Planning for an Uncertain Future: Drought Contingency Planning, Demand Management, & West Slope Agriculture

Over 200 people attended a conference sponsored by the Grand Valley Water Users Association at Colorado Mesa University on October 23, 2018. These minutes were compiled by Ken Ransford, Esq., secretary and recreation representative for the Colorado River Basin Roundtable.

Amy Haas, Upper Colorado River Basin Executive Director.

1. Amy Haas was hired as general counsel for the Upper Colorado River Commission 1 year ago. The Upper Colorado River Commission is an interstate administrative agency, comprised of 5 commissioners, 4 from the Upper Division states of Colorado, Wyoming, Utah and New Mexico, and 1 federal commission member. **At least 4 of 5 votes are needed to pass a motion**. In the lower basin, the Dept of Interior chair is the water master. The Upper Colorado River Commission doesn't go to any state and dictate what is done. **The Upper Colorado River Commission doesn't have a water master**.

2. The Upper Basin's Drought Contingency Plan is to maintain critical elevations in Lake Powell and Lake Mead. Why now? **There's been an extreme drought since 2000**. In 2013, lake levels were precipitously dropping in Powell and Mead. The operational criteria in **the 2007 Interim Guidelines were simply insufficient to protect against dropping reservoir levels**; then Department of Interior director Sally Jewell said if you don't address this, the federal government will. In December 2014, the Upper Colorado River Commission developed an Upper Basin plan.

3. "**Non-Depletion Obligation**:" The 1922 Colorado River Compact requires that the Upper Basin not deplete the river below 75 maf every 10 years. Once Lake Powell declines, it's harder to meet these obligations. There are **3 potential responses** to a Compact Call: (1) Drought response: develop Drought Contingency Plans to **drain Colorado River Storage Project reservoirs** in the Upper Basin. (2) Demand Management: investigate the feasibility of **compensating farmers to use less; (3) Cloud seeding**.

4. Drought Contingency Planning began in earnest in 4th quarter 2017, primarily in response to Mexico's drought planning. The Drought Contingency Plans are a patch, not a permanent solution. **Mexico said it would cooperate with the stipulation that the Lower Basin also participate in Drought Contingency Planning**.

5. Demand Management involves reducing the risk that Lake Powell dips below 3,525' or 3,490,' and reducing the risk of involuntary curtailment in the Upper Basin. **A storage program is not a foregone conclusion of the Demand Management plan**.

6. The **system conservation pilot program (paying farmers to fallow fields** in Grand Junction and several other locations in the Upper Basin) is a subset of Demand Management, a temporary program to compensate farmers for using less water. They wanted to test the concept, and they believe they did, **successfully**. Without storage, there's no point in conserving. In the first 4 years, they estimate they conserved 50,000 af, and they **need to store 200,000-500,000 af each year.**

7. Water that is conserved **may only be released for 1922 Colorado River Compact (the Compact) compliance purposes, and not pursuant to the 2007 Interim Guidelines**.

8. The BuRec 24-Month Study forecasts water conditions in the ensuing 24 months. **Lake Powell typically receives 10.3 maf inflows annually. Powell inflows have been under 5 maf for 7 of the past 18 years, and below average for 15 of the last 18 years.** Powell has lost 30' of elevation in the last year. If they lose another 30', they'll be at 3,560' elevation. Inflows have been **92 maf in the past 10 years, which is just about breakeven**—82.3 maf must be released to meet the Lower Basin and Mexican Treaty obligations, and much of the remaining inflow was lost to evaporation from Lake Powell. Is the past 20 years an anomaly, or the new normal?

9. Assuming 1906-2015 hydrology continues, there is a 1.5-2% risk under the 2007 Interim Guidelines that Lake Powell will dip below 3,490.' **The August 2018 24-month projection show a 31% chance that Lake Powell will decline to 3,490' by 2026, but this drops to about 4% with demand management**.

10. Under the 1906-2015 hydrology, the risk that Lake Mead hits 1,020' was 25%. Under the new normal, the risk is 45%, but only 5% with a Drought Contingency Plan.

