From your perspective as a community leader in Northern Colorado, what is your key takeaway from today's session?

- Investment into the water infrastructure and administration is a worthwhile venture as management of the system is extremely complicated. Investment should be in the form of education and training, data collection and support of staff, in addition to the pipelines, ditches, dams and weirs we typically think of. Going slow and following the process is necessary to be sure we are taking the steps to manage our water in a manner that collectively benefits the system as a whole.
- The most important thing I took away from today's presentation is that we have some incredibly smart people working on water issues in CO. I particularly liked Amy Beatie.
- It seems that every class and presentation reinforces just how complicated water can be in Colorado and along the Colorado River Basin. The great thing is that there are checks and balances in place to properly govern issues and disputes and that at the end of the day we are all on the same team trying to make sure that the water problem is being solved by extremely talented and bright individuals.
- My key takeaway from our October session is the importance of Colorado Water Law. Colorado is clearly a leading state in the water law space, but we need to ensure that our legal system is efficient and nimble enough to overcome future water issues. Water law is a critical component in water resource management and that has greatly benefited Colorado. We need to evaluate what will and will not work in a continuously deteriorating water availability scenario. Are there management practices we need to amend or add? I foresee concern regarding the first in time first in right doctrine in a scenario with continuously dwindling water availability.
- Getting water projects through systems (legal, permitting, decrees, etc.) takes years
 as water is a limited resource, I am concerned about the timing of all the processes and the urgency to secure regional water resources.
- I was astounded by how complicated and critical the duties of the river Referees and Commissioners are. The day-to-day, minute-by-minute reviews of calls and application of priorities have wide-reaching effects within the river systems and the growers and municipalities. Those with junior water rights often have to be prepared to reschedule or put off the use to keep the senior rights in play. There must be a lot of both pressures and experience in play to realize fair and productive outcomes. I had only imagined the extent of their duties, and the presentations certainly advanced my understanding.
- It was fascinating to learn that Lake Estes is not water storage per se and that the
 water in Lake Estes turns over once every other day or once a day in summer and a
 "wall of water" is released down the Big Thompson in the middle of every night.
- There is a lot of collaboration and cooperation between the water commissioners and stake holders (municipalities, counties, ditch company's, water districts, and the general public). It seems like this cooperation has rapidly increased over the last 25 years. This will be a huge plus for future water use decisions.
- There is significant coordination and effort by Water Commissioners, Division of Water Resources, permitting and water users.
- Couple of thoughts from David Thorpe's report
 - "We make irrigation and irrigation makes us"
 - "Working with the environment, not against it."
 - "Myth of individualism gives way to collaboration."

A few thoughts from Claire Bouchard's report.

2022-2023 Water Literate Leaders of Northern Colorado Homework Assignment for **October 2022 – Redacted**

Urgency Preservation Collaboration Social Justice

Interesting to hear the progression of water law from diversions to storage to well digging with augmentation plans and the evolution of water courts.

- How crucially important water administration and oversight are for our Colorado watersheds. It was especially impressive, with such a small team, how the state and the different district water managers manage daily water distribution to all water Colorado and downstream users.
- Amy Beatie is rad. But in all seriousness, I really appreciated her thoughts on
 working with the judge and some of the precedence around how water is litigated in
 Colorado. It gives me hope that there are good people working collaboratively, much
 like the previous presentations last month covered particularly around how
 Colorado handles problems internally relative to the rest of the west.
- I think the most impactful portion of the training last week, was understanding the sometimes unintended consequences of legislation and how expensive and time consuming the project process can be. It reminds me a lot of real estate development projects, where you are constantly balancing the needs/desires of various public entities to ensure a project can make it fruition. Additionally, while there is a lot of collaboration in the water industry, there may be some contention built through filing statements of oppositions which also add time and expense to a project. I do believe some level of legislation and the ability to file impact statements are necessary to the process, however, how can we work to streamline them as much as possible while maintaining the underlying purposes.
- Amy Beatie's sharing was inspirational; I truly appreciated how she reflected on a
 dear mentor in the water world and emphasized the windy path to where she is now.
 She seized opportunities that came before her and she has created a legacy of
 natural resource management in Colorado. May we wall be bold enough to pursue
 our dreams and create a legacy.
- My key takeaway was how little I understand about water law! High on my list of things to do is to read the book you provided to us.
- The legalese surrounding water is even more complex than I originally thought.
- MANY interested parties/stakeholders/influencers and it takes sophisticated collaboration, and strategic planning, and continuous improvement.

