

**1. What did you learn from the film that encouraged you?**

- The 2013 executive order signed by Hickenlooper directing the Colorado Water Conservation Board to provide a plan for the future made me feel a bit better about the entire situation. I know that we have smart people in this state and technology is only getting more and more advanced, so this gives me hope that we will come up with something brilliant for our future water needs. I am also impressed with the 9 Basin Roundtables and their efforts -- I am a sucker for collaborative solutions.
- I realize that this answer sounds a bit like a cop out, but I found the film itself to be incredibly encouraging. As Central's District Engineer, one of the biggest difficulties that I face when interacting with the general public about water rights and water resources management is finding a quick and effective methodology to describe Colorado's prior appropriation system and the interaction of this important doctrine with the waters of Colorado. I thought this film did an incredible job of presenting an approachable and engaging summary of Colorado Water Law and our water resources. The story about the Echo Park Dam and some related 1964 legislation; The 1968 National Wild and Scenic River Act; State legislation that recognizes in-stream flows and recreation as a type of "beneficial use"; Two Forks dam did not happen because the case for conservation (and alternative transfer methods/trading) was convincing enough.
- Increased voice of citizens and environmental concerns; Mesa Verde – Ancestral Puebloans working in similar conditions; Current collaborative efforts of multiple stakeholders in water management; Decrease in dam production/environmental movement increase; Recent impacts of water conservation in cities.
- The future is not going to look like the past.
- Continued history of collaboration, cooperation and compromise; Some ideas and plans in progress to address the challenges.
- I was encouraged by the holistic water management approach being practiced in the San Luis Valley. It appears to be a model that fosters both innovation and accountability when working with a constrained resource; additionally, I was encouraged by the intentionality of resource planning and strategic thinking that has occurred in this arena over the years with agencies such as the BoR and the CWCB; I was also encouraged by the movement toward shared interests between water managers and environmentalists, and the broadening definition of beneficial rights.
- The idea that people are planning ahead.
- This is both discouraging and encouraging: We seem to do things without anticipating or without knowing issues that will come up in the future, but then we work hard to rectify what we can when the time comes. But preventing disasters in the first place is preferable to trying to fix something after it's broken.; That environmental groups are learning to speak the language of water law and vice versa; the Colorado Water Plan.
- The biggest encouragement from the video is that there is, on occasion, the ability for competing interests to work together to better manage a public resource for the greater good. Quite often competing water interests become so adversarial that there is never the opportunity for open and honest dialogue. When these competing interest work together, projects can be designed to consider the long term health of the aquatic ecosystem as well as the growing needs of the community.
- I am encouraged by the awareness of environmental needs in regards to river health. Seems to be an understanding that you can serve needs of municipalities and still show concern for the

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environmental needs and its importance on the long-term health of the river; Conservation efforts seem to have helped although not the only solution.

- I was encouraged that Colorado has a history of compromise and collaboration when it comes to water.
- I was really encouraged by the amount of collaboration, with all stakeholders, that has occurred in the past with regards to construction of major water projects. I believe that collaboration is going to be critical as we plan our water future.
- The countervailing pressures brought by both the water development community/laws and conservation community/laws that will ultimately help achieve the goals of both.
- Much forward thinking, even 100+ years ago.
- More ink has been spilled than blood; collaborative solutions have been reached; alternative transfer methods (temporary leasing) prevents some buy & dry solutions; Colorado River Compact shows competing interests can develop a win-win solution; one of 9 interstate compacts addressing water sharing with downstream states; reclamation of the South Platte around Denver; in-stream flow programs add focus on leaving water in the river, including recreational flows (but see Crystal River images and issues); Animus/La Plata project took forever but addressed concerns of many interests, including Native Americans; signs that engineers, water managers, and environmentalists are moving toward constructive conversation; State taking steps to create avenue for cooperative solutions (9 basin commissions); Governor's efforts to create a State-wide water management plan seems to set the framework for a cooperative approach by all stakeholders.
- What encouraged me most from this film was hope that all sectors can get along and together we can learn ways to all save water.
- The most encouraging thing to me is the number of passionate folks working towards a solution.

