

2018-2019 Water Literate Leaders of Northern Colorado  
Homework Assignment for **December 2018**

**What did you learn today that encouraged you?**

- It was encouraging that municipal water users are putting significant effort and resources into limiting the effect on rural communities that occur when a buy and dry purchase takes place.
- Thornton does appear to be a good “neighbor” with regards to the stewardship of the lands that they own in Weld and Larimer Counties.
- Ditch companies are very well managed and making concerted efforts to increase efficiency and reduce water loss.
- While irrigation companies are a business and are not looking for the environmental side of water usage, they are working hard to find ways to maximize the water they can get to their customers. (North Poudre Irrigation Company lining ditches to reduce seepage).
- North Poudre Irrigation's willingness to work with other users to find innovative solutions to water issues. Thoroughly enjoyed Robert Sakata's time with the group.
- All presenters were interesting. I particularly enjoyed Robert Sakata.
- While I have no idea how we will have enough water for future use, I am encouraged that there are a lot of smart and committed folks interested and concerned about the question and the future – for ag, for people, and for the environment. It isn't going to be easy and passion for a perspective can add to the challenge but – we've come this far. It is an extraordinary system that has been built. We can rise to and solve big challenges.
- Was encouraged with Stacey Baumgarn's presentation of increased public awareness of the waste and inefficiencies of bottled water.
- Tad Moen said "Biggest thing is getting rid of that old school mentality." This is encouraging to support new ideas and hopefully a paradigm shift that will better tackle our local water issues.
- I was encouraged to learn more about the Thornton Agricultural Stewardship Office, and also to hear about the Ag Protection Water Right.
- I was encouraged by the diversity of thought and emphasis on new approaches and collaboration from the ditch company representatives.
- Possible beginning of collaboration (water bank) of northern Colorado communities; Focus on conservation of ditch water; Agricultural presentation on front range farming.

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**What did you hear today that discouraged you?**

- It was discouraging to hear how difficult and costly it is for certain ag producers to ensure their water rights are not injured due to change cases in state water court. Ag producers operate with a very thin profit margin and additional unnecessary costs that are required just to ensure their water rights remain whole make it challenging for ag to continue to exist especially in areas where there is high demand for conversion of ag rights to municipal use.
- I had originally thought that the Alternative Transfer Method approach, coupled with irrigation efficiency improvements could create a new market for water while leaving property in agricultural production. However, it appears that may not be as promising as I thought. As more water is removed from the existing system of irrigation ditches, the future viability of those ditches comes into question.
- The disincentives to water efficiency in agriculture.
- Most disappointing is that facility wide pouring contracts prohibit or limit the number of water bottle filling stations; ought to be illegal restriction; If I understood correctly, NISP will have very junior rights and likely won't get water every year.
- As usual, this is so complicated. How are we going to be able to accomplish anything?
- Stacey's book report that bottled water has little regulation. Change cases often penalizes conservation and efficiency in return flow calculations relative to historic consumptive use. ATM processes could introduce weeds that are detrimental to vegetable farmers.
- The loss of knowledge we are heading toward as family farms disappear. I guess larger, industrial / corporate farming will take its place but it seems we will have fewer and fewer people who really understand / know what real food is and how food (crops) are grown and sustained. Yikes.
- Really enjoyed the discussion with Robert Sakata, particularly about the importance of estate planning, but so discouraged that there is no plan for the family to continue the farm. Seems like the iconic Sakata Farm will become the victim of "buy and dry".
- During this class in particular, I got to thinking about water as a moral issue. The complication of our water challenges goes deeper than just the landscape and the human need into places where we have to challenge our thinking regarding if water is a right for everyone, and does that "everyone" include the flora and fauna needs of our natural as well as created environment?
- Some of the laws are in direct contrast to possible partnerships and solutions. For example, the North Poudre Irrigation Company can't release water to Nature Conservancy as keeping fish alive is not considered a beneficial use, or when Dan talked about the disincentives to be more efficient with irrigation.
- I was discouraged by the gloomy long-term outlook for local fruit and vegetable growers.
- Failure of previous water collaboration opportunities; Decline of agriculture on front range.