What did you learn today that encouraged you, discouraged you, or captured your attention to the extent that you could see yourself engaging in it further?

- The book reports were fantastic and I have been inspired to read as much as
 possible. I was discouraged by the interpretation of the suite of environmental
 regulations that are protecting and balancing our human impacts on the natural
 world. While I understand the presenter's perspective, I would have appreciated a
 more balanced presentation.
- It was encouraging to have discussions about Social Justice & gender issues in the context of these big issues. I loved David's references in his book report about all the gender references/roles in our lexicon about development in the west.
- As mentioned above the most encouraging thing is there are a lot of intelligent people working on the water problems not only in Colorado, but other western states as well. The folks from the Division of Water Resources covered a lot of topics and the map of the stream flows was very interesting on just how much water flows out of Colorado and is utilized by other states. It is always interesting when folks talk about the new Chimney Hollow Reservoir and NISP that is still in the final stages of the approval process. These are huge projects that have taken 25+ years to get approved.
- I was really excited about this session because water law is so interesting to me. I enjoyed hearing the presentations from water law professionals and it paired extremely well with seeing how the law is carried out via the river commissioners. We got to see the whole scope of the system. I often think about water law from only a water right perspective, so it was interesting to hear from John Kolanz about water law from a project and permitting perspective as well (which, really, I should know as an employee of a NISP participant). I feel like I want a better background on notable water law cases. This is something I have been telling myself for quite some time. Understanding where, when, and why these notable cases shaped Colorado water would give me a better vantage point of where we are now and why.
- Water enforcement! I loved the three presenters and learning about their work it's so concrete and real. The historic water rights are living and breathing for them. The collaboration among municipalities, ditch companies, landowners, and water districts is really amazing. I know it's not easy, and they can't please everyone, but I was glad to hear most are cordial and cooperative! Loved hearing about Lake Estes and its daily release at midnight!!
- Learning about the opportunities to improve the management of the Waters of the US, in particular the Corps of Engineers permit programs. Never very well-defined, the extent of WOTUS within each jurisdiction would vary based on precedents and local requirements and pressures. Then, the previous two Federal administrations implemented drastically different WOTUS definitions, to previous permits and between each other. Chaos reigned. It was very encouraging to hear of the practical, state-specific approaches under consideration, which will better reflect specific hydrologies, soils, and wildlife, as well as the regional differences that are poorly incorporated by a National approach. Start with humid vs arid regions, then consider plains vs mountains, and fresh vs salt waters, and we'll be able to move forward.
- I believe Mr. Kolanz mentioned that he wrote a recent article regarding Section 404 of the Clean Water Act and the potential for Colorado to take over part of the management of the program – I wonder if we can get a copy of that article?

2022-2023 Water Literate Leaders of Northern Colorado Homework Assignment for **October 2022 – Redacted**

- The Deputy Attorney General for the State of Colorado gave a very encouraging talk about her outlook on careers. She advised the Water Leaders group to go for higher level rolls and leadership positions in the water management field!
- Ongoing changes to laws, rules, etc. Even the "Quick Dip" was almost overwhelming. But was great to just get the overview, complexities and coordination required. Interesting that Colorado deals with water differently than other states in regards to the Court system. Need to always stay engaged with some many consistent changes.
- Encouraged that Biden didn't reverse some of NEPA requirements.
 I thought municipal use would be more than shown. Concerning about the reduced irrigation and increased municipal by 2050.

Seriousness of run-off from burn scar.

Permitting needs to be more streamlined

Listening to the permitting process reassures me about the NISP project permitting and can engage in support for that program.

Regulatory uncertainty

Intention of 1041 is not what it ended up being. This is an area in which I am currently engaged.

Colorado Water Plan recognizes the need to address the broken permitting process.

