective capacity building in nonprofit organizations. Retrieved from Venture Philanthropy Partners: http://www.vppartners.org/sites/default/files/reports/ full_rpt.pdf* *Porter, M.E. (1998). Clusters and the new economics of competition. Harvard Business Review, 49(6). Retrieved from: https://hbr.org/1998/11/clusters-and-the-new-economics-of-competition* *Slaper, T., & Ortuzar, G. (2015). Industry clusters and economic development. Indiana Business Review, 28(1). Retrieved from http://www.ibrc.indiana.edu/ibr/2015/spring/ article2.html* *White, S.B., & Biernat, J.F., & Duffy, K., & Kavalar, M.H., & Kort, W.E., & Naumes, J.S., & Slezak, M.R., and Stoffel, C.R. (2010). Water Markets of the United States and the World: A Strategic Analysis for the Milwaukee Water Council. Retrieved from Milwaukee Water Council: http://www.thewatercouncil.com/wp-content/uploads/2012/04/EDA-Report.pdf*

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.
Grants in which OWF was prime contractor: 719 – 9/12/2013 /PO # OE PDA 14000000036 Line Item 001 / $19,900 TSTool SWSI Phase 2 -12/24/2015 / $50,000 Front Range Land Water Buffer Project - 3/18/2015 / CONTRACT #: CTGG1 2015-3419 / $109,954 CDSS Open Source – 9/2016/ CT PDAA 2017-1401 / $300,000 StateDMI Well Enhancements-3/28/2016 / $25,000 CWCB SNODAS – 6/15/2016 / POGG1 PDA 201700000412 / $33,000 OWF has been a subcontractor on numerous CWCB projects including HB 1238 South Platte Groundwater Study, AAADAT, SPDSS- Saint Vrain, SPDSS –Software, Poudre Ag Water Sharing, Bring Value of CDSS to Universities, South Platte/Metro Non consumptive Basin Implementation Plan, BIP Support, South Platte Visualiziation Tools, SWSI 2017, and CRWAS-BNDSS Gap Analysis.

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.
None

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Submittal Checklist	
X	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract.
Exhibit A	
X	Statement of Work(1)
X	Budget & Schedule(1) *(Spreadsheet)*
X	Letters of Matching and/or Pending 3rd Party Commitments(1)
Exhibit C	
	Map(1)
X	Photos/Drawings/Reports
	Letters of Support (Support letter from Basin Roundtable encouraged)
X	Certificate of Insurance (General, Auto, & Workers' Comp.)
X	Certificate of Good Standing with Colorado Secretary of State(2)
X	W-9(2)
	Independent Contractor Form(2) (If applicant is individual, not company/organization)
Engagement & Innovation Grant Applicants ONLY	
X	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.