

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

- a) It is amazing how quickly the early (later 1800s - forward) Colorado settlers began conceiving, planning, and working to bring and manage water from the western slope to the eastern slope. And, how quickly their actions began forming the foundation for Colorado water management and the elements of water law. b) DAM priority: domestic, agriculture, and manufacturing
- My key takeaway from this session is that addressing the sticky water issues the State faces today will take tough conversations that will require the participants to understand each other as human beings with legitimate concerns underlying their position on an issue. This will help move the interaction toward problem solving as opposed to staking out a position and defending it at all costs.
- That our conversations about water are going to get harder and more nuanced both in Colorado and as a headwaters state. And that we need to be mindful of our conversations to make sure they are productive and collaborative.
- How complex our water system is to support our urban and rural needs.
- My key takeaway was how truly complex finding solutions to water scarcity would be and what great diverse minds were in the room to engage in the discussion. Being from Greeley, I was proud of the leadership exhibited in early days to create a system most said was impossible. However, looking at current needs of business and residents and new challenges, it will take a big vision to create solutions for the future.
- My takeaway for this first session is two-fold. First, from discussing the history of water in Colorado to acknowledging ways to have better conversations that more positively manage conflict, this issue of water is wicked. The complexities and complications that arise from social divides and ecological parameters are so important to understand if we want to find localized solutions that can be scaled to meet the regional needs of Northern Colorado. Second, and on the note of solutions, people across sectors understand that water conservation is an issue of significance and are all trying to find answers within our own circles. But that is not enough in this climate (both our environmental and social), and we must use this platform as an opportunity to engage in an interdisciplinary and collaborative process to achieve regional goals around water management.
- My key takeaway was that our water history has been built upon cooperation. To succeed in moving forward with creative solutions and problem solving for all communities, every person needs to have the mentality that this limited resource needs to be shared, conserved, and planned for. In some municipalities even now, building is being halted, economic growth has stalled. If we, as leaders, do not help the neighboring communities in need, I fear that they will disappear at some point.
- Listening to the introductions indicated a lot of consensus on the needs to conserve, discuss, and cooperate. It is hopeful that consensus on need will lead to consensus on action. After learning about the water diversions from the Western Slope in the presentation and in the Great Divide film it is amazing to hear concern about Thornton

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moving water south. The last presentation of how our brain works is really illustrated by this issue. The history is so real, we can still see the ditches and irrigation being used. Hopefully, leaders of the caliber that produced these ditches and structures of law will be available to lead us through these challenges. It also makes it apparent that the impossible can be achieved.

- I enjoyed the introductions of everyone, all of the presentations and look forward to more dialogue on the topic. The key takeaway for me as a community leader is water in the west may just be the ultimate wicked problem and I am hooked!
- I really benefited from the historical perspective provided, especially the precedents for water law.
- My key takeaway from this session is the historical developments that led to the water laws and how they affected the western United States. This is really a significant national historical event that happened in our own backyard. The founding of Colorado in 1876 really had water at the forefront and chiseled into the state's constitution. The Union Colony-Fort Collins conflict in 1874 really necessitated the need for establishing water rights and how to settle these disputes. The "1st in Time" doctrine was key to the development of water law in the west.
- My key take away from class on Wednesday was this: The state had been looking for a solution to bring water from the west slope from the very beginning of our formation, even before we were a state. That the citizens overwhelmingly voted for a 1mil tax to fund the CBT project. I am impressed how people were educated and understood the importance of water.
- Contrary to what a lot of skeptics say, the Colorado River Water Compact is a good document for the State. If we were to unwind this document and try to recreate it, we would find that an updated version would not be as favorable to Colorado as this document is. I think I wrote down 5 or 6 different books just mentioned verbally – I have a lot to read! The diversity of the group and each of our backgrounds and passion for water and water related issues is amazing and refreshing to see and learn.
- I am impressed by the diversity of the attendees and the knowledge of the presenters. Great beginning. The realization that we (the Town of Wellington) are not alone in facing these challenges. It sometimes feels that way. That there are many people who are engaged in finding a way forward.
- Everyone who is impacted by CO water through their work (everyone in the class) is aware of the limited supply crisis, but we acknowledge that the public is not aware. Those who are aware of where their water comes from in CO and how it impacts the two separate slopes and the other western states are the minority. We all want to find a solution to ensure water is used the most efficient and beneficial way, but everyone has a different definition of that. There is motivation to find solutions though, optimism is there.
- I was impressed by the number of attendees in the room who have significant experience in different areas. Everyone in the room was in agreement that water is perhaps the most important natural resource we have in Colorado even though several different interests were represented. This includes municipal leaders but also developers, financial institutions, agricultural users, and lawyers. I left with the feeling

