



The CEO Water Mandate



Working Together to Address Acute Water Challenges: Water-Related Collective Action in California and the Colorado River Basin – Meeting Summary

Table of Contents

Working Together to Address Acute Water Challenges: Water-Related Collective Action in California and the Colorado River Basin – Meeting Summary 1

 Background 2

 Key Learnings and Outcomes..... 2

 Session 1: Opening Session: Setting the Scene – Shared Water Challenges Facing the Region: Making the Business Case for Collective Action 2

 Session 2: Innovations to Improve Water Security: Partnerships in the Urban Context..... 4

 Session 3: Corporate Water Stewardship in the Supply Chain: Partnering to Improve Agricultural Practices..... 5

 Session 4: Collaborative Multi-Stakeholder Platforms to Improve Coordination and Water Resource Management..... 6

 Session 5: Technology Solutions and Data Analytics and Visualization..... 6

 Afternoon Session: Taking Action to Tackle Priority Challenges 7

 Session 6: Re-convene as a Whole – Share Breakout Outcomes and Discussion of Next Steps 7

 Sustainable Agriculture Initiatives 7

 Cooperation Between Utilities and Industrial Users..... 8

 Technology Solutions and Analytical Tools..... 9

 Host Organization Concluding Remarks and Adjournment 9



Background

In July 2007, the UN Secretary-General in partnership with international business leaders and under the auspices of the UN Global Compact launched the CEO Water Mandate – an initiative established to better understand and advance water stewardship in the private sector. The Mandate is built upon six core corporate water management elements: Direct Operations, Supply Chain and Watershed Management, Collective Action, Public Policy, Community Engagement, and Transparency.

On May 28th, in Los Angeles, the CEO Water Mandate co-hosted a workshop with Deloitte entitled “Working Together to Address Acute Water Challenges: Water-Related Collective Action in California and the Colorado River Basin”. The multi-stakeholder event was attended by a range of interests from the region, including representatives from municipal water districts, private industry, and local and national NGOs. The action-oriented event offered participants the opportunity to explore cross-sectoral collaboration opportunities that address shared water challenges. The event was co-sponsored by AT&T, Deloitte, MillerCoors, and Veolia Environment North America.

Key Learnings and Outcomes

Some key conclusions from the day’s discussions included the widely held view that collective action water stewardship initiatives could help address both immediate drought-related water challenges, and also longer-term issues like climate change, groundwater depletion, and internalizing the costs of water risk. The [Water Action Hub](#) was identified by numerous participants as a potentially powerful tool for mobilizing collective action by enabling participants to share good practice, upscale solutions, and connect across sectors and regions. The workshop produced actionable ideas for collaboration around three primary themes: sustainable agriculture initiatives, cooperation between utilities and industrial water users, and technology solutions and analytical tools.

Session 1: Opening Session: Setting the Scene – Shared Water Challenges Facing the Region: Making the Business Case for Collective Action

Jason Morrison (Technical Director, CEO Water Mandate) opened the meeting with contextual information about the Mandate’s Water Action Hub and the initiative’s related work on water stewardship collective action. He described the purpose and goals of the convening, reviewed the day’s agenda.

In his opening remarks, **Will Sarni (Director and Practice Leader, Enterprise Water Strategy, Deloitte)** spoke of the current and future risks to companies due to water scarcity. These risks will affect both direct operations and supply chains, particularly in the agriculture industry, and are presently posing a threat to businesses in terms of physical, reputational, and regulatory risks. Mr. Sarni made the case



The CEO Water Mandate



that is closely tied to business growth, and managing water risk successfully requires mobilizing the entire value chain and skilled stakeholder engagement. The Water Action Hub is a valuable tool for doing both.

Deloitte will be publishing a report on water security and business risk this summer, which will include a maturity model for addressing water risk. The report will be published in July.

Edwin Pinero (SVP Sustainability and Public Affairs, Veolia Environment North America) gave remarks on Veolia's experience engaging in collective action on water issues. He stressed the importance of making the business case for engaging on water issues, and discussed Veolia's ongoing work with the World Business Council for Sustainable Development to value water in ecosystem services in order to make the case for engaging on water in financial terms. Mr. Pinero also discussed the importance of recognizing externalities and working beyond company fence lines to address water risks. Because of the local nature of water issues, a global "one size fits all" approach to water stewardship is not sufficient. Veolia engages in collective action (and the work of the Alliance for Water Stewardship specifically) because it leads to "standardized flexibility"; it is an approach that facilitates problem solving and communication without rigidity.

