



COLORADO

Colorado Water
Conservation Board

Department of Natural Resources



COLORADO

Department of Local Affairs

Division of Local Government

**Colorado Water and Land Use Planning Alliance
Quarterly Meeting**

Wednesday, March 4th, 2020 1:00-4:00 p.m.

University of Colorado Denver Sturm College of Law

2255 E Evans Avenue, Room 412

Denver, CO 80210

Welcome

- January 8th, 2020 Meeting Summary
 - Alliance visioning
 - What does a successful Colorado look like?
 - On what timeline can we get there? How long should this group be meeting?
 - Our strengths
 - Our audience
 - Formal role in advocacy/ promoting legislation
 - Key focus areas
- Save the date for the American Water Resources Association (AWRA) 2021 Land and Water Policy Specialty [Conference](#): July 19 - 21, 2021 at the Hyatt Regency Tech Center in Denver

Alliance Member Updates

- Gretel Follingstad – **University of Colorado, Denver, College of Architecture and Planning**
 - Gretel's current work is going well; she will give an update on her collaborative project in June.
- Waverly Klaw – **Sonoran Institute**
 - Waverly will participate and present in the land use/water track at the RMLUI 2020 Western Places/Western Spaces [Conference](#) later this week. She will be at sessions for the metrics project (Thursday afternoon), the policy and market nexus (Friday morning), and the utility leader report out (Friday afternoon).
 - Consider nominating a community (including your own) for the new Growing Water Smart [Award](#) that will be presented at APA Colorado's 2020 Colorado Planning [Conference](#) this fall by the Babbitt Center and Sonoran Institute.
 - In January, a developers' focus group discussed challenges and opportunities for becoming more water smart in future development. There will be a follow up event that will focus on planners and developing solutions from that perspective.
- Jeremy Stapleton – **Sonoran Institute**
 - Hello from Phoenix.
- Kevin Reidy – **Colorado Water Conservation Board (CWCB)**

- We held a great utility roundtable last week on February 27; the follow up report-out session will be during the last timeslot of the RMLUI [Conference](#) on Friday afternoon.
 - CWCB is updating the state's Municipal Drought Management Plan Guidance [Document](#). Megan Holcomb, CWCB's Senior Climate Specialist, is leading this effort (Megan is in Taryn Finnessey's old position). Hopefully the document update will be completed in the fall.
- Jessica Thrasher – **Headwater Institute**
 - Headwaters Institute will host rain barrel and rain garden [workshops](#) in 2020. The goal is to empower residents to take action. Headwaters Institute is looking for partnership opportunities in these efforts.
- Desi Santerre – **CO Department of Local Affairs (DOLA)**
 - Desi is the Water and Wastewater [Program](#) Manager for DOLA's Division of Local Government. She works with water infrastructure (not as planning-oriented) but is looking at areas of overlap.
- Amanda Hoff – **Little Thompson Water District**
 - Amanda attended the Growing Water Smart [workshop](#) in September 2019 as part of Weld County's team. Little Thompson Water District is working with partners and local jurisdictions to figure out how to better integrate water and land use.
- Anne Castle – **University of Colorado, Getches-Wilkinson Center**
 - Anne will participate in a Water Law 101 session at the RMLUI [Conference](#). There will be a presentation on Colorado River law and where we are hydrologically. RMLUI will also have a session on California's Groundwater Management Act.
 - Other work includes participating in the [demand management](#) work groups set up by CWCB to analyze Colorado River system demands and what we might do in the event of curtailment.
 - Anne is working on a water and tribes initiative intended to facilitate participation of Colorado River Basin tribes in discussions about new operating guidelines for the Colorado River.
- Emily Tibbott – **California Strategic Growth Council**
 - Emily is visiting from California and presenting with Anne Castle at the RMLUI [Conference](#). Their panel on California's Groundwater Act will include implications for land use.
- Brad Evans – **South Platte River Waterkeeper**
 - Brad is working with the [Waterkeeper Alliance](#) to reduce waste and pollution in the South Platte.
- Anna Bierbrauer – **University of Colorado, Denver, College of Architecture and Planning**
 - Anna is working on the water survey project with Rocky Piro.
- Torie Jarvis – **Northwest Colorado Council of Governments (NWCCOG) Water Quality/Quantity (QQ) Committee**
 - QQ membership is very interested in water quality. Torie is working on finalizing a Water Savings Guidance and Model Standards for the Colorado Headwaters [guidebook](#) for the QQ region (funded by a Water Plan Grant) that will help mountain and rural communities take advantage of low hanging fruit conservation measures. A workshop on this topic will be held in Glenwood Springs. Because there was a focused Growing