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we were all on the same page when it comes to protecting and preserving the remaining water resources we have.

- I found it incredibly interesting that regardless of which side of the political divide individuals are on, everyone seemingly agrees that water is a scarce and precious commodity in Colorado that needs to be managed wisely. Over the course of the last century and a half, the state and the west have developed an incredibly complex system that has, for the most part, been able to meet the needs of users in our state and users in the other states that rely on the headwaters in Colorado. Climate change and the increased aridification of the west are going to make water even more of a challenge in the west.
- My takeaway from the September session is the incredible story of water in Colorado. I have participated in the west slope tour provided by Northern Water but hearing from Brian Werner again brought back to memory the vast history that has shaped Colorado water law. I am thankful for those before us that were forward thinking in creating the doctrine of prior appropriation - "first in time, first in right". The history of Colorado water helps to understand where we are today; hearing about the various studies and projects also helps to identify how the past has influenced our current situation.
- Water has been a challenge in the past and will be in the future. It will take great leadership and ideas to keep the development of Colorado moving forward. It will be challenged on all levels. The climate may have the biggest impact on our water supply as the supply decreases and the demand increases. It will take creative thinkers to work with others and allow them to let some of their guard down to allow them to see the other side and hopefully find some middle ground to work with.
- a. Great session – loved Brian’s historical presentation. Amazing to start at the Louisiana Purchase and work forward with the history of water. b. Great group – I feel fortunate to be a member of the class! c. Really looking forward to this experience.

2. 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?

- Encouraged: I was taken by how positive and enthusiastic Brian Werner was/is about the future of "Colorado Water." Discouraged: I wasn't discouraged at all by the content/presentations of our Sept 29 session. Very interesting and encouraging. Thanks. Captured My Attention: From Martin Carcasson's presentation: It is excellent to have WLL (aged ~25 to 75 yr) and multiple other adult groups learn about and try to practice the public deliberation concepts and ideas presented. But, how and when can this foundation for public deliberation and democracy be introduced and instituted as part of the core [required] curriculum in public/private primary and secondary education [K through 12] in Colorado? That's the only way — when and if REAL change in our society's deliberative skills/practices and democracy can happen.
- Closely related to the previous item, I found significant encouragement in Dr. Carcasson's discussion about structuring dialogue to facilitate a problem-solving approach to wicked problems.