11. Amy showed a **slide indicating 11 boxes representing all the agreements that have been formed regarding Drought Contingency Planning**. There's a companion agreement that marries the Upper Basin and Lower Basin Drought Contingency Plans. It permits either basin to enforce the other basin to operate according to its respective Drought Contingency Plan, or to ask for federal legislation to accomplish this. **The agreements will not be effective until federal legislation is passed**. Amy anticipates this agreement will be very succinct.

Brent Newman CWCB, and Amy Ostdiek, Colorado Attorney General

1. See the September 24, 2018, CBRT Minutes, for a summary of their presentation .

Kevin Rein—**the State Engineer's role in Drought Contingency Planning**

1. Changes of water rights and water administration. **The State Engineer needs a legal basis to administer a water right and to shepherd it** to where it needs to be to help us.

2. Change of water rights: there's a technical quantification aspect, and also a legal process. **What is the new beneficial use, and what is the SEO's rule in this?**

    a. Quantification: **In Colorado you can change a water right's use, which is a great benefit because the water right retains the senior appropriation date**. But, there must be no injury to any other water user. **We meet the no injury standard by doing an historic consumptive use (HCU) analysis**. Determine the HCU over the period of its use, and return flow obligations, and put terms and conditions to ensure there is no injury. No injury means no user on the river suffers a reduced water right as a result of the change.

    b. Legal process: the State Engineer is directed to participate in every water right application in water court; it serves as the technical arm of the court. **The State Engineer can allow a change in water rights through an administrative approval**, such as instream flow loans and substitute water plans. **But, generally water rights are changed in water court**.

3. Does current law provide for this kind of water right? We need more guidance on whether it is legal in Colorado to leave water in the river to reach Lake Powell.

4. Administration in Drought Contingency Planning: **All water administration needs to ensure that no injury occurs**. CRS Section 37-92-502, adopted in the 1969 Water Administration Act, provides that **the division engineer shall curtail any diversion as needed to meet higher priorities. If they are met, the river is "free" and the State Engineer cannot curtail any other use**.

5. **We need to identify beneficial use to give the Division Engineer authority**—he needs a valid water right **to invoke his authority**; there needs to be a source of water—i.e., irrigation water right that was diverted into an irrigation ditch; there must be a destination; and there must be no injury to both senior and junior water rights. **Exchanges in the reach can still take place as long as water gets to its destination**, net of transit losses.

6. CRS Section 37-87-102(4), reproduced below, gives the division engineer authority to shepherd water downstream with due allowance for transit losses and allow for substituted water agreements**. The authority to shepherd water already exists**.

> The owners of any reservoir may conduct the waters legally stored therein into and along any of the natural streams of the state, but not so as to raise the waters thereof above ordinary high watermark, and may take the same out again at any point desired if no material injury results to the prior or subsequent rights of others to other waters in said natural streams. Due allowance shall be made for evaporation and other losses from natural causes for the protection of all rights to the waters flowing in said streams, such losses to be determined by the state engineer.

Panel questions

1. **The equalization provisions of the 2007 Interim Guidelines were not favorable to the Upper Basin**, but we were operating under a different hydrology then. They remain the governing operational criteria, with the possibility of a Drought Contingency Plan supplement. Amy Haas was at a meeting not long ago where a state walked out of the room when she discussed the structural deficit in the Lower Basin; now the Lower Basin is talking about this. **Amy Haas is seeing an evolution in the conversation**.

2. Will the Lower Basin voluntary reductions survive the Drought Contingency Plan? California is willing to reduce use; before, they were unwilling to do this, and all water reductions were suffered by Arizona and Nevada. That bodes well.

3. **After 2026, will a Compact Call be part of our water administration? Yes**. If we lose power at Lake Powell, we lose funding for endangered fish preservation, and maintaining the Colorado River Storage Project reservoirs ("CRSP reservoirs").

4. System Conservation Pilot Program is in 4th year of operation. 500,000 af is a comfortable maximum water conservation target for the Upper Basin. The maximum conservation in the past 4 years has been 50,000 af. **Brent Newman thinks 500,000 af is optimistic**.

5. **Are we cloud seeding everything we can? Brent said we're doing a good job with the resources we have**; the majority of funding for this comes from local water districts.