Heather Cooley (Director, Water and Sustainability Program) and Michael Cohen (Senior Research Associate) of the Pacific Institute presented on the water risks and opportunities present in California and the Colorado River Basin. Drought is a natural feature of both California and the Colorado River Basin, but it is exacerbated by climate change. California is currently experiencing severe drought conditions in one hundred percent of the state, with the most extreme conditions in agricultural regions. Declining levels of snowpack, the state's largest "reservoir", also contribute to water stress in the state. California has historically responded to water challenges with a "hard-path" approach of building large infrastructure, but a new approach is needed. We need to rethink demand by reducing waste and increasing efficiency. We need to rethink supply by finding new ways of capturing and treating water. And we need to rethink water management by improving existing institutions, collecting better data, and integrating water and land management.

Over 36 million people are served by water from the Colorado River basin, though more than half of them live outside the Basin. Seventy percent of Colorado River water goes to supply agriculture. The Law of the River, the name given to the collection of laws and treaties and regulations managing river use, is dynamic and changing. There have been significant developments in the last ten years, with an increase in inter-state and international cooperation and stakeholder engagement beyond federal agencies. The Law of the River insulates Southern California agricultural regions from near-term water shortages, as they have senior water rights. Like California, the Colorado River Basin also faces severe drought and declining reservoirs. The period from 2000-2013 is the driest in the historical record, and in the driest 1% of the tree ring record. This has not yet led to shortages in the lower basin because of high reservoir storage at the start of the drought and due to a variety of new changes in water management. However, a structural supply/demand imbalance will likely cause downstream users to experience water shortages in the near future. A portfolio of solutions exists to address water stress in the Colorado River Basin,



The CEO Water Mandate



including water conservation in urban and agricultural settings, desalination of brackish water, and water reuse. There is increasing pressure to implement these solutions more quickly.

Session 2: Innovations to Improve Water Security: Partnerships in the Urban Context

Session 2 focused on innovative collective action efforts underway and on sharing good practices and lessons learnt that may be applicable across multiple regions/locales.

Tim Fleming (Director, Sustainability Operations, AT&T) and Brendan FitzSimmons (Project Manager, Corporate Partnerships Program, Environmental Defense Fund) presented on their experience initiating a water management program at AT&T and the Water Efficiency Toolkit they developed together. AT&T focused on its large real-estate holdings, where cooling towers and large buildings in less than 2% of the company's portfolio made up 50% of the water use. Many of these facilities are located in water stressed regions. The company was at high risk from potential water shortage because of the significant cooling demands of these facilities. EDF proposed a variety of operational and technical solutions. Upgrades in cooling tower filtration systems reduced water use by 30%, reduced discharges by 70% and reached a positive return on investment within two years. EDF also helped to construct the business case for making the upgrades elsewhere in the company. Pilot programs achieved water reductions ranging from 14-40%. This program is potentially scalable to other companies, and could save 28 billion gallons per year in the United States in the commercial and institutional sector, with more savings possible in the industrial sector.

EDF developed free tools to jumpstart water management programs at other companies, available online [here](#). The Water Management Application (WaterMAPP) is an Excel-based water scorecard and water efficiency calculator that draws upon lessons learnt at AT&T to help companies build the business case for sustainable water management. EDF and AT&T plan to reach out to potential users (particularly utilities who can in turn reach out to institutional and commercial customers in their jurisdictions) in five water stressed regions, including Dallas, Houston, Denver, Phoenix and Los Angeles to promote adoption of the toolkit.

Melissa Baum-Haley (Water Use Efficiency Programs Specialist at the Municipal Water District of Orange County) presented MWDOC's program targeting water efficiency improvements at water intensive industrial operations. MWDOC has learned that the window of return on investment for efficiency improvements needs to be a matter of months because of the time required to complete the process. Ms. Baum-Haley recommended improving industrial processes through technology improvements to achieve large water savings.

Dr. Emma Stewart (Head of Sustainability Solutions at Autodesk) presented on her experience integrating sustainability into her company's suite of products and tools. Autodesk software collects geographic data, and allows users to sketch green infrastructure projects with engineering level detail, in the context of real data. Their latest urban planning software also shows users how building would perform against EPA stormwater requirements, and helps build the business case for sustainable water management with automated triple bottom line analysis.



The CEO Water Mandate



Session 3: Corporate Water Stewardship in the Supply Chain: Partnering to Improve Agricultural Practices

In her presentation, **Kim Marotta (Director of Sustainability, MillerCoors)** emphasized the materiality of water for MillerCoors. Water is the main ingredient in all of the company's products, touches every part of the brewing process, and irrigates crops. Put simply, "no water, no beer". MillerCoors takes the position that companies should play a critical role in mitigating the global water crisis, and that collaboration with communities and governments is necessary in order to ignite change. MillerCoors' strategy for engaging on water issues is in line with the UN Global Compact CEO Water Mandate (which the company is a member of), and includes watershed assessment, water footprinting, efficiency, wastewater management, and investing in communities. MillerCoors has implemented projects to mitigate water risks in the water stressed areas where it sources and operates. MillerCoors' Irwindale facility has reduced water use by almost 30% in the last five years. In the Trinity watershed in Texas, MillerCoors has engaged with over 100 ranchers, companies and non-profits to plant native vegetation, which holds water in the ground when it rains and allows ranchers to fair better during times of drought. A small pilot project in Idaho has retrofit irrigation systems to comply with best practices. This program has led to huge savings in water and energy, and produced better yields on participating farms. MillerCoors is now working with 150 growers in its agricultural supply chain.