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**What did you learn today that surprised you?**

- It was really surprising to learn how water quality issues can affect food safety and the effort and resources produce farmers must put in to ensure water quality does not affect food safety.
- I was very surprised to learn that exchanges can happen outside of the water court system.
- How expensive water efficiency measures are.
- Lining ditches with bentonite can have such a drastic impact to reduce seepage and increase flows; North Poudre shifts from delivery 5.5AF/share to 7AF/share just to decrease seepage loss; that North Poudre, as an original CBT investor, gets water at \$1.50 per unit (did I understand that correctly!!!????); Fracking water can only be excess water? Sells for \$1,500/AF?; Thornton owns a ton of real estate!!! The got a bunch of water, but now need to establish a completely different municipal division for mowing fields, growing grasses, renting farms and farm houses!
- A water share is not the same quantity everywhere. It's like monetary shares for companies. I had no idea, but it makes sense.
- Realizing that Thornton is not the bad guy in the room for buying farms in Northern.
- Colorado. Farm owners estate planning becomes complicated as water prices increase.
- The Sakata family story.
- While it should be obvious – I have always been curious about all of the ditches. It was interesting to learn how they developed through time and... how (of course) topography (and quantity of water) determines service territory (and its extent). And, that not all “shares” of water are the same – in type, usability, or volume!
- Continue to be amazed and at time startled by the complexities of water delivery- seeing that this is especially true with the delivery of irrigation water.
- I was surprised to learn about the concept of re-vegetated farms; I am ashamed I thought commercial enterprises would be less responsible than to do something like this.
- Given that CBT shares will be used up in 5-10 years, and the dramatic increase in share prices, I'm surprised there isn't a greater sense of public urgency to find solutions.
- I was surprised to learn that our class no longer has an agricultural voice.
- Ditch management history; Cost of lining ditches with bentonite; August river flows are mostly from mountain reservoir releases; Approaches to filling reservoirs on front range; Regulations required of front range farmers/impacts of farm bill.

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**What did you learn today that you want to know more about?**

- Learning a little bit of detail about exchanges was interesting. I'd be very interested in understanding how some of the more complex three way exchanges take place. Are they typically approved by the water court system or are they informal agreements and how does the water commissioner monitor these exchanges?
- From listening to Tim Dow it appears that one of the last all Ag systems, Larimer and Weld, is beginning to go through the first change case. It would be interesting to track the progress of that case.
- I want to explore more about ATM's.
- Rule 11; didn't understand the brief commentary at all; not sure of its impact or relevance.
- What are the ecological effects of lining ditches with bentonite?
- Would like to read "A Ditch in Time" - a book on Denver Water history and structure. Although only alluded to, would like to know more about hydroponics.
- As this course and story unfolds, I am continually fascinated by the complexity – the ways in which water can be traded / swapped / delivered – in quantity, time, and place, etc. WOW!
- So excited to meet and listen to Dan Brown- such a wealth of information, wish he could have talked longer! His presentation really helped me begin to understand some of the basics of water law. Can he come back again?!
- I feel like I need to learn more about the "color of water" -- a quick Google search shows a few options (Blue - Potable; Green - Sewer & Drain Lines; Purple - Reclaimed, Irrigation, & Slurry) but are those the only types?
- Opportunities for Glade/Thornton collaboration.
- It would have been nice to hear Morning Fresh / Noosa's perspective on water.
- How does Division of Wildlife partner with ditch companies in stocking lakes/management of wildlife?

**Was there anything today that captured your attention to the extent that you could see yourself engaging in it further—to study it further, to play a leadership role in bringing it to the attention of others?**

- I was really impressed to see how WSSC ag users and the City of Thornton have apparently worked very well together and displayed concern about each other's interests given they have very different goals. Although in my formal role I cannot personally be a proponent on any type of project, I do think that general concept can be applied to other processes.

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- I think the dialogue at the beginning of class about the potential for a regional partnership, and what that could look like was intriguing. I would very much be interested in engaging further in that.
- Really need to understand more of what the details would be on the ownership of NISP units; if so junior, might they be worthless in some years? When NISP units come on the market will the price of CBT be affected?
- Water exchanges: Fossil Creek Reservoir (south of FoCo) was built to exchange water with someone further north, so they can take water north of town; There may be an opportunity to use exchanges to increase river flow in certain areas.
- The concept of “beneficial use”. How much fighting/debating/etc. has gone into this definition and, how has it evolved through time and how might it further evolve in the future? What are the opportunities (and dangers) in changes to this definition?
- I continue to ponder the efficiencies of delivery and use of irrigation water and seriously wonder how all agricultural water is on a level playing field.
- I struggled a bit visualizing how the ditches work -- turning switches on and off, etc. It got me to thinking about how cool it would be to see a working model of one of our rivers where the observer could work the ditches and actually experience the water priorities. This further made me think about how cool it would be to have a "Water Museum" somewhere along the front range so that the average citizen could be further educated on the water challenges we face in our state.
- I envision future conversations with ditch companies.
- The future of Glade Reservoir; Rawhide Energy; Supporting local farmers at markets and increasing interface between students and active farmers.