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Water Supply Challenges and Solution for the Rocky Mountain West

agriculture-urban water transfers, or “buy and dry”—would remove this process as a viable option. Additionally, Klahn worried that the Colorado Plan will undermine local and regional decision-making, which will be problematic for small cities and industries. She also questioned how the Colorado Plan intends to convert the basin roundtables’ recommendations to the state level without taking away local control. Finally, Klahn questioned whether the state as a whole is in the position to do more than provide financing for a state water plan.

In sum, the panelists provided an interesting and stimulating discussion on the differences of state water plans in several western states. Their discussion highlighted the major successes and failures of different state water plans and how Colorado could learn from these plans in implementing its own state water plan.

Autumn Aspen

ROCKY MOUNTAIN LAND USE INSTITUTE ANNUAL CONFERENCE 2014: MOVING BEYOND RECESSION, WHAT’S NEXT?

WATER SUPPLY CHALLENGES AND SOLUTION FOR THE ROCKY MOUNTAIN WEST

Denver, CO March 12-14, 2014

On the final day of the Rocky Mountain Land Use Institute’s 2014 Conference, a panel of water professionals greeted an audience of land use planners. Titled “Water Supply Challenges and Solutions for the Rocky Mountain West,” the conversation that emerged called for a movement from the days of diverting water through pipes to engaging in critical dialogue about water in the public forum

The panel included three speakers, each with a nuanced expertise underlying his perspective of the future of water in the West. Grady Gammage, attorney at Gammage & Burnham and Senior Research Fellow at Arizona State University’s Morrison Institute, presented his research on the Central Arizona Project and the diversion of Colorado River water to make Phoenix and agricultural land in Arizona possible. James Eklund, Director of the Colorado Water Conservation Board, discussed his efforts to garner community input for an in-progress draft of the Colorado Water Plan. Jim Lochhead, CEO of Denver Water, closed the panel with broad commentary on the paradigm shift occurring around water and Denver Water’s collaborative approach to planning for the future.

Despite the panelists’ respective interests in research in Arizona, policy in the state of Colorado, and pragmatics in Denver specifically, each lamented the historical and present state of water politics and called for strengthened relationships between the different players at the water-planning table. Under the broad umbrella of “water supply challenges and solutions,” the speakers pointed to the particular problem of adversity between agricultural and municipal water users, and the creation of more integrated and cooperative community relationships required to reach a solution.

According to Grady Gammage, the current debate around water supply and scarcity is a battle between “plumbers and planners.” Plumbers address the societal problem of water scarcity by building pipes and dams to transport water, and then leave the problem there. This mentality, that we can move water wherever we need it but should avoid complex conversations about water use, pervades our water paradigm as the way we successfully settled the West. According to Gammage, the time for the plumber mentality is over. With the help of planners, we must now face the difficult question of how to use the water we have.

In a presentation of his report on the Central Arizona Project, Gammage emphasized the false assumptions underlying popular belief about Phoenix, Arizona. Gammage especially lamented the way people outside of Phoenix perceive the city as the most unsustainable city in the world. In reality, city planners in Phoenix are always conserving four years of extra water supply, and are in that way models for wise water planning. According to Gammage, overly critical external beliefs about Phoenix cripple effective water planning in the West as a whole.

Gammage emphasized that every city in the country uses more water than falls in rain. Unlike Colorado, Arizona has the fortune of growing crops and people in the same place, converting land from farming to subdivisions, which use less water respectively. His report called for a reconfiguration of the belief that Phoenix is a “giant demographic mistake,” using population and precipitation data to analyze the issues surrounding Arizona’s continued growth despite increasing population and decreasing water resources. It sought to educate the public about the Western water systems and their reliance on a highly variable field. Some years yield much precipitation; other yield only drought. Western water systems are built with certain amplitude of variability, but climate change raises questions about whether we are making the right assumptions.