6. **Market-based approach to demand management—is this possible? The State Engineer would not direct this**. The State Engineer will use existing law to facilitate water substitutions. A market-based approach is ok as long as there is a legal right underpinning the transaction. **If a water user can prove injury, that will defeat any market-based transaction.**

7. **Will Front Range trans-mountain diverters participate in demand management? Brent Newman, said, "Absolutely, yes, they will."** Amy said some M&I providers participated in Demand Management, such as fallowing ball fields in NM. They invested $4.5m to conserve 25,000 af, a cost of $180 per af.

8. Are water rights with a priority before 1922 secure? Yes. **Any change to water rights or use must be voluntary and compensated**.

9. Are there any plans to import more water into Colorado? This was contemplated in early discussions, but there is **no plan for importing water from another source in the Demand Management program discussion**.

Eric Kuhn, former General Manager, Colorado River District

1. There are 5 Upper Division states, but only 4 have an obligation to deliver water to Lee Ferry (Arizona is entitled to 56,000 acre-feet because it possesses land in the Upper Basin in the Virgin River drainage).

2. The 1968 Act that authorized the Central Arizona Project (CAP) requires the Dep't of Interior to prepare long-range operating criteria and annual plans. The Secretary of Interior must consult with the states, but the Secretary has the final say.

3. **Today in 2018 there is a little more water in Lake Powell than Lake Mead, so we are in the upper balancing tier, and are delivering 9 maf**. Under Art 3(e), the Upper Division states cannot withhold water they cannot use. The Upper Basin wants any water stored in Lake Powell to be unaffected by the water conserved through System Conservation Project.

4. **This recent drought is having a greater impact than the drought of the 1950s because there's more development, in particular the CAP**. We want to know the likelihood that we'll have to implement Demand Management to maintain reservoir levels.

5. **If we go into a 2000-04 drought today, Lake Powell would dip below 3,490' and dry up**; see the slide. This would also occur in the 1988-94 drought, where Powell would dip below 3,490' for a couple of months.

6. Once you go below minimum power, your limited where you can't even deliver water out of Lake Powell to Lake Mead. **If we always keep water in Lake Powell, we will never have a Compact Call**. If 2019 is a drought year, **the 24-month study predicts Lake Powell will drop to 3,537' in April 2020**; at that level, there is only 2.5 maf available for delivery from Lake Powell.

7. Eric showed a graph of the 25-year average flows in the Colorado River basin, and there were 3 periods between 1445 and 1544 where the average flow was barely above 11 maf (that would leave only about 2.4 maf for the Upper Basin, compared to its current annual use of about 4.1

maf-ed.). **There were lots of periods in the past when water flows were lower than what we have now.**