Kari Vigerstol (Senior Hydrologist, Global Freshwater Team, The Nature Conservancy) and Ellen Silva (Applied Sustainability, Senior Manager, General Mills) co-presented on their work together in Mexico and Idaho. Because 99% of General Mills' water use is upstream of its processing facilities, the company looks for partners to help assess water risks for key commodities. General Mills asked TNC to assess its growing regions and facilities, and overlaid this information with data on company materiality, material and reputational risk to come up with eight priority watersheds, several of which are in California. The company is now conducting deeper analysis of its priority regions.

In the El Bajio region of Mexico, a key sourcing region for General Mills, growth of the agricultural sector has led to aquifer depletion, posing a critical physical risk for companies. General Mills has found partnership to be key to addressing these challenges. General Mills has taken a three pronged approach to collective water management in this region, addressing economic, governance, and technological challenges. TNC and General Mills have shared this experience and analysis with other companies dependent on resources in this area to share lessons, and are looking to pursue a water fund in this area.

Dan Sonke (Manager of Sustainable Agriculture, Campbell Soup Company) shared his company's experience in working with tomato growers in the central valley of California. Campbell's stakeholders reported that water was the most critical sustainability issue to them, as water is used both for irrigation and manufacturing Campbell's products. Pilot studies showed that converting tomato fields to drip irrigation yielded a 30% water savings. Campbell facilitated data sharing and collection amongst its growers. The use of evapotranspiration and weather data helped growers to save water whether they used drip irrigation or not. This is crucial, as tomatoes are often grown on rented land, and landowners



The CEO Water Mandate



may not want to install drip irrigation because it can limit their options to plant perennial crops like almonds in the future. Campbell is also pursuing water conservation in its manufacturing facilities. The company has reached a deal with the EPA to allow it to avoid costly regulations by investing in watershed level nitrate projects instead.

Session 4: Collaborative Multi-Stakeholder Platforms to Improve Coordination and Water Resource Management

Cindy Dyballa (Steering Committee Coordinator, Water Efficiency Action Network Colorado Basin States) kicked off this session by introducing the Water Efficiency Action Network (WEAN), a nascent initiative composed of diverse stakeholders who share a goal of collaboratively advancing the understanding, application, and effectiveness of water use efficiency in Colorado River Basin states. WEAN is made up of three working groups: 1) a group to promote dialogue among researchers, 2) a group to develop models for long term revenue stability while investing in efficiency, and 3) a group dedicated to water efficiency as a method for adaptation to climate change. WEAN is nearing the end of its two year pilot to test the validity of the framework, and hopes to expand in the future.

Lisa Wojnarowski Downes (Director, Freshwater Stewardship, North America, The Nature Conservancy), represented the Alliance for Water Stewardship (AWS), a multi-stakeholder organization dedicated to enhancing water stewardship capacity, and guiding, incentivizing and differentiating responsible water use. The AWS has recently launched a standard system that defines a set of water stewardship criteria and indicators for how water should be stewarded at a site and catchment level in a way that is environmentally, socially, and economically beneficial. The international standard provides water stewards with a six-step continual improvement framework that enables sites to commit to, understand, plan, implement, evaluate and communicate water stewardship actions. The AWS standard is now being field-tested in the Great Lakes region of the United States, Peru, Brazil, South Africa, India, and China.

Session 5: Technology Solutions and Data Analytics and Visualization

Scott Bryan (Chief Operating Officer, Imagine H2O) presented Imagine H2O's mission to harness the innovation economy to address natural resource problems. Imagine H2O is a non-profit supported by foundations dedicated to changing how we think about water, and promote market-based solutions and collaboration. Each year, Imagine H2O selects for its accelerator program a group of 10-12 water entrepreneurs, assisting them in attracting capital and gaining exposure through partnerships. One such partnership connects entrepreneurs with sustainable agriculture partners like Olam. Another pairs entrepreneurs with utilities. Mr. Bryan stated that the water stewardship space needs to move beyond pilot projects dependent on philanthropy to viable market-based solutions.