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- What encouraged me about our discussions, is that even though we are facing some pretty serious issues with climate change, it seems like more people are wanting to be involved with and support conservation efforts around water. People are continuing to have conversations about how we can work together as a state (not divided into east and west slopes) to make sure communities and people get what they need in terms of water. I especially liked the story of the ranchers who worked together to come up with solutions!
- Encouraged – I am fascinated by Martin Carcasson and think every person and organization could benefit from his program. I'm definitely following up on learning more about it. Discouraged – I think climate change is going to negatively impact the future of Colorado and the west.
- I was encouraged at the vision of the region already in finding solutions; but the future scarcity coupled with extreme growth is alarming. I always believe direction forward can be found in studying the history. I am looking forward to learning more about how past leaders found a way forward, and am looking forward to bringing my skills to bear to help educate others. As a new leader in Greeley, I want to be able to accomplish that same vision collaboratively into new space with our team.
- Martin Carcasson's presentation on wicked problems, polarization, and deliberative engagement gave me a lot of encouragement in approaching the topic of water in Northern Colorado. I'm actually very interested in tapping into his research to share with my students, as well as dive deeper into it for my personal professional development. We discuss wicked problems and communicating science through stories regularly, so it came across as exceptionally pertinent to me on a variety of levels. I also believe it set a nice frame for how we should approach conflict and critical conservation in the Water Literate Leaders program. I'm a firm believer that healthy and respectful conflict when managed well produces the most creative and innovative solutions to issues.
- The one resounding theme that I think all the speakers shared was a positive outlook for Colorado's water future. This has always been a topic that I have not been optimistic about as, right now, we have the haves and the have nots. Some municipalities have planned extensively for their water portfolio and far into the future. Others have not. I think if we spend time understanding each community's water needs and how they could be met, it would be a start to regional cooperation among the municipalities.
- As a member of a town board, the issues mentioned scare me. Those are huge steps in restrictions and limitations. I hope we can avoid making those decisions; but understand the necessity. Not a fun prospect but probably very possible. The understandable resentment of the Western Slope towards the Front Range; it is a mirror image of the Colorado River issues between the State of Colorado and other Western States. The presentation regarding how to discuss this around the issues involved and not in terms of the politics and beliefs of the participants was very valuable. Knowing what we think and why we think certain ways is very helpful. This is an excellent start on how to communicate. Each of us needs to evaluate the validity of our perceptions.

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- Overall, I was encouraged by the diverse spectrum of backgrounds, and viewpoints on water that my cohorts in class bring to the discussion. From young to old and everyone in between (#me), it is clear that the class is very passionate about this “wicked problem” we face and it encourages me about this issue and many others that we face in our country! Nothing discouraged me from this class, rather I was encouraged. I was captivated by the presentation on public discourse. Dr. Carcasson spoke more eloquently than I but the same language. What I mean is that I have found that in life, especially in government, we have much more in common than we all know and the answers are not on the left or right, rather in the center. It is how one frames a question / conversation that enables the center and ultimate answers to come forward! His presentation only emboldens me to improve in this area and become better at framing conversations to solve problems.....not just the wicked ones!
- I really wish that Martin Carcasson could have had more time to work through his presentation. The material is very good and communication is critical in any role we play.
- I was somewhat discouraged to learn from Amy Moyer’s presentation in understanding the western slope’s challenges and some of the weather patterns particular to the western part of the state. I found it interesting how the drought monitor shows such dramatic shifts in the western part of our state. However it was very encouraging to learn all that they are doing on the western slope to preserve and protect the water and increase efficiencies through the Community Funding Partnership.
- To hear that there is such discourse and individuals or groups trying to change the structure of water law in Colorado is very disturbing. I can see myself getting more engaged in that front to protect what we have established and is working and quite frankly a model for many other states
- I thought Martin Carcasson’s presentation was fantastic! He really simplified the cycle of exaggerated polarization especially as they relate to our emotional thoughts. What this has done is made me more cognizant of how we negotiate our values and truly listen and understand the perspectives of others. I plan to read the book “getting to yes” soon. The quote “we judge other groups by bad examples and judge ourselves by our best examples” is unfortunately the reality we live in today.
- Encouraged: Brian Werner’s comment about the many talented people who are working on this complex problem (water scarcity and climate change). We have faced tough times in the past and have come through. That there are many others who are willing to work on creating solutions. Discouraged: The seriousness of the situation that Colorado and the region face. There will be no easy solutions. The “water gap”. Captured my attention: The history of water in Colorado. Quite fascinating. Martín Carcasson presentation on *Addressing the Leadership Challenge of Polarization and Groupishness* This is something that we have seen over the past several years in national politics. It has now reached into our personal interactions with almost everyone.
- I really enjoyed listening to the last speaker, Carcasson, on polarization. It was a really interesting look at how it stems from peoples different understanding/morals/reason. I agreed with his idea of just asking the other disagreeing party what their purpose is

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for believing something rather than just assuming they are wrong or evil. This type of communication would be beneficial in almost all of my future engagements in the future, just having empathy for the other side.