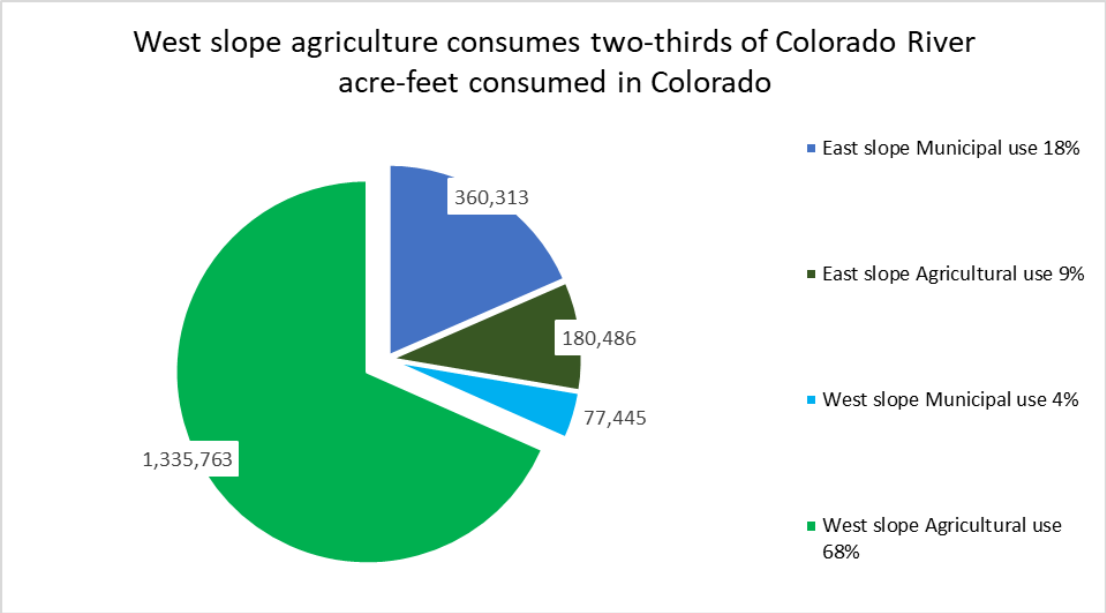
8. The first goal—avoid Compact calls. **The Colorado River District policy is to avoid curtailment**.
9. There can be no guarantee of success. **Nature can always change our plans**.
10. The Colorado River Risk Study demonstrated **that 2 maf could be released from upper CRSP reservoirs. This would not get us through a 2002-04 drought.**
11. In extended droughts, we could save well over 1 maf from demand management.
12. Assumptions:
    a. There could be a 1 or 1.5 maf error in the 24-mo forecast.
    b. We will take action once Lake Powell' water level drops to 3,525.'
    c. The Lower Basin will successfully implement its Drought Contingency Plan.
13. **The deficit could be millions, and the Upper Basin cannot deliver that in 1 year**. We'll have to store water ahead of time and bank it, more in wet years. It looks pretty good if we can store 1 maf.
14. Drought Contingency Plans haven't been approved. New guidelines must be negotiated, and federal legislation is required.
15. A drought has occurred in the past and it's likely to occur in the future. **To be safe we probably need to store at least 1 maf.**
16. **Why are we in this predicament** and what has the water community done wrong? **We took a short-term view of the hydrology**. We assumed the 20th century hydrology was the norm. the very highest 25-year water cycle since 1440 peaked in 1922, the year the Colorado River Compact was negotiated!
17. **What is the new normal? The new normal is 12-14 maf river flow;** as temperatures increase, plants consume more. What arrives in Lees Ferry will be diminished due to higher temperatures, and we'll have to adapt to this on a continuing basis.
18. **Is a Lake Powell pipeline a Lower Basin use or an Upper Basin use?** St. George is on the Virgin River drainage, so it's in the Lower Basin. It has 150,000 af flow, used by NV, AZ, and UT. St. George is growing like crazy, and Utah would like to take water. **Under the 1922 Colorado River Compact, it's a Lower Basin use because the diversion is in the Lower Basin**. New Mexico has a similar issue, because the Navajo Indians take water from the Upper Basin and use it in the Lower Basin**. Utah thinks it's Upper Basin water**. See Article 8 of 1922 Colorado River Compact.

Panel with Andy Mueller

1. The reservoir reoperation plan—moving 2 maf down to Lake Powell—is a no-brainer.

2. Demand Management is the intentional reduction in consumptive use, and the Colorado River District has issues with that. Demand management also makes sense, except that we have to figure out where the water is going to come from and how it's going to be generated to go into that pool. The CWCB is saying it will be voluntary, temporary, and compensated.

3. Mueller provided a slide, reproduced below, showing **how much Colorado River water is being consumed by the Front Range. These water rights—540,799 af—are causing the consternation now.**



4. **We need the state's leaders, including Kevin Rein, to set up general principles about how this Drought Contingency Plan program would work**. How will this be voluntary, temporary, or compensated? How will it be consistent with Colorado's Water Plan. What would happen in the event of a new trans-mountain diversion? **We don't want to see Demand Management where we reduce our use, only to allow a new trans-mountain diversion to be developed**. We don't want this to set a precedent for a new junior major diversion over to the East slope.

5. **The state is not contemplating a mandatory reduction in use**; I keep hearing this from the state, **but there are major water users on the Front Range who are talking about that**. **They don't think we'll find the money to support the voluntary program**. If we don't, what is the alternative? We don't know.

6. When someone on the Front Range says we need a mandatory program, we want to be ready with an answer. That is what the Colorado River Risk Study Phase 3 is investigating. We first have to get a policy from the state we agree with and then we have to work out the details. **The Colorado River District and the Southwestern Water Conservation District will oppose federal legislation**, scheduled for this upcoming lame-duck session starting November 7, 2018, **if we fear there will be injury to the West slope**.

Bruce Whitehead, executive director, Southwestern Water Conservation District.