Water Smart workshop in the QQ region, some of the members are now very poised to use the new guidebook as they work on code updates, drought management planning, and other projects.

- Torie requested a presentation on the Municipal Drought Management Plan Guidance Document update at a future Alliance meeting. Grand County is currently working on a drought management plan.
- **Charlotte Roehm – Western Resource Advocates (WRA)**
 - WRA and partners are hosting an Immersive Grant Writing [workshop](#) on April 2. The workshop will help water providers submit grant applications to CWCB. WRA is also providing direct technical assistance to multiple communities.
- **Faith Sternlieb – Lincoln Institute of Land Policy, Babbitt Center for Land and Water Policy**
 - Faith will introduce the StoryMap later in the meeting.
- **Drew Beckwith – City of Westminster**
 - Westminster is updating their water efficiency plan and will be integrating land use techniques (using the guidance [document](#) developed by Anne Castle and others). The city is also updating their comprehensive plan and master water supply plan.
 - Staff conducted a survey to determine the most popular water efficiency tool desired by customers; rain barrels was the #1 choice.
 - In the master water supply plan, staff is working on a scenario based future supply-demand gap approach and updating seminal work by Stu Feinglas on the water demand of various land use types. Initial findings indicate that current water estimates are lower than when Stu completed the work 5-10 years ago, which is directly related to water efficiency measures in the city. However, the highest density developments are showing more water use.
 - The city is updating landscaping regulations that limit turf and promote pollinator plants.
- **John Berggren – Western Resource Advocates (WRA)**
 - John is speaking on panels at the RMLUI [Conference](#) with Waverly Klaw and also with Susan Wood.
 - WRA is working with APA CO on proposed legislation ([HB20-1095](#)), which authorizes a local government comprehensive plan to include goals specified in the state Water Plan and adds a staff position in DOLA. It has made it through the House and Senate Agriculture and Natural Resources Committee. It will be at Appropriations on Friday.
 - WRA is helping to coordinate (with partners such as the Babbitt Center) a land use and water [workshop](#) in Utah.
 - John worked with Waverly to put on a mini-[workshop](#) called Water and Land Use in North Central Colorado in Greeley two weeks ago. The 2-hour event was targeted at Weld County communities and discussed with planners how to incorporate water efficiency into land use planning. This came from the APA CO region's membership interest as well as September 2019 Growing Water Smart [workshop](#) participants.
- **Lindsay Rogers – WaterNow Alliance**
 - WaterNow Alliance just closed the Project Accelerator [program](#) application cycle, which Lindsay mentioned at the January 8 meeting. They recently selected two Colorado projects to provide direct technical assistance. The Town of Severance will work on

integrating water efficiency into their comprehensive plan, which should be finalized in August. The City of Centennial passed their comprehensive plan recently and is working to amend land development codes to incorporate better stormwater management, water efficiency, and water reuse.