Tom Higley is the Founder and Chair of 10.10.10, an organization that challenges startup CEOs to design their next venture as a profitable solution that addresses one of ten "wicked problems", of which water is going to be one. By inviting experienced entrepreneurs to be a part of 10.10.10, Mr. Higley hopes to



engage them on the issue of water and give them the opportunity to connect with thought leaders and each other to explore solutions that could turn into companies. Mr. Higley stressed the importance of data and analytics to exposing problems and finding innovative ways to address them. He focuses on solutions that can be shared across many players, and reduce inefficiencies. Collaboration, he said, can only happen when we have the necessary data, a way to communicate, and a plan to share costs.

Peter Yolles (Chief Executive Officer and Founder, WaterSmart Software), presented on using behavioral science to motivate behavior change around water practices. WaterSmart Software helps utilities educate their consumers about their water use and motivate them to reduce their consumption by comparing their use to that of their peers and creating personalized action plans for each household. The company currently operates with twenty municipal utilities. The program has prompted households to reduce water use an average of 5% per year, and has tripled participation in other residential or business programs provided by the utilities.

Afternoon Session: Taking Action to Tackle Priority Challenges

In the afternoon sessions, participants shifted into smaller group discussions to explore individuals' particular interests in future collective action. Some of the questions explored by each group were:

- a. What are existing areas of alignment among actors and/or initiatives?
- b. What are some possible short or immediate-term collective action initiatives? Longer term goals?
- c. What obstacles may there be to multi-stakeholder water stewardship collective actions and how can these be overcome?

Session 6: Re-convene as a Whole – Share Breakout Outcomes and Discussion of Next Steps

Sustainable Agriculture Initiatives

Areas of shared concern and possible alignment on action for this group include:

- Drawing lessons from a wide variety of crops, beyond what each company directly sources
- A common set of tools and language for engaging growers that is applicable to a wide variety of crops
- Creating a regulatory environment that allows for innovation
- Focusing on shared value creation through market-based solutions
- Targeting issues such as:
 - Groundwater overdraft
 - Soil health, nutrient management, and nitrates.
 - Water supply security
 - Source-water protection
 - Climate change adaptation



Possible short or immediate-term collective action initiatives and long-term goals identified by the group include:

- Shifting the conversation from commodities to growers and empowering them with tools to reduce water use
- Using the California Water Bond to leverage and scale water stewardship collective action
- Creating and aligning incentives for stakeholders
- Increasing the diversity of voices at water meetings, and demonstrating that the private sector is a willing partner in collective action initiatives
- Develop a collective vision of the farm of the future

Obstacles identified by the group include:

- Sharing information on suppliers, supply chain transparency
- Aligning on metrics and common terminology
- Making the business case for collective action, while taking into account benefits that can arise
- Linking global and regional initiatives with local efforts
- Overcoming inertia to lead to meaningful action
- Leveraging and scaling funds and innovation

Cooperation between Utilities and Industrial Users

Areas of shared concern and possible alignment on action for this group include:

- Reliability of water supply and quality
- Matching water quality with desired uses
- Environmental responsibility
- Integration of water, land, energy management
- Meeting regulatory requirements

Possible short or immediate-term collective action initiatives and long-term goals identified by the group include:

- Education around the value of water using company brands
- Improving relationships between companies and local water utilities.

Obstacles identified by the group include:

- Data sharing is challenging from both the utility and company perspectives
- Little communication between companies and utilities



- Low price of water
- Corporate water-related mandates may not be communicated to and/or gain resonance at the facility level
- Finding ways to scale up solutions

Technology Solutions and Analytical Tools

Areas of alignment for this group include:

- Engaging insurance companies
- Finding ways for businesses to monetize water stewardship
- Finding ways to fund the adoption of new water technologies
- Necessity of addressing shared water challenges
- Using water technology to spur regulatory change
- Automating data collection

Possible short or immediate-term collective action initiatives and long-term goals identified by the group include:

- Developing new business models
- Using the CEO Water Mandate and the Water Action Hub to help align interested parties and to spur policy change
- Coalescing around a big threat like internal shadow pricing and pricing internally to drive change

Obstacles identified by the group include:

- The lack of water data across the value chain. Hard to have business or tech create solutions
- How to affect residential water use?
- Regulatory barriers
- Water rights, particularly the insecurity of groundwater rights
- Pricing and the need to internalize costs, build risk into business related to costs and pricing
- The need for more distributed solutions

Host Organization Concluding Remarks and Adjournment

As Jason Morrison brought the day's proceedings to a close, he committed the CEO Water Mandate to conducting a diagnostic of what aspects of the day's conversations could be facilitated by the Water Action Hub, and to conducting research to see what related initiatives may already be underway. Will Sarni thanked the participants for attending, and attributed the event's success to its diverse group of participants.