**2. What did you learn from the film that discouraged you?**

- I did not realize that conservation would only reduce our future needs by 25-35%. In a time where water is expected to become more and more scarce this is not enough.
- While I truly believe that environmental impacts due to water projects do need to be contemplated, I do think the unintended consequences of the environmental movement of the second half of the 20<sup>th</sup> century are discouraging and should be re-evaluated. In order for Colorado to continue to grow and thrive, major on-stream water storage projects will be vital to the success of our state. Having said that, regulation does still need to exist, so that we can build projects while continuing to minimize impacts to the environment. Regulation needs to continue to become smarter and more efficient as time goes on or we risk not being able to effectively supply water to future generations without significant sacrifice to agriculture and recreation.
- The concept/practice of “use it or lose it” (and related unintended consequences); Realizing 40+ million people depend on the Colorado and 70% of the water is siphoned off – long-term sustainability and viability of this over-allocated resource; Conflicted feelings about Wayne Aspinall and his legacy; While the Dolores Project may have (partially) corrected a long-standing wrong – it is sad in that it needed to be corrected. Better late than never but, yet another piece of the painful legacy in how Native Americans have been treated. A very complex story and back-story I am sure.
- Complexities of problems facing Colorado/world with water needs; Impact of dams on natural water flows.

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- Negativity towards lawns and the must use to keep your water right.
- Pace of growth vs. pace of projects and conservation efforts; Rapid decline of water levels on Oglala Aquifer; Rapid and unpredictable patterns of climate change.
- The complexity of the overall system and legal structure is daunting; it is discouraging to know that the gap between supply and demand will be realized as early as 2030, and that climate change threatens to make the issues around water storage even more important.
- The projected population increase for this area.
- How shortsighted people can be; How are we going to bridge the gap of more people with less water?; While we may now be speaking the same language, we're still talking from different hilltops.
- The film paints a altruistic picture of competing interests that are starting to work together to solve water challenges and hints that the future will continue in that direction. Although this is a great goal, too often that approach does not happen. There are many examples of projects in Northern Colorado and elsewhere in the state where these competing interests fail to work together to solve problems which is understandable, but highly discouraging.
- The fact that the Colorado River often does not reach the ocean; the gap between supply & demand of water continues to increase. I wrote 2030 on my notes so I assume this is the year that demand will be greater than supply.
- I was discouraged by the notion that we could have an unresolved water demand vs. supply gap when my kids graduate high school.
- I was really discouraged by the thought that in most years there isn't enough water to satisfy all users' needs. I was further discouraged that a statewide water gap between supply and demand is predicted by 2030.
- The apparently overwhelming growth in all uses of water that threaten long-term sustainability.
- Reservoir levels so low that turbines may no longer be able to generate power; Colorado's population will double by 2050; insufficient water by 2030; existing approach to meeting needs of today's 5 million people not a sustainable model for next 5 million; despite alternative transfer methods, towns and cities prefer certainty of purchasing outright senior water rights; also viewed as a farmer's pension plan; under interstate compacts, 2/3 of Colorado water must be delivered to other states; conflicts over these agreements continue to this day; harder to reconcile water management with environmental goals to return rivers to uncontrolled flows; Echo Park success of Sierra Club and Two Forks dam success shows tension between control of water for use vs environmental resistance; Colorado Water Congress; Colorado one of the first to see surface water and underground aquifers as a linked system; example of Republican River and Ogallala aquifer, and draining of Spiney Reservoir, suggest more work needed; San Luis Valley facing alarming challenge given water use far exceeds sustainable levels, including underground aquifer; 2003 court order to shut down wells to preserve senior diversionary rights, leaving fields of crops to dry up; projects to increase availability of water for future resident growth (NISF) are held up by environmental concerns.
- The most discouraging thing I learned from the film was the amount of time and money it takes for us all to agree on something.
- The water issue seems so complex and overwhelming.