In framing the discussion around use of current water resources and the land-water nexus, Gammage pointed to several choices Arizona needs to make to determine where it (and presumably, the West more broadly) can continue to grow. These competing priorities include density, landscaping, the lifestyle of affluence (such as swimming pools in the desert), aesthetics in the urban environment, integrity of the natural environment, and agriculture. This final concern was of particular interest to Gammage. He believes we should use water as a policy for preserving some measure of agriculture in Arizona, which currently allocates nearly half of its water to crop production. The benefit of keeping agriculture in Arizona’s water use plan is the ability to move water between agriculture and the city in varying times of drought and plenty.

According to a disappointed Gammage, his report failed to spur sufficient dialogue to facilitate the paradigm shift required around water in the West. The Sun Corridor, occupying the entire southern portion of the state of Arizona, can continue to grow until 2030, but it is uncertain what will happen after that. The uncertainty surrounding climate change requires critical conversation about water resources and collaboration between typically adverse land developers and water planners. According to Gammage, mere water use reduction evades the real question of how to plan for decreasing water resources. He adamantly believes that rather than augmenting water supply like

plumbers, we need to address the pivotal questions of planners.

James Eklund of the Colorado Water Conservation Board brought the conversation closer to home with a call for collaboration on the drafting of the Colorado Water Plan. He discussed historical skepticism to a statewide water plan, due to widespread faith in the doctrine of prior appropriation. The changing paradigm follows social and environmental challenges ranging from drought to wild fires to severe floods. Colorado's ability to meet these challenges requires an intentional and collaborative plan.

While noting the weaknesses of the prior appropriation doctrine, Eklund emphasized its resiliency and ability to adjust. He denounced efforts to do away with prior appropriation, instead calling for a statewide water plan that can and must work within the doctrine on which our system of local control and private property rights rests. Stating that this status quo solution to scarcity is unacceptable, Eklund called for a Colorado Doctrine formed of collaboration and action. Cooperation and shared self-interest must overcome rhetoric on both sides of the water use divide.

Eklund's presentation echoed the water supply challenges Gammage detailed, including the gap between supply and demand, the degradation of rivers, the shortsightedness of buy-and-dry, and the sluggish movement of regulatory processes. In response to these challenges, Eklund envisions a secure water future including vibrant sustainable cities, healthier water and natural environment, robust recreation and tourism, and viable and productive agriculture.

According to Eklund, the solution to the challenges Colorado faces in its efforts to secure a sustainable water future is a comprehensive and collaborative Colorado Water Plan. The draft plan is due to the incoming Governor on December 10th, 2014, a deadline intentionally placed after election season so as to avoid political influence. Whoever is then governor will either remand or approve the plan, at which point Coloradans can begin creating their own plan for the trajectory of water in the state. Eklund admitted that Colorado is not a pioneer in state water planning, noting that all Western states have water plans except Colorado and Arizona. Rather than maintaining the disconnected spectrum of opinions about water that currently exists, Eklund called for Colorado to join the state water planning movement as a united front.

In order to achieve that unity, the Colorado Water Conservation Board is facilitating a bottom-up approach, which former Speaker Russ George established, to take water conservation out of party politics and bring it to the public. Basin Round Table meetings are currently taking place, bringing together ranchers, farmers, non-profits, and residents to participate in the creation of the Colorado Water Plan. In order to broaden what has been an insular conversation over the last several years, Eklund elicited a call to action. He urges Coloradans from all walks of life to participate in the water planning process. Those who are interested can visit www.coloradowaterplan.com to begin attending Basin Round Tables and submitting comments to the drafting process. Even more importantly, Eklund asks Coloradans who care about water to talk to their neighbors about participating in a community-based solution to the state's water challenges.

CEO of Denver Water Jim Lochhead offered an even more focused

perspective on water planning and reinforced Gammage and Eklund's insistence on an integrated discussion around realistic water planning. Despite Western explorer Zebulon Pike's early celebration of water scarcity as a barrier to unchecked Western expansion, infrastructure melded with a distinctly plumber-like mentality to allow the city of Denver to exist. Today, Denver Water serves over one million people with only two percent of the state's water supply.

Lochhead summarized the organizational structure of Denver Water and illustrated a few ways in which it is a unique water provider, independent of land use management. Even further than operating like a business that can pour its rates back into the system to encourage customer conservation, Denver Water is participating in planning discussions among states in the Colorado River Basin. This conversation is necessary because the future of Colorado's water supply is at stake. As all three of the panelists suggested, water planners have moved from an era of supply development to an era of limits and thinking about sustainability in the face of complete uncertainty. The water system is no longer just about infrastructure, but also includes watersheds, the western slope, and the direct connections between urban centers throughout the Basin.