- I was surprised to learn that even brilliant people like Justice Hobbs have moments of self-doubt. It was refreshing know and learn from Amy Beatie, her unique career path, and her leadership style, and the influence she had and will continue to have on our overseeing our state's water legal system. Impressive to say the least.
- I've been swapping emails with Amy about having a cup of coffee to talk more about water and Colorado law, so I am looking forward to that. We're scheduled to talk in a couple of weeks, and it turns out we live near one another.
 I also really enjoyed the presentations from Michael, Mark, and especially Jean, on how the Big Thompson and Poudre rivers are managed. There are a lot of people doing a lot of around-the-clock work to keep the system running.
- I plan to read John Kolanz's article on "Why Colorado Should Evaluate Clean Water Act Section 404 Program Assumption". I found this entire conversation very interesting.
- One thing that really captured my attention was the book reports shared by fellow class participants and how the authors of the books really emphasized that while we, as humans, strive to shape and conquer the environment around us, and sometimes succeed at it, more often than not, the environment shapes us as humans and our relationship with it. I live in a community with a water owners association and potentially see myself engaging with the association at a deeper level, bringing the knowledge I learn through WLL to the water conversation for improved stewardship of this precious resource.
- A. The role of a River Commissioner was quite interesting to me, and really had no idea what they did. B. I really enjoyed the book reports! Both were very well done David and Claire set a pretty high bar for the rest of us. C. Amy's leadership talk was interesting and provided plenty to think about. It was also interesting to learn about how the AG's office works.
- Exploring regional solutions, rather than each local water company or municipality fending for themselves.
- I was surprised to learn that 1861 began the era of senior water rights and within 20 years junior water rights were already being issues in the 1880s and here we have applications, augmentations, and many complexities to manage in the 2020s and beyond.

What questions do you have based on what you heard from today's speakers and group discussion?

- I would like to understand the calculations and annual adjustments made to the
 distribution of water that was presented to us. It may be that we could have had an
 entire session on this work to truly understand the intricacies of allocation. If the
 most junior water right receiving an allocation is an 1860's right then why are rights
 being issued in the 2020's?
- Just curious Amy hinted that if Phil was not elected AG she would be out of a
 job. Is that true for all the hundreds of employees that work in her office? What
 continuity is there between regular employees and political employees? Seems like
 a crazy system because these issues are so long term how is there continuity?
- No questions
- Colorado water law clearly does a good job of managing water resources, but I think to the future and wonder how well it will hold up. Legal systems are difficult to change, which is usually for the better, but in our ever evolving water crisis I can't help but think about how our current system may pose barriers to accessible water?
- I didn't realize there is a whole Colorado Water Plan from 2015. I am looking forward to researching it! I wonder when all the different professions and subject matter experts get together to talk about water supply and demand? Is it only over a water rights case or deal? Or are they thinking about the future and how to strategize the supply given our known regional growth? I work with City managers and mayors, and water district/water utilities on the topic, but I'm not sure if the water attorneys and the Colorado Division of Water Resources are talking policy/future planning?
- What agencies (and who, specifically) in Colorado are pursuing these State-based permitting approaches for dredge-and-fill, and specifically how can we get involved in that process (or processes)?
- At such time in the future that Thornton is able to begin transmission of their water (minus the roughly 40% return flows to the Poudre), how will this water be accounted for in the Platte? The wastewater from Thornton's end users will be new water to the Platte that wasn't there before and I'm just curious if downriver users simply get a windfall?
- Why does permitting have to be so difficult. I suspect the reason is government red tape. Different sub agencies like the Army Corps of Engineers handle important questions differently depending on which office you talk with. I realize there are geographical reasons, but in a lot of cases it is due to interpretation of the rules. This can be resolved with better management from the top.
- Nothing significant additional. Loved hearing about Amy's non-traditional path to DAG.
- Speaking of social justice in water issues, how are different people groups affected and are their voices heard in the discussion about water?
 Can you own water rights without being part of a ditch company?
 What are the myths of land use we are telling ourselves?
- What kind of regional cooperation between Thornton and Larimer County could we see in the future?
- We will be filing a junior water storage right off the Poudre for some of our projects, but I think I will be doing some more homework (or working with our water attorneys) on how long the Poudre has had a call on it and thus the likelihood of being able to call for water.

2022-2023 Water Literate Leaders of Northern Colorado Homework Assignment for **October 2022 – Redacted**

- I would love to know more about beneficial use. What factors are used when determining beneficial use? Are there any time requirements to actually putting to use?
- There was a great deal shared about how water is managed in northern Colorado, especially the sources flowing through the Thompson, the Cache la Poudre and the Platte. Senior water rights take precedence over junior rights and we undergo thorough due diligence when new water projects are imagined, planned and then brought to life. One of our classmates and speaker, John Kolanz, posed the question of: is there a better way to do all of this with respect to what may be the west's most precious resource? The answer may be no, but I think it is one we are collectively pondering as a class and I look forward to further discussion.
- A. How much water law does one need to know in order to be "water literate"? B. I'd like to better understand the relationship between land owners, river commissioners, and the major water companies. C. What is on the agenda for November?
- Still interested in the multiple uses of the 'same acre-foot of water' multiple times as it makes it way into and out of our region, before flowing out of state.
- I would be curious to learn what water decisions or types of water decisions are handled by what parties and when does that escalate then beyond water court to Amy Beattie at the State level.