- I thought it was remarkable that there was some discussion about the interstate compact agreements Colorado has with other states and that by attempting to renegotiate these agreements, Colorado would probably lose more than we gained. It's no secret Colorado's population is booming however this pales in comparison to the already existing populations in Arizona, California, and Mexico. Admittedly, I was one of the people before the class started believing we as a state need to rework these agreements however I'm now of the opinion perhaps we currently have a very good position.
- I found Martin Carcasson's talk on polarization and groupishness very intriguing. It's frustrating that human nature leads us to crave certainty and consistency; and therefore we want to form groups that think like we do and cherry pick evidence. I like that Martin shared steps with us for depolarizing situations so that we can have genuine conversations with those that see a situation differently than we do. It gives me hope that we can find answers that work for everyone on water issues and also on the larger political issues our country is encountering right now.
- The presentation by Martin Carcasson piqued my interest in relation to how we deal with public engagement; he noted that community problem solving brings out negative aspects as opposed to positive ones. This is certainly something that is being experienced across the nation related to a myriad of topics. Locally we deal with the public on a regular basis and generally when trying to gather good information those that are against the issue are the loudest! I can see how using the deliberative engagement process could help in those situations. I think part of the problem is that in preparation for a "town hall" we focus on how to handle the negative comments as opposed to trying to bring out the best in people. As we dig deeper into water issues/law, my bet is that we find ways to use this type of engagement to not necessarily come to consensus on issues but we will be able to at least agree that we understand the issue.
- The thought-guarding that we all do explains a lot about how divided we have become. I am encouraged that we can train ourselves to let this guard down and listen to the opposing side. I see this as a big challenge for future negotiations. I usually find myself in that middle ground. I take a lot of time to gather information and data from all sides and at times think about things way too long before making a decision because I need to make sure I have gathered as much information as I can to make an educated decision.
- a. The discussion around the shift in focus from more local water issues to the significant attention on the Colorado River is appreciated. There is so much news on this and Brian's perspective of positivity and hope regarding water was encouraging.
b. 10 essential books to understanding water from Brian and the many additional resources was super encouraging. Thank you!

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

- Can (or why can't) science and technology simply synthesize more water [$2\text{ H} + \text{O} \rightarrow \text{H}_2\text{O}$]; so that "all of this" would simply go away. And, there would be a whole new set of questions and circumstances to answer and manage? There's plenty of oxygen (21% of earth's gaseous atmosphere) and hydrogen around!
- Are the Basin Roundtables providing an adequate forum for the types of discussions Dr. Carcasson was talking about? If not, can the Roundtables be better utilized in this regard?
- Even though there is a reserve and currently Colorado isn't using its full water use allotment per the Colorado River District, will this become a problem for the state in the future with climate change and population growth? Since there is some downstream overuse already does this set a precedent for more water moving out of the state?
- I've started reading some of the hand outs: Where your water comes from – Page 10 – I thought it was against the law for any homeowner to re-use water as in grey water recycling? Please clarify.
- Jennifer mentioned a white paper from the Greeley Chamber of Commerce explaining the basics of the region. I would be curious to read if she can locate it. Also, I really enjoyed the last speaker; as a class on current dialogue and how we can tackle communication around current issues.
- I'm curious to better understand how the percentage allocations were delineated in the Colorado River Compact, and what role contemporary values/perceptions/legal standings of Native Americans played in the creation of regional water rights? During Amy Moyer's presentation, she discussed the \$4.2 million annually slated for high-impact projects and investments for water challenges on the Western Slope. I'm also aware that the City of Fort Collins has previously implemented a community innovation grant. I'm interested to what extent these types of incentives are creating community-based solutions, and how we can scale and fund programs like this across the region/state/cross-boundary if they are showing promise? How can we (as the cohort) collectively adopt a wicked problems mindset going forward, and keep it at the forefront of our discussions, especially as we draw closer to the "opportunities for regional cooperation"?
- Many of the speakers demonstrated and explained how many of the reservoir, ditch, river, etc... systems are connected. I've always wondered if water is transferred from one vessel to the next. I understand logistically (for the most part), but does Horsetooth call Lake Loveland and say "Hey! We're sending down a bunch of water! And then does Lake Loveland call Boyd and say, "Hey, we know you're full, but we have to send out this water, so drain away so we can send you XX amount of acre feet." It has always been my view that there is a magic man behind the current who pulls levers to make the reservoirs and lakes full, or empty. To understand how all the different companies work together, would be great.