Lochhead explained that the dialogue needed around water is not simply about conservation. A secure water future requires planning around economic and natural resources sustainability. While the historical conversation around water consisted largely of self-interested appropriation, the new trend must relate to uncertainties and topics that political leaders are typically uncomfortable addressing. Among the topics that Lochhead considered of primary importance in the water planning conversation are climate change, population growth, river diversion security, and permitting efficiency.

According to Lochhead, the more we learn about climate change, the more we realize we do not know. It is unclear whether a changing climate will result in more precipitation or less, and our water rights system is built on assumptions about fixed amounts of water. Lochhead suggested the need to develop a regulatory and allocation plan that responds to a changing climate and its impacts on hydrology.

Lochhead encouraged the conversation around growth to shift from planning how much Colorado can grow to strategizing for how exactly Colorado should grow. Colorado's doubling population requires municipalities and other players to come together to discuss urban sprawl and water use. Lochhead was adamant that population growth cannot continue in the same way that led to the last five million people in Colorado. Rather than having a simple conversation about meeting a water supply gap, water planners and land use planners must collaborate to craft a long-term plan about how to grow within existing service areas while meeting the needs of a growing population.

Lochhead also acknowledged a major concern with Colorado River security. Cities like Denver have grown dependent on allocation of the Colorado River founded on the Colorado River Compact, which overestimated water supply and assumed agricultural development on the river. Our needs are different now, and the Colorado River is burdened with environmental and recreational interests, as well as municipal needs. Like Gammage and Eklund, Lochhead called for more cooperative conversations between urban and agricultural projects so as to avoid massive dislocations, economic instability,

and recreational impacts on cities.

Finally, implementing creative solutions to Denver and the Colorado River Basin's water supply challenges requires quicker permitting processes. Lochhead called for the development of a permitting process that includes some level of logic. He suggested continued effective environmental analysis, but at a pace that allows water users to get through the process in a reasonable amount of time.

Recognizing the practical reality that transcontinental diversion projects are too costly to serve as potential solutions, Lochhead closed the RMLUI panel by reiterating the need for true communication and collaboration between interest groups, particularly land use and water planners. Discussion of the real issues at stake will require political courage and committed community participation. By moving past an "us vs. them" mentality, Colorado can integrate uncertainties into a plan that will sustain the Front Range economically, environmentally, and from a smart-growth perspective.

Ashley Basta

LAND USE TOOLS FOR A WATER-SMART FUTURE: TRAINING COMMUNITIES AND BUILDING NETWORKS

As part of its weeklong conference, the Rocky Mountain Land Use Institute ("RMLUI") hosted a three-member panel that discussed land use and its importance in water-related issues, especially in Colorado and other western states.

The host of the panel, Drew Beckwith, a water policy manager with the Western Resources Advocates, first addressed the growing gap in urban water supply. Beckwith explained that as population continues to grow there is a constant concern over the availability of water for future generations. Beckwith mentioned that because of this population growth, the demand on the Colorado River will exceed its supply sooner than expected. Before introducing the speakers, Beckwith addressed how land use substantially affects water supply and emphasized that different geographic locations face different land use challenges.

The first speaker, John Nolon, professor at the Land Use Law Center at Pace Law School, discussed integrating water and land use planning through leadership training. Nolon focused on the work of the Land Use Leadership Alliance training program ("LULA program"), which educates local land use decision-makers on legal tools and techniques. The step-by-step LULA program focuses on reaching out to prominent local leaders, bringing them into the training program, educating them on land use and decision-making, and subsequently having them implement post-training strategies in their localities. The LULA program selects communities that have something in common with each other or are geographically proximate, such as Aurora and Castle Rock in Colorado, to organize the dialogue and address programs at a regional level. The program then introduces prominent local leaders to the program and focuses their work on legal research and policy issues. The program finds great importance in urban form—the spaces and boundaries that make up a city.