### 3. What did you learn from the film that surprised you?

- There were so many things in this film that I did not know about (some of which made me feel really ignorant even though I have lived in Colorado since the age of 8 months old!) Specifically how much of our water use goes to Agriculture and that many of our engineering feats are actually pulling water from the Western Slope of the Rockies.
- Even though I knew about them before the film, I am constantly surprised by the engineering accomplishments of early Colorado that make present day life possible, including the Roberts Tunnel, the invention of the center pivot, ditch systems and irrigation companies, the Gunnison Tunnel, Cheesman Dam, Colorado Big-Thompson Project, the FryingPan-Arkansas Project, and Lake Dillon. As a state, we should do more to educate our citizens of these major engineering accomplishments.
- In the opening lines of the film – the extraordinary stats related to the impact and importance of the Colorado River and water resources flowing from CO; The original designation/description of the Great Plains as the Great American Desert – I guess I had never heard that; The idea of Powell’s boundaries based on watersheds; I am embarrassed to admit I never really knew or thought about what the Bureau of Reclamation was or did; How have I never heard of the Fry-Ark project?
- Recent collaborative efforts to co-manage water with all stakeholders; Depth of water management history in Colorado; Distribution of water resources (80% Agriculture / 80% of run-off Western Slope).
- Extinct beaver-made wetlands.
- Agriculture still has 85% of the water and the rate of decline in aquifer.
- The film was very informative, and I realized that I have a lot to learn on this topic. I was surprised that 80% of our water supply originates on the west side of the divide while 80% of the use is on the east side; I was also surprised to learn that it was a conflict between Union Colony and Fort Collins over irrigation that initially led to the concept of senior water rights.
- I've seen this film a couple times before, so nothing.
- I'd never really heard how the CBT project had come about before; How many diversion projects there are in Colorado?
- I grew up in the Arkansas Valley in Southeast Colorado and my family still utilizes some water that is diverted by the Fryingpan-Arkansas Project so I was very surprised to see video of President Kennedy dedicating the project. I was not fully aware of Dan Luecke's environmental movement behind the Two Forks veto which I find to be a fascinating story.
- The amount of water that leaves the state via Colorado River & South Platte; 80% of water originates on Western Slope but 80% of population on eastern slope.
- I was surprised to learn that the state’s population is projected to grow by “five more Denvers” by the middle of the century. (I don’t remember hearing it mentioned that way before).
- While I knew that the Colorado River was a MAJOR supplier of water to the west, I had no idea that the combined economy of the cities served by the Colorado would equal the 12<sup>th</sup> largest economy in the world. I was also surprised to find out that 2/3 of the surface water in Colorado must be delivered out of state because of various compacts and agreements.
- The extent of agricultural use (80%), and the massive scale and number of diversion projects and complexity of state-wide water systems.
- That the idea of first in time, first in right began off the Poudre River; Ag uses 85% of the water in Colorado (how much now?); Colorado River feeds about 50% of the country’s fruits & veggies; Up to 2/3 of Colorado’s water must go downstream out of CO.

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- 18 other states and Mexico get water from Colorado; 80% of State's water originates on the West slope, but more than 80% of Colorado's population resides in the East slope; the Colorado River rarely reaches the sea; 2/3 of State's water is held in snowpack; supply of clean water as critical to health as a supply of penicillin; Powell created maps with State boundaries reflective of water sheds, not typical political boundaries; In the 1850's, water levels could fall so low that a single farmer could empty a river; Union Colony #3 ditch water reduced when competing ditches built upstream near Fort Collins; birthplace of Colorado water law was in the Cache le Poudre basin; prior appropriation law allows first users to divert water far from the basin where it originates; use it or lose it works against current rights owners from trying to use less/conserves; today 85% of water use in Colorado is for agriculture; Moffat Tunnel was a WPA project; Dillon Reservoir is a diversion system bringing Blue River water to the East slope; Metro areas that rely on Colorado River water have combined economies that is the 12<sup>th</sup> largest in the world; half of the flow siphoned off to feed agriculture centers that produce 50% of the nation's fruits, nuts and vegetables; Colorado River Compact on 1922 restricts how much water can be used in Colorado; Adams tunnel part of CBT projects, sponsored by Bureau of Reclamation and addressed in Colorado River Conservation District agreements; completed in 1956; made Weld County largest agricultural producing County in Colorado, ranked in top 10 nationwide; followed by Arkansas River diversion project in the 60's; allows expansion in agriculture and provides water to Pueblo, Colorado Springs, and Aurora; Aspinall pushes to make sure Western slope gets its share of Colorado River appropriation; 3 dams on Gunnison; Blue Mesa Reservoir largest body of water in Colorado.
- I honestly was not surprised by anything addressed in the film. While I have much to learn, I have been aware of and know about what was presented.
- How Colorado has been a leader for a very long time in working towards the complex solutions of supply vs. demand.

**4. What did you learn from the film that you want to know more about?**

- I want to know more about what Aurora has done with its water re-use. I did not quite understand what was going on there from what was discussed in the film.
- I would love to learn more about the design, construction and negotiations that made our trans-mountain projects possible.
- CO as the headwaters of four great rivers – with 2/3 of the water moving during the spring snow melt; CO River Compact – and that 2/3 of the surface water must be delivered; The CBT and related stats; Fish as indicator species (canaries in the coal mine was the reference)
- Big Thompson Project and water allocation in NE Colorado; Acacia system.
- Aquifers and related sustainability issues. Ditch systems and opportunities for increased efficiency.
- The need to overhaul Colorado water law, particularly use it or lose it.
- I'm interested in learning more about some of the pending projects that are currently in the permitted process, such as Windy Gap, Gross Reservoir and NISP; I also want to learn more about strategies such as alternative transfer rights and conservation techniques.
- How to develop new resources to meet the increasing need.
- Water Supply Initiative and the Prairie Waters Project "Water Loop" in Aurora.
- I would like to know more about the 9 different interstate compacts and how those different compacts effect the administration of state water law within each basin.