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- It seems reasonable that with the shortages that there will be evolution of the concepts behind the “beneficial purpose” clause. Will lawn watering be considered a beneficial purpose as water becomes even more scarce and expensive?
- After viewing the maps shown by Amy Moyer, I would love to better understand what will occur if we do not find ways to increase the level in Lake(s) Powell and Mead. I would like to chat more about climate change. I don’t disagree that Earth’s climate is shifting, I do not think it’s as dramatic as some would lead us to believe. Even on the extreme, a 5.4F change over 123 years (see slide in Moyer presentation), doesn’t seem as overwhelming as one might think. Without knowing enough, it seems like we are often focused on climate rather than sheer consumption by a growing population that wants an unlimited supply of water. I would like to understand the storage strategy of water more. We briefly touched on it in the Moyer presentation and a class question. Powell and Mead are in the low 30’s yet Flaming Gorge is in the mid 80’s. Why? Strategy behind it? As we sat in class, I wondered what other states are doing to address the water problem we ALL face? Is California for example, cutting back, educating its citizenry and changing land use code?
- No additional questions at this point.
- One question I have is how do we deal with some of the polarization we have between “sides” on the issues facing water today? In Martin Carcasson’s presentation, he laid out how easily we take our sides and entrench our positions. It seems there is a lot of stagnation in many of the proposed water projects with political polarization seeming to be the cause.
- So far I don’t have any questions, this first class was a good whetting of the appetite as to what we are going to dive deeper into.
- The priorities and uses for water are so diverse with, as Brian explained, domestic uses being prioritized over all other uses (Domestic Agriculture Manufacturing). How do we create policy which doesn’t fully neglect or become too impactful on the other secondary uses of water – recreation, environmental, energy, etc.? Or maybe the question is how are the policies currently in place not recognizing these secondary uses – should they be acknowledgement of these items?
- How do we engage the public and provide meaningful education about this complex issue? How do we play into the solutions?
- How do we move forward in educating the public in the Western U.S. on the water dilemma and how do we get a forum with enough voices to make decisions on what the most beneficial use is?
- I’m interested in knowing what current projects the Bureau of Reclamation is currently involved in or considering which would affect Colorado. There have obviously been massive projects in the past and I wonder if we still have the same mindset as a state and nation that we should continue to commit dollars to large water infrastructure projects on a regional scale. I understand storage projects such as NISP are in the works however is there any discussion involving large users such as California becoming less dependent on Colorado sourced water?
- How do we best mitigate the challenges that we will be facing to all water users? How can we better incentivize water conservation for ag, industry and municipal users to create better outcomes?

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- I don't have any specific questions from this month. I do want to learn more about the nuts and bolts of CO water law – it is definitely a topic that I won't ever fully understand but I want to be able to participate in discussions and feel that I have enough foundational knowledge to bring value to a conversation.
- a. I agree that the compacts that Colorado has should be heavily guarded and not reopened. Do you think other states will try to reopen these compacts to help with their water needs? b. Climate change has impacted the water in and out of Colorado. Are there any plans on how to counteract these changes? It appears that we may be way behind and catching up will be a major challenge. c. It is good to know that we can train our minds to be more open to other opinions and data. Will there be any future coursework or work sessions on this training?
- a. For a student with less base knowledge of the water world (me) are there any videos that you recommend from the list before the next class? I will review the Citizen's Guide to Colorado Water Law. Thank you!