- WaterNow Alliance is planning to put together a workshop in the late summer/fall and is trying to figure out what level of information to provide. Where's the gap? The workshop could be about water in comprehensive plans, water efficiency, developer incentives, code development, etc.
 - Kevin: This is a good conversation because we need to figure out where we are in the spectrum. Some communities need basic information while others are ready for advanced work.
 - Waverly: Sonora Institute is working on a fall Growing Water Smart workshop so we should coordinate to leverage that work.
 - Faith: There are several types of gaps. Who in the audience are we missing (geographically, types of jurisdictions, sizes, other gaps)? This goes beyond topical gaps.
- WaterNow Alliance released a [guidebook](#) last spring on alternative transfer methods (ATMs). There is now a yearlong outreach initiative around the guidebook. Please reach out to Lindsay if you'd like to partner in some way.
- Flo Raitano – **Denver Regional Council of Governments (DRCOG)**
 - DRCOG is planning an annual award [celebration](#) on April 22.
 - DRCOG started a quarterly city/county managers' forum to assess pain points. Water has come up but the main focus has been homelessness. The recent meeting included a speaker from Los Angeles who discussed using corrugated steel to create off-grid moveable units (no utilities necessary).
 - Kevin: Lennar Homes is building 40 new homes through a CWCB-funded project that will feature new homes with full greywater systems.
 - Jeff: Denver Water is learning a lot about greywater permitting processes right now. Between the water utility, and various levels of requirements, there are several lessons learned coming out in the pilot. We're first doing single family, then possibly stacked multi-family, then possibly a community scale project. Permitting depends on configuration, use types, and other considerations.
 - There is interest among Alliance members to learn more about greywater systems in the future.
 - POLITICO Live is hosting a free event on March 19 at CU Denver related to water resources.
- Jim Holway – **Lincoln Institute of Land Policy, Babbitt Center for Land and Water Policy**
 - The Lincoln Institute will celebrate its 75th anniversary next year in 2021.
 - The sessions in the RMLUI [Conference](#) land use/water track are going to be compelling. The first one is on water law and then there will be a deep dive on climate. The entire track will have great information.
 - Erin Rugland's [report](#) on integrating water into comprehensive plans for the Colorado River Basin states is complete. The Babbitt Center is focusing on getting the word out and sharing the report digitally.

- Erin Rugland and Zach Sugg are in Montana today at a conference discussing Babbitt Center work on water and land use.
- Through a partnership with APA and the Alliance for Water Efficiency, there will be nationally representative work on integrated water & land use planning.
- The first Arizona Growing Water Smart [workshop](#) occurred in early February. The workshop was well received and there's interest in taking it to California. We're also discussing the market for the workshops. Is it timely to cut down on the number of workshops? When will it be a once a year workshop?
- The Lincoln Institute's [Landlines](#) magazine just did an [online story](#) about Growing Water Smart.
- The Babbitt Center is looking at agricultural water issues and trends that project how much agricultural land will go out of production with retirement of farmers. They are involved with the Public Policy Institute of California's [work](#) in the San Joaquin Valley.
- The Babbitt Center funds a dissertation fellowship [program](#) for PhD students. The application period is coming up.
- **Rocky Piro – University of Colorado, Denver, College of Architecture and Planning**
 - As an update on the survey, the feedback from reviewers was great. The timeline started a bit later than anticipated; the team originally contemplated three phases. Instead of targeting different geographic groups, the survey was sent to all contacts at the same time. There has been a good response rate with 70 responses to date. All but Denver and Boulder of the Front Range counties have responded. The goal is to be strategic and inclusive; there have been some high plains county responses and some from the West Slope. Currently the team is calling jurisdictions that didn't respond. Municipal response has lagged slightly, particularly in cities over 10,000 in population. The next step will be data analysis that will include partnership for review.
 - Christy: This survey project is an example of how the Alliance is able to amplify a project and improve the outcome as a result.
 - Jim: If any of you spent time on this project, please email that to Rocky so he can document in-kind donations.
 - Rocky is working with David Rouse of APA to update a textbook on comprehensive planning. The tagline is sustainable, resilient, and equitable. The idea is to encourage a holistic approach to water planning and all other components advanced in a truly integrated and sustainable 21st century comprehensive plan.
- **Austin Troy – University of Colorado, Denver, College of Architecture and Planning**
 - Austin will present in a Friday morning panel at the RMLUI [Conference](#).
 - Austin is working on a contract with the Babbitt Center and Gretel Follingstad to project residential irrigation demand into the future (30-40 year timeframe) using DRCOG's UrbanSim model. They are currently working on a regression tree analysis to explore if-then scenarios based on various factors (e.g., lot size, housing type, family size, income, etc.) that relate back to the synthetic households in the model. The outcome will be a distribution range of outdoor water use and the ability to run through scenario models to test future technologies or policies. They are also exploring HOAs and are finding large increases in water use in Denver-area HOAs. In Arizona, the opposite is occurring because HOAs are enforcing xeriscaping where Colorado HOAs are enforcing turf lawns.

