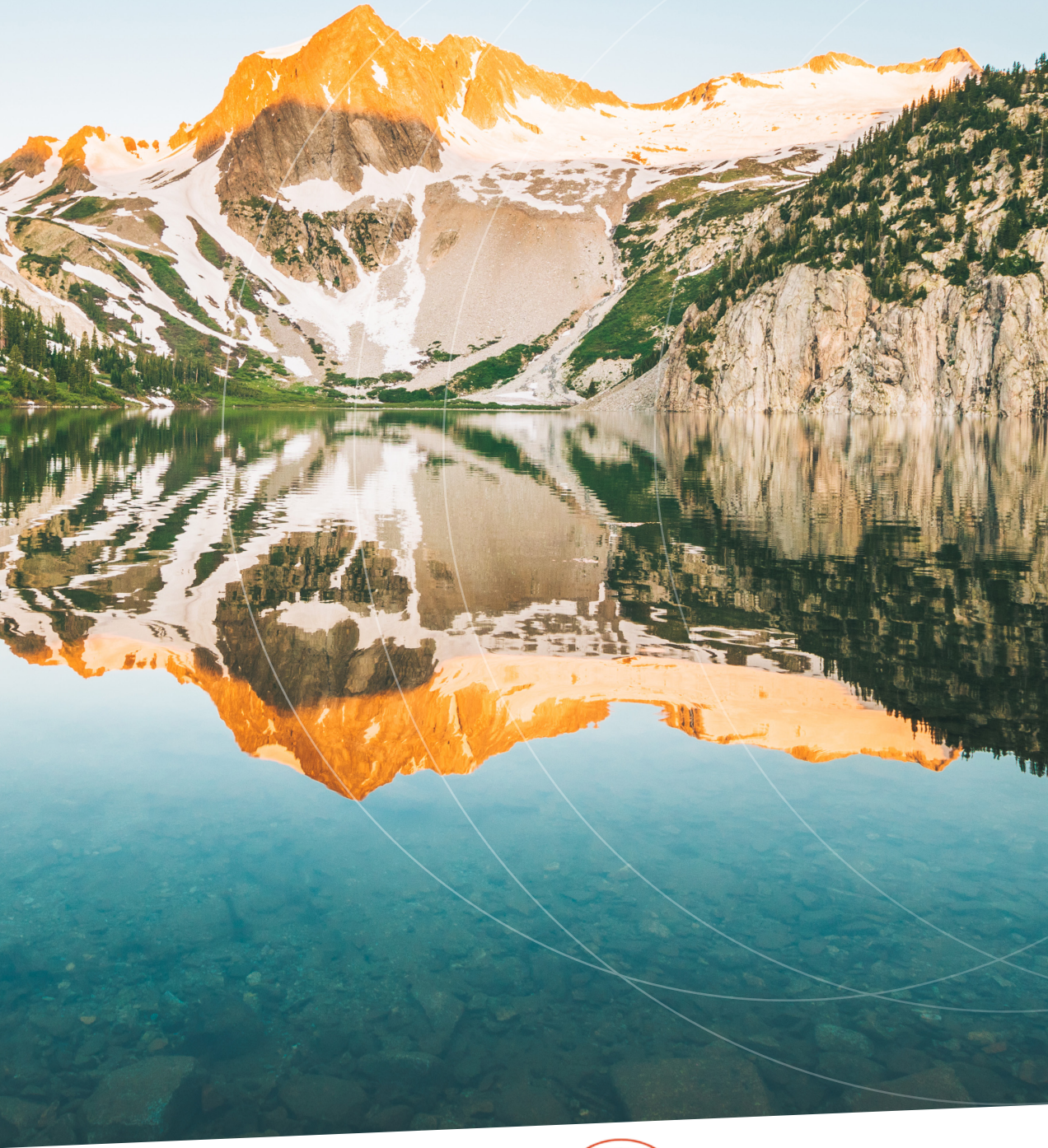
TAP-IN

Opportunities Report 2017



TAP-IN
COLORADO

What is TAP-IN?

TAP-IN is a platform to bring Coloradans together around our state's water. The mission is to provide the space for Coloradans to "tap in" to the creative current that flows through our state to solve our greatest water challenges. The goal is to build a network across communities to unleash the power of Coloradans collaborating.

In 2016, the Colorado Water Conservation Board (CWCB), Colorado Office of Economic Development and International Trade (OEDIT), Denver Water, Colorado State University, and Open Water Foundation joined forces to create and develop TAP-IN. Along with many active statewide partners, TAP-IN launched in April 2016.