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- I would like to learn more about the impact of “Buy and Dry” on the long-term health of water; aquifers and managing their long-term sustainability; the Colorado water plan; Tourism / Recreation Needs vs. Municipal Needs.
- I would like to know more about The People’s Ditch in the Sangre de Crist National Heritage Area. I would also like to visit the Living West exhibition at the History Colorado Center.
- Two things: What effect does the “use it or lose policy” have on the potential for conservation? And what impact could a rotational fallowing program have on cultivating future water supplies?
- Alternative Transfer Mechanisms and water quality strategies.
- How much does AG use now?
- Have a chart that shows all of the boards, commissions, committees, institutions and entities that are or should be “at the table” to develop a cooperative solutions; names of each entity and their goals; the Prairie Waters Project details (renewable water loop); all of the interstate agreements to which Colorado is a party and an outline of what they provide.
- I am most interested in figuring out ways to make water uses more efficient. We have come a long way, but I believe all sectors could do more.
- Holistic water management.

**5. Was there anything from the film 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 could see myself working to increase the scope of the Fort Collins Waterwise Program, perhaps also trying to increase the incentives for xeriscaping and/or being the most water wise on your block.
- As Central’s District Engineer, I engage in the water rights and water resources topics covered in the film on a daily basis. Water supplies and water resources are a constant topic at Central as we continue to build out our system to be able to successfully supply our members with a reliable supply of water year after year. Although frustrating at times, I find every aspect of my job to be complex, fascinating, and ever-evolving. In order to be successful as the District Engineer, I must constantly study water rights and be a leader within our community.
- Will our future decisions be equitable? Economically? Socially? Environmentally? How do we avoid decisions that lead to a situation where those without political capital, economic capital, or deep knowledge of this complex situation will not become the modern day equivalent of how we treated Native Americans (and needed the Dolores Project to “remedy”? Basically – as water becomes more expensive – will resources (and clean water) only go to those that can afford it?
- Acacia systems; How is this connected to Colorado K-12 Educational System?; Leadership role in further developing educational component of water management issues in Colorado.
- More about WISE and water recycling.
- Policies that communities can enact that result in more effective uses of water and conservation; Evaluation of water treatment options.
- I look forward to learning more about the overall topic as it is very relevant to my current role at the City of Fort Collins.
- I will be gaining additional knowledge by attending this class as well as continuing to serve on the Greeley Water Board.
- We need to change our culture around water and “There’s going to be a new awareness of the value of water”

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- There were a lot of topics covered in this film that captured my attention. The history of the development of Colorado Water Law back to the gold mining era was extremely interesting and I'd like to learn more about that. My professional role within the Federal Government requires me to refrain from being an opponent or proponent of any project, I do have the ability to encourage project proponents to work with competing interests to better plan their goals. I think the Learning By Doing approach could be applied and improved upon with other projects within the state.
- While I was not on the board of the Poudre Heritage Alliance when we decided to help fund this film, I am proud of the PHA's connection to it and what it stands for. I hope to continue to be an advocate for meaningful dialogue and sustainable, middle-ground solutions.
- I would really like to understand the reasons why the Two Forks Dam was veto'd? I'm always a big believer in fully understanding why things failed so that you can learn from them and avoid making the same mistakes in the future. I also found it very interesting that we are utilizing less water these days while our population continues to grow. What is driving that reduction in use? More efficient appliances? Smaller dwellings / lots? Changes in building regulations? Conservation? This is very interesting and hits particularly close to home for me.
- The overall dilemma of the west slope/east slope water dynamics and the need to be vigilant with both urban and agricultural water use.
- Interesting to think that there are those who believe that we need to revise the water rights system; Balance between aesthetics and needs for water.....; 25% - 35% of water can be conserved. The remainder?; Seemed like a very fair presentation.
- Hard to come up with a topic narrow enough at this point; the entire issue captures my interest, but will need to narrow that during our coursework; my bias is toward ensuring sufficient water for agriculture and growth and development vs recreation needs, so I need to learn more to appreciate a more balanced approach.
- The topic that captured my attention was the study of water management.
- Holistic water management, specifically as it applies to irrigation cooperatives in Northern Colorado.