The team is also finding that trees pay for themselves in terms of water saved through shade of a mature tree canopy.

- Austin is working on an effort to create a network map for water stewardship organizations, including federal agencies.
- There's growing interest at CU Denver to incorporate water into the curriculum more formally and systematically. As a reminder, CU Denver has the only accredited planning [program](#) in Colorado. There's interest in an entire course on water and additional curriculum in other courses. Austin may use this group to identify core elements of water literacy.
- **KC McFerson – CO Department of Local Affairs (DOLA)**
 - DOLA is continuing to raise water issues in its planning efforts and projects.
 - KC is gearing up to facilitate a land use survey for local governments.
- **Chaz Baculi – Lincoln Institute of Land Policy, Babbitt Center for Land and Water Policy**
 - Chaz and Faith will present the StoryMap later in the meeting.
- **Caitlin Coleman – Water Education Colorado (WEco)**
 - WEco's [Headwaters](#) magazine is coming out soon with a focus on equity and environmental justice.
 - The first Statewide Water Education Action Plan ([SWEAP](#)) was recently completed. SWEAP will help meet specific Water Plan goals by laying out a 5-year plan. WEco will be looking for partnership around baseline metrics and analyzing progress.
 - WEco is hosting a water education [symposium](#) at Keystone Science School later in March.
 - Caitlin is planning the summer issue of Headwaters magazine to focus on aging infrastructure.
- **Scott Winter – Colorado Springs Utilities**
 - Colorado Springs just updated their comprehensive plan last year, but it didn't include extensive water components. However, there were landscaping policies.
 - The city's zoning code and commercial landscape code are currently being updated. They are considering permanent 3-day watering restrictions.
 - Colorado Springs Utilities developed water use benchmarks by land use type and business types. Analyzing by age of construction is illuminating unsettling trends in new development. There are smaller lots with larger homes and smaller landscapes but more water use, particularly in common areas, that isn't in older developments that have larger lots. Part of the reason is having an irrigation system. It's difficult to reach these customers so there's a move toward adjusting the utility's block rate structure.
 - The city is also updating annexation plans. Most annexations are small but larger ones trigger the need to analyze impacts. There's also an idea growing around regionalization. There are 32 water providers in El Paso County and all but Colorado Springs Utilities have groundwater exclusively. So, considering development types and implications of annexation is becoming more important. Colorado Springs Utilities is considering redesigning tap fees.
- **Ean Tomas Tafoya – GreenLatinos**
 - Ean has worked on land use and transportation projects in Denver. With his role at GreenLatinos, he works on statewide water policy analysis and advocacy. GreenLatinos

is a member based organization that looks for connections to Latinx communities and organizations.