TAP-IN was inspired by Colorado's Water Plan. Colorado's Water Plan calls upon Colorado's innovation and business communities, education and research institutions, and public and non-profit organizations to collaborate with the water sector to address Colorado's water challenges with "outside the box" creativity. The plan sets an objective to identify five water challenges that Colorado's innovation community could help solve by 2030, and engage Coloradans along the way.

In 2017, TAP-IN shared a total of 18 challenges with Coloradans, all of which are included in this report.

What is a reverse pitch?

In contrast to traditional pitch competitions where entrepreneurs pitch their ideas and products to potential investors and customers, a reverse pitch puts end users in front of the community to pitch their specific challenges – a "problem pitch."

TAP-IN uses the reverse pitch model to transform challenges into opportunities by:

- providing water users the forum to share their unique insight;
- creating space for new ways of thinking;
- breaking down silos and connecting disconnected communities;
- cultivating creative partnerships that leverage talent and resources;
- and catalyzing action that could lead to community-driven solutions.

How can you get involved?

Colorado water users have laid out their real-world challenges and are inviting creative minds, entrepreneurial spirits, and passionate problem-solvers to tackle them.

We invite you to be part of the equation. There is tremendous potential to innovate in the water sector. It's time to **TAP-IN** to it.

> "Traditional water meetings and conferences that happen regularly across the state need to learn more from the TAP-IN approach."
>
> - Sarah Johnson, Wild Rose Education

TAP-IN: Source & Cycle

The first reverse pitch event, TAP-IN: Source & Cycle, was held on June 21, 2017 at the Denver Metro Chamber of Commerce. The event focused on urban water challenges and gathered 130 attendees. Keynote speaker and panel moderator was Scott Bryan, president of Imagine H2O - a California based organization fostering water innovation globally.

Pitch-er Organization	Problem Pitch
City of Boulder	The American Society of Civil Engineers rated U.S. water infrastructure a D+ this year. As water infrastructure ages, there will be more water leaks. It's important that we use the water we have as efficiently as possible, including fixing these leaks. We challenge the innovation community to develop innovative tools to help utilities identify and fix leaks, both on the consumer and provider side, in a more efficient and cost-effective way than we have before.
Denver Botanic Gardens	There are global issues related to shrinking land and water resources, but we still need to produce food to support a growing population. Urban food production is a growing global market. A residential/light commercial atmospheric water harvester for drip irrigation in small-scale urban agriculture applications could address these challenges and seize new opportunities.
WateReuse Colorado	Potable reuse is an innovative solution to water supply issues. It typically uses reverse osmosis, which generates brine that is high in salts and difficult to dispose of. Converting these problematic salts into a beneficial product could help alleviate one significant constraint to reuse and make it a more sustainable and cost-competitive option.
Denver Water	It is a challenge for water utilities to meet peak-day water demands with the current infrastructure. A solution that lets utilities turn off irrigation systems remotely, on a volunteer basis, would help utilities avoid major capital investments in infrastructure for redundancy and reliability. Both the utility and its customers could save considerable amounts of money if peak demands are lowered when water demands approach system capacity.
National Renewable Energy Lab	Across the world in arid regions, massive quantities of water evaporate from man-made reservoirs, reducing valuable drinking and agricultural water supplies. Recent technology advances have led to floating solar PV systems that can be placed on reservoirs to provide clean electricity, while also reducing evaporation and algae growth. We challenge the entrepreneurial community to work with water utilities and reservoir managers to find ways to scale up the deployment of this innovative technology to rapidly provide renewable energy and greater water security.
The Water Connection / Greenway Foundation	Trash in urban waterways is a complex, expensive, pervasive and visible problem, not just in Denver, but in cities around the world. We are challenging the entrepreneurial community to develop a cost-effective, awareness-raising, attractive, and highly functional solution to this problem, either through an in-stream trash removal device, or a solution "upstream" in the problem chain to keep trash from ever entering waterways.

> "Because of TAP-IN, we, The Water Connection, "connected" with an entrepreneur, and are crafting a proposal for a pilot of a stormwater-inlet trash removal device. We plan to pursue support for the pilot from the City and County of Denver and other stakeholders."
>
> - Devon Buckles, The Water Connection

TAP-IN: Cultivate & Produce

TAP-IN: Cultivate & Produce focused on the agriculture, food, beverage, and brewing industries. The event was held on August 24, 2017 at Innosphere in Fort Collins with 100 attendees. Nate Allen, executive director of WaterStart, gave the keynote address. WaterStart is based in Las Vegas, NV and is a cluster of global leaders in the implementation of water innovation.

