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Water Wise: Meeting Colorado's Water Challenges

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Water Wise: Meeting Colorado's Water Challenges

However, he also stressed that Colorado lacked any kind of emergency flood plan and argued Colorado needed to address and plan for future floods.

Overall, the panel extensively addressed the concerns of the September flooding, the effects of the flooding, and what Colorado could do better in the future.

Devon Bell

ENVIRONMENTAL ENTREPRENEURS (E2) ECOSALON

Denver, CO October 29, 2013

WATER WISE: MEETING COLORADO'S WATER CHALLENGES

Environmental Entrepreneurs ("E2") is an independent non-partisan organization uniting business and environmental leaders to shape state and national policy. E2 is an affiliate of the Natural Resource Defense Council ("NRDC"). Donations supporting E2 go through the NRDC and the two organizations share staff. Due to the close affiliation between the two non-profits, the NRDC and E2 both value environmental advocacy and sustainability. However, E2's mission expressly seeks engagement of business leaders to achieve the shared goals of the affiliated organizations. E2's mission is "[t]o create a platform for independent business leaders to promote environmentally sustainable economic growth."

On October 29, 2013, at Deloitte Consulting's office in downtown Denver, E2 hosted a panel to discuss the topic "Water Wise: Meeting Colorado's Water Challenges." Panelists included Will Sarni, Director of Enterprise Water Strategy at Deloitte; Jerry Tinianow, Chief Sustainability Officer of the City of Denver; Greg Fisher, Chief Planner for the Denver Board of Water Commissioners ("Denver Water"); and James Eklund, Director of the Colorado Water Conservation Board ("CWCB"). In light of E2's recently released report titled "Colorado Water Supply and Climate Change: A Business Perspective," each speaker addressed questions relating to water conservation and efficiency in Colorado.

Will Sarni discussed three categories of value that he contemplates when consulting with a wide variety of companies to strategize their water management. Sarni asserts that the three risk categories for business value are physical risks, regulatory risks, and reputational risks. Physical risks, for instance, could be the temporary unavailability of water. Regulatory risks range from the reallocation of water away from business production to meet more urgent needs during times of drought to the suspension or withdrawal of the supplier's license or permit. Reputational risks refer to the potential for negative exposure or public outcry against a business for its water-use practices. Among other things, when Sarni consults with businesses about the location of manufacturing plants he asks whether the business will have access to water in twenty years at that location and from where the water to support growth projections will come. Will Sarni's role at Deloitte Consulting led him to encourage business leaders to incorporate water stewardship into their corporate risk management plans.

Denver's Chief Sustainability Officer, Jerry Tinianow, discussed the city government's sustainability agenda. Denver's plan encompasses twelve areas: air quality, climate change, energy, food, health, housing, land use, materials, mobility, workforce, water quantity, and water quality. For each of the twelve resources, Tinianow has specific goals for the government with a separate, but complementary, set of community goals. Tinianow expressed the city government's water quantity goal to reduce use of potable water for irrigation of parks and golf courses by 22 percent to an eighteen gallon per square foot average, and to reduce use of potable water in city buildings by 15 percent over a 2011 baseline. Tinianow stressed that half of the water used in Denver currently goes toward watering golf courses and parks, though he seemed optimistic about meeting Denver's conservation goals by 2020.

Greg Fisher, the Chief Planner for Denver Water, outlined how the Board supplies the Denver area with sufficient clean water and how it plans to do so in the future. As Fisher explained, Denver Water serves 25 percent of Colorado's population while only using 2 percent of the state's water. Fisher claimed there are still conservation opportunities, but acknowledged Denver Water's successes thus far. Fisher asserted that Denver Water serves 30 to 40 percent more people than it did in 1980, yet it uses the same amount of water as it did in 1980. One contributing factor for this conservation success was the dramatic reduction in household use that occurred when Denver Water installed meters on all homes in 1990.

In terms of future conservation, Denver Water's current goals involve a push for innovation of WaterSense-labeled indoor fixtures and higher water efficiency levels for households. Since multifamily homes use half as much water per household on average as single-family homes, Fisher encouraged thoughtful land use planning as a tool to achieve higher efficiency. Denver Water will continue employing their four-tiered rate scale in the future, which incentivizes conservation. The affordable first tier rate (\$2.59 per 11,000 gallons per month) accounts for most households' entire water use. But the cost of water increases sharply above that tier because using more than 11,000 gallons per month indicates outdoor watering. Fisher argued that this tiered scale is a practical and equitable solution because it allows everyone to have cheap access to the amount of water they need to live and it discourages uses Denver Water views as inefficient, such as watering grass. Under Greg Fisher's guidance, Denver Water seems poised and ready for Colorado's water future in the short term. That said, Fisher predicted that the solutions might need to be more extreme if the state's population doubles from five million people to ten million by 2050, as many people expect.

Finally, James Eklund, Director of the CWCB, discussed the context of Colorado's water situation and the creation of a comprehensive water plan. He asserted that in certain settings—education, healthcare, and transportation, for example—we fear the unknown, but with water issues we fear the known because there are so many studies and statistics displaying a tense, dry future for the American West. Eklund encouraged the audience to trust the state demographers' accuracy in their projections of an additional two million people in Colorado by 2030. Eklund stressed how critical it is for Colorado's interstate situation that the state has its intrastate house in order due to Colorado's

status as a headwater state with many binding compacts. Arizona, Colorado, and Washington are the only states in the West without comprehensive water plans. Through an executive order in May 2013 Governor John Hickenlooper directed the CWCB to commence work on the Colorado Water Plan, which Eklund is currently working on.

The CWCB's comprehensive water plan will be a dynamic document amended every two to five years. Eklund stated that the CWCB's goals include addressing the gap between supply and demand, incentivizing quicker regulatory processes for businesses wanting to establish in Colorado, and devising a statewide comprehensive water plan. Eklund also called for the need to formulate alternatives to "buy and dry," which refers to users (typically municipalities) in one location buying water rights from other users (typically farmers) and drying up vast swaths of land completely. Eklund concluded by reminding the audience that Mother Nature and hydrology require that we move quickly.

The E2 conference served as a platform to begin an informed conversation between entities that value a strong economy built on responsible water use and conservation. A predictable and secure water future for the West is in the best interest of the community and the economy, so E2's effort to engage a wide array of participants in the discussion is a step in the right direction.

Emily Dowd

**COLORADO BAR ASSOCIATION AND CONTINUING LEGAL
EDUCATION IN COLORADO INC. PRESENTS: GROUND WATER
REGULATION— HISTORY AND FOCUS ON DIVISION 1, 2, AND 3**

Denver, Colorado October 30, 2013

**HISTORY OF GROUND WATER REGULATION FROM A TECHNICAL
PERSPECTIVE**

James Slattery, a professional engineer who serves as Water Engineer for the Republican River Water Conservation District, presented on the topic of the changing ways engineers and hydrologists evaluate the effect of ground water withdrawals on nearby surface streams. Slattery has provided expert testimony for the State of Colorado in two arbitration hearings and is also an engineering representative on a team that is designing a \$21 million pipeline system to collect and deliver well field water to the North Fork of the Republican River.

The current techniques for determining the relationship between the amount of pumped water from underground aquifers and the decrease in surface water is the result of more than a century of evolving ground water measuring techniques. In 1856, Henry Darcy, when experimenting with water flow as it traveled through porous mediums, discovered a rule to predict groundwater flow in any situation, later becoming "Darcy's Law." This rule was rudimentary in its practicality because it did not include any unit of time, which made it unruly in application. However, Darcy's Law laid the foundation for future inventions that sought to predict with greater precision the measure-