- Jody Beck – **University of Colorado, Denver, College of Architecture and Planning**
 - Jody is in the Landscape Architecture Faculty at CU Denver. Jody recently started leading the University Technical Assistance [program](#) at CU, which is funded by DOLA. This program has been focused on small and rural communities and is currently expanding in topic considerations.
 - Jody serves on the Land Water Capital Access Committee for the CO Food Policy [Network](#), which will be putting together a white paper on revisions to the Water Plan and how to support new and beginning farmers.
- Susan Wood – **American Planning Association Colorado (APA CO) Legislative Committee**
 - As many Alliance members have heard, there is legislation ([HB20-1095](#)) moving forward to encourage water in comprehensive plans and provide a staff position in DOLA for permanent support of water and land use integration. The legislation will be in Senate Appropriations on Friday. If it moves through Appropriations, it goes to the Senate floor. One interesting piece is that planning and water issues are nonpartisan but for some reason this bill has been passing along party lines.
- Karen Hancock – **City of Aurora**
 - Karen serves as the project manager for Aurora’s new zoning code. There are several new mandates. For those following news on metro districts that fund infrastructure (there have been recent Denver Post articles), they present a hurdle. Metro districts pass along costs to future landowners. While they’re complying with the code, metro districts often install turf in common areas, which is then turned over to the HOA and the HOA can’t remove the turf.
 - Aurora is also having fluvial hazards issues with sediment deposition outside of regulated floodplains. Some of the research is showing deposition areas in places with residential entitlements, which presents potential issues.
 - Alliance members discussed areas with mandatory legislation to remove special districts and other side of the coin in Colorado where TABOR resulted in the need for special districts in order to get work done.
 - Aurora city planners are working with Aurora Water to estimate water demand for new zoning districts. This is difficult. Aurora has over 70 square miles of undeveloped land.
- Jeff Tejral – **Denver Water**
 - Jeff will be at the utility roundtable RMLUI [Conference](#) panel on Friday afternoon.
 - Denver Water is launching a pH adjustment [program](#) to address customers that are connected to lead service lines.
 - Denver Water is doing research on greywater systems and partnering with city planners on green code as it relates to income, both water and energy. This will be tested for city and Denver Water processes with an eye toward adopting new code in 2022.
 - Jeff is involved with Denver’s One Water plan. Discussion has been deep and inclusive thus far.
 - Denver Water is involved in a Climate Task Force with Denver staff. There has been a lot of staff resource investment to kick this off and it includes citizen action.
- Aditi Bhaskar – **Colorado State University (CSU)**

- Aditi is an Assistant Professor of Civil and Environmental Engineering at CSU. She analyzes impacts of new development and redevelopment to quantify impacts to base stream flows. This informs what changes to land use regulation will mean in terms of changes to hydrology.
- Marianne Eppig – **Urban Land Use Institute Colorado (ULI Colorado)**
 - Marianne is the Director of ULI Colorado.
 - Marianne worked with the Sonoran Institute on onsite water use/reuse; a report is forthcoming.
 - There was an event this morning about metro districts that included a streaming. This is available on the ULI [Facebook](#) page.
 - ULI Colorado is building a healthy spaces committee to work on this topic statewide.
- Andy Hill – **CO Department of Local Affairs (DOLA)**
 - Andy is the Director of the Community Development [Office](#) in DOLA’s Division of Local Government.
- Steve Malers (update sent via email) – **Open Water Foundation (OWF)**
 - The Open Water Foundation created stories for the South Platte Basin: <https://southplattebasin.com/colorado-water-plan/stories/>
 - These do not use the ESRI StoryMap platform. OWF continues to explore technologies to improve on story creation and publishing.
 - OWF is working on tools to analyze and view spatial data, including Front Range urban growth onto agriculture.
 - OWF has made an attempt to create a dataset for all municipalities and all water providers in Colorado. The datasets cross-reference several public datasets: <http://data.openwaterfoundation.org/>
 - OWF’s hope is to collaborate to make such datasets commonly available so they can be used as needed. Maintaining cross-jurisdictional datasets is a challenge.

CO River Basin StoryMap: “The Hardest Working River in the West”

- Faith and Chaz from the Babbitt Center presented “The Hardest Working River in the West: A StoryMap of the Colorado River.” The goal of the StoryMap is to display basic information about the Colorado River in an engaging way. Chaz presented the StoryMap and explained its features while Alliance members filled out a feedback form.
- Current StoryMap outline:
 - *The Hardest Working River*
 - *A balancing act*
 - *The Colorado River Compact*
 - *Lee Ferry: Dividing Line of the Colorado River Basin*
 - *Divvying Up the River*
 - *Upper Basin State Allocation*
 - *Lower Basin State Allocation*
 - *Mexico*
 - *Recent Years’ Allocations*
 - *An Over-Allocated River: “Paper Water” vs. Hydrologic Reality*
 - *So How Much Water is Really There?*