Pitch-er Organization	Problem Pitch
Wood's High Mountain Distillery	The distilling industry uses a large amount of water for cleaning processes and also produces a large amount of dirty waste water. A solution that balances and minimizes the cleaning process water and the dirty waste water would save the industry money and would minimize the environmental footprint.
Colorado Ag Leadership Program	There is not enough water to meet current agricultural demands and there is little incentive for senior water rights holders to work to expand water availability. Through water banking, like alluvial groundwater recharge, there could be incentives for all water users to maximize the utility of their existing infrastructure.
Forest Coffee Trading Co.	Forest Coffee Trading currently produces around 300 gallons of cold-brew coffee per week, while using up to 350 gallons of additional water for cleaning and sanitizing after production. Other beverage industries have similar challenges. We are looking for solutions that reduce the cleaning water usage while continuing to maintain high food-safety standards.
Horse & Dragon Brewing	The vast majority of the 5,000+ breweries throughout the U.S. do not have an accurate way to measure the water used in each stage of the brewing process and, therefore, have trouble determining the inefficiencies and opportunities for improvement and conservation. We challenge the innovation community to develop inexpensive, accurate, and portable external flow meters that analyze water use during each step of the brewing process — with the goal of diagnosing intervention points for conservation.
Western Water Partnerships	"Buy-and-dry" is the process of reallocating water from agricultural purposes to meet municipal and industrial water demands - a practice that can have significant negative impacts on the agricultural economy, rural communities, and the natural environment. Western Water Partnerships is looking for partners in water sharing agreements between farmers/ranchers and cities to provide water to cities when they need it most, while keeping water on the land to sustain agriculture.
The Nature Conservancy	Organic farming provides material economic benefit to agricultural producers, which creates the possibility of growing less-water intensive crops without losing economic value. Converting such less-water intensive crops can support stream flows for native species, riparian habitat, and recreation. A barrier for farmers converting to organic is understanding how to access buyers for crops. A tool that can easily connect buyers and producers of organic crops would speed the rate of organic adoption and support water conservation.

> "I thought TAP-IN was brilliant and want to steal the format for our community."
>
> - Jana Knapp Sanchez, LaunchNoCO

TAP-IN: Play & Protect

The final reverse pitch event of 2017, TAP-IN: Play & Protect, was held at FACTORY in Grand Junction on October 4, 2017 with 65 attendees. The event focused on the outdoor recreation industries and watershed health. A panel of subject matter experts kicked off the event and discussed the challenges and opportunities Colorado faces at the nexus of watershed health and outdoor recreation.

Pitch-er Organization	Problem Pitch
JW Associates	There is a major discrepancy between the ability of municipal water providers to understand and identify hazards in their water supply watersheds and their ability to plan and implement projects to reduce those hazards. Smaller water providers, especially in western Colorado, lack the human or financial resources. Finding ways to support these small water providers would have tremendous positive impacts for watershed protection.
Many Rivers Brewing	Colorado companies who have a corporate ethic can support healthy rivers, gain positive public attention, and potentially increase sales by changing their business model to a Public Benefit Corporation. Helping companies that rely on Colorado's rivers (breweries, outdoor gear, etc.) shift to a Public Benefit Corporation is one solution to our water challenges.
Grand Valley Paddling Club	Historically, the Grand Valley has mistreated its waterways - dumping trash and hazardous waste along the river banks. This behavior has negative impacts on the rivers and community. We are looking to find innovative ways to activate the waterways to enhance the environment and economy.
Colorado Water Trust	Colorado faces complex water challenges; yet, the language used to describe those challenges is nearly impenetrable for the average resident. Entities that work to protect and preserve our water, like the Colorado Water Trust, need to find ways to communicate our collective challenges and our successes in a way all citizens can understand.
Ouray Ice Park	The Ouray Ice Park is the world's largest man-made ice climbing venue and an important staple in the City of Ouray's economy. The amount of water that the Ouray Ice Park relies on to make ice has been drastically reduced by over 50% over the last five years. Coming up with solutions to this problem of decreased water allotment and helping the Ouray Ice Park find a way to get the water it needs is paramount to the future of the Ouray Ice Park and the winter economy of Ouray.
Colorado Parks and Wildlife (CPW)	Over the last few years, filamentous algae growth in the White River above Meeker has generated concern from ditch owners, fishery advocates, and municipal water interests in the basin. Through a series of community meetings, some clarity about the scope and magnitude of the problem has emerged. Solving this complex challenge will involve long-term, cultural, political, and economic adaptation.