- *Of Storage and Shortages*
 - *Where Does the Water Come From?*
 - *Managing the Supply: Storage and Reservoirs*
 - *Major Reservoirs of the Colorado Basin*
 - *Reservoir Capacity*
 - *Management Triggers: Lake Mead Key Water Levels*
 - *Surplus Conditions*
 - *Agreed Upon Shortages*
 - *Lake Mead and Lake Powell Combined Levels*
 - *1984 Lake Mead – Las Vegas Aerial*
 - *2016 Lake Mead – Las Vegas Aerial*
- *Who's Using all this Water and Where?*
 - *The Basin States*
 - *Water Use by Sector*
 - *Public Water Use by State – Surface Water vs. Groundwater*
 - *Groundwater: Unseen and Underappreciated*
 - *Municipal Water Use*
 - *Public Water Use*
 - *Agriculture Water Use*
 - *Tribal Water Rights*
 - *Tribes with Settled Claims*
 - *Tribes with Unsettled Claims*
 - *Surface Water Entitlements*
 - *Groundwater Entitlements*
 - *Connecting Land and Water*
 - *Major Land Uses*
 - *Federal Land*
 - *Tribal Land*
 - *Developed Land*
 - *Agricultural Land*
 - *Alfalfa*
 - *Alfalfa in the Lower Basin*
- *Water Management Hurdles*
 - *Water Supply Uncertainty*
 - *The Constant Threat of Drought*
 - *Tracking Short-Term Drought*
 - *Climate Variability*
 - *Palmer Drought Severity Index (PDSI)*
 - *Water Demand Uncertainty*
 - *Urbanization and Growth*
- *Tools for a Resilient Future*
 - *Efforts at the Basin Scale*
 - *Drought Contingency Plans*

- *Upper Drought Contingency Plan*
 - *Lower Drought Contingency Plan*
 - *Minute 323 of the United States – Mexico Water Treaty*
 - *Water & Tribes Initiative*
 - *The Ten Tribes Partnership*
 - *Efforts at the Local and Regional Scale*
 - *Incorporating Water into Comprehensive Planning*
 - *Growing Water Smart*
 - *About the Babbitt Center for Land and Water Policy and the Lincoln Institute of Land Policy*
- Alliance members then discussed their reactions to the feedback form's questions:
 - What is your main takeaway from the StoryMap?
 - Is this the right type of information you would want to know about the Colorado River and Basin?
 - What are the 2 or 3 most important things you would want someone to know about the Colorado River and Basin?
 - Would you recommend this as an introduction to someone about the Colorado River and Basin, such as a Colorado River Basin 101 educational/introduction tool?
 - If so, who would you show this to?
 - How might you use this StoryMap?
 - Any other feedback?
- Alliance members provided robust initial feedback on components to add and potential uses for the StoryMap.
 - The StoryMap audience includes Alliance members.
 - Members suggested linking to more video elements, such as PBS' Water and Power [video](#) produced with History Colorado. Audio clips could also be incorporated into the StoryMap.
- The Babbitt Center is not ready to share a public link; they will make further changes before publishing it on the web in May. Chaz will run through the StoryMap at the RMLUI [Conference](#) to garner additional feedback.

Alliance Work Planning

- Updated Charter
 - Alliance membership does not need to formally adopt the updated charter language.
- The 2019 Summary of Activities document is available.
- Christy created a public Google [Calendar](#) that is regularly updated with water-related events, webinars, application deadlines, etc.
- Resource Guide Spreadsheet and Course Book
 - The list of resources is being translated into the "course book" for communities. The timeline is to have a draft by June.
 - Would members like to participate as reviewers? Decision: Babbitt Center staff, DRCOG, Jody, John.
- The Alliance [StoryMap](#) linked on CWCB webpage can be updated with new demographic information and projects if Alliance members find it helpful.

- Work Plan Format
 - How much ownership is desired over the work plan? Decision: Not much; the quarterly meetings are generally sufficient.

Wrap-up and Next Steps

- Announcements
- Next Meeting Date – Wednesday, June 3rd, 2020
 - Meeting will focus on the Basin Implementation Plans (BIPs) and the Water Plan update process
- Happy hour at Asbury Provisions