> "Since TAP-IN: Play and Protect, we have been able to collaborate with regional groups with an interest in figuring out solutions to the Ouray Ice Park's water problems."
>
> - Dan Chehayl, Ouray Ice Park

The Impact

Pitch-er Experience - Denver Botanic Gardens

"Having recently announced our joint venture with Metropolitan State University to co-manage the One World One Water Center, the TAP-IN event was the perfect opportunity for us to introduce ourselves as a "player" in the water space to water influencers from across the state. While we have a history of working to showcase and promote water-wise landscape and agriculture, our commitment has extended to creating meaningful partnerships with a variety of entities to amplify our water stewardship initiatives. The TAP-IN event gathered many potential partners in one place and offered the perfect setting for us to float an idea we've had for a while now: to incorporate atmospheric water harvesting into urban agriculture applications.

Our pitch to the TAP-IN entrepreneurs led to three conversations, two of which have developed into partnerships. One of the fellow pitchers – Jordan Macknick from NREL – followed up to introduce us to Zero Mass Water, a company that has an atmospheric water harvesting device. We are currently fleshing out details of a partnership with them to demonstrate their technology at the Gardens and to incorporate it into urban agriculture "gardens-in-a-box" that we are designing in conjunction with CU Boulder's Environmental Design department. A second entrepreneur – Gabe Stalcup – reached out to us to discuss displaying his atmospheric water harvesting prototype at the Gardens' Chatfield Farms location.

None of this would have happened without TAP-IN! Thanks so much for making these connections possible."

- Jennifer Riley-Chetwynd, Denver Botanic Gardens
TAP-IN: Source & Cycle Problem Pitch-er

Pitcher Experience - Ouray Ice Park

"We are working with the Grand Junction Economic Partnership to develop an economic analysis, a suggestion we received following the problem pitch to help us really define the importance of the Ouray Ice Park to the local economy. We have also been working with a water engineering firm out of Montrose (RB Innovations Inc.) to increase efficiency in our systems, look into using an old water reservoir near the Park, and develop computer aided design software to model the Ouray Ice Park's plumbing system. A company out of Grand Junction (Summit Sealants) supplied a few pallets of mortar and worked with us to seal the old walls and help prevent any major leaks from happening. We will be filling the reservoir with water, nearly a million gallons, in the next week! All of this has been pro-bono and stemmed from TAP-IN!"

- Dan Chehayl, Ouray Ice Park
TAP-IN: Play & Protect Problem Pitch-er

The Partners

TAP-IN is a truly collaborative project developed and supported by many partners statewide. These partners understand the importance of water to our state and are stepping up to do their part to ensure we protect all the things we love about living, working, and playing in Colorado.

Lead Partners

Sponsors

Engagement Partners

10.10.10
BROWNHOUSE Public Relations for Western Colorado
City of Boulder
City of Fruita
Clear Comfort
Colorado Ag Leadership Program
Colorado Cleantech Industry Association
Colorado Foundation for Water Education
Colorado Outdoor Recreation Office
Colorado Parks and Wildlife
Colorado Water Trust
Conservation Colorado
East Colorado Small Business Development Center
Forest Coffee Trading Co.
Go Code Colorado
Grand Junction Economic Partnership
Grand Junction Small Business Development Center
Hutchins Water Center at Colorado Mesa University
Hydro Venture Partners
Isle Inc.
JW Associates
Lucas Innovation
National Renewable Energy Laboratory
Ouray Ice Park
Outdoor Recreation Coalition of the Grand Valley
Tamarisk Coalition
The Business Incubator Center
The Nature Conservancy
The Water Connection/The Greenway Foundation
Ute Water Conservancy District
WateReuse Colorado
Western Water Partnerships
Wood's High Mountain Distillery

2017 By The Numbers

#

1 Community Dialogue Event

3 Reverse Pitch Events

3 Locations (Denver, Fort Collins & Grand Junction)

50 + Sponsors, Partners, and Pitch-ers

350 + Attendees Across TAP-IN Events

> "If I had an hour to solve a problem I'd spend 55 minutes thinking about the problem and 5 minutes thinking about solutions."
>
> **- Albert Einstein**

Engage

Twitter: @TAPINcolorado
Website & email list: www.tapinco.org