1. **The Southwestern Water Conservation District** was started in 1941, just 4 years after the Colorado River District was formed. On this issue, it **speaks with the same voice as the Colorado River District**.
2. Bruce thinks **the State Engineer has the authority to administer a Compact Call**.
3. Compact compliance and maintaining Lake Powell levels are 2 distinct issues. The goal is to avoid involuntary curtailment.
4. **There hasn't been enough attention to environmental impacts, so we are likely underestimating the costs of a voluntary curtailment**.
5. Most rivers in the Southwestern Water Conservation District are tributary to the San Juan River in Utah, except for the Dolores.
6. **The Upper Basin states will not cause the flow to be depleted; nature's hydrology will do this**.
7. Concerns: Are we out of Compact compliance, or are we trying to maintain water levels? **If we have mandatory curtailment, it will be hard to get any new water rights, or develop IPPs**. What is the purpose of reductions, the level of curtailment?
8. Strict administration—is everyone using what they're entitled to?
9. If you reduce diversions by 600,000 af, you impact a lot of TMDs. If you limit to 300,000, or 150,000, you do not hit as many senior post-Compact uses. But **junior post-Compact uses will be hit hard** and carry the burden, thereby protecting senior post-Compact rights. **If junior uses are ordered to curtail for several years or more in a decade, they'll go out of business**.
10. What the Southwestern Water Conservation District is asking: Support CRSP reservoir releases, and also support voluntary, temporary, compensated uses that would otherwise cause depletions in that year. They want to avoid disproportionate impacts, and want contributions from both sides of the continental divide. **They want the conceptual framework respected before requiring the Southwestern Water Conservation District to participate**. Other reductions should be based on consensus.
11. They **expect the CWCB to adopt a policy so the Southwestern Water Conservation District can support a Demand Management program in Colorado**.

Kevin McBride, Yampa-White Roundtable Chair

1. I want to recognize John Wesley Powell who recognized watersheds, Herbert Hoover who said there was plenty of water in the river for the next 50 years, and John Fletcher, the GM of the Yampa River District, who said, "Keep it simple, I know it's not, but keep it as simple as you can."
2. **When you release a lot of water out of a reservoir, it drops. We call it a "structural deficit." When water goes into a reservoir, it goes up. We call that Drought Contingency Planning**.
3. Voluntary—people voluntarily walk the plank. People are saying we're not sure what we're walking off of, or what are we walking towards, and what are we walking away from.

4. **We don't want to see a lot of speculation**.

5. Hydrology will tell us how temporary this is. How do you stay in business in a long-term drought**? The Yampa Basin uses only about 10% of its native flows**. In the old minutes there was a lot of discussion about how much of the native flow would be used. There are a lot of people interested in signing up for a Drought Contingency Plan, but there are a lot of people who are only using 10%, **so should they have to deliver water in a Drought Contingency Plan at the same rate as other basins?**

6. Brent Newman was correct, when he said people want to know what it means for their community, and their headgate.

7. **I think we need to get to Compact Administration; if there's going to be disagreement and lawsuits, it's best that happens now before there's a crisis and not afterward**.

Frank Kugel, General Manager, Upper Gunnison River Water Conservancy District

1. The total population in Gunnison County is 15,700. The Upper Gunnison River Water Conservancy District was founded in 1959, and it includes Blue Mesa Reservoir. The district benefits from Taylor Reservoir, built in 1937; the Upper Gunnison district has a second fill right in the reservoir.

2. Watershed management planning – **80% of all streams shall have a water management plan by 2030, to anticipate a 20% decrease in stream flows and 50% increase in population**. They anticipated a shortage in 2050, and Drought Contingency Planning has pushed that forward. They devoted 90 minutes to Drought Contingency Plan at a recent Upper Gunnison board meeting, and farmers showed up en masse, surprising them.

3. The Upper Gunnison district is a sponsor of cloud-seeding operations, and they run a remote cloud-seeding generator. Use of CRSP reservoir storage affects them; **in 2018 Blue Mesa Reservoir was pretty low, so not much is available for CRSP reservoirs releases**. All that's left is demand management. How can you reduce demands enough to make an impact?

4. **In the Upper Gunnison basin the only crop grown is grass hay**. The water supply and root zone depth below the surface is only about 1.' If there's any reduction in the level of subsurface water, it will dramatically affect the hay crop. If you turn off water for 1 year, the native grasses don't return for a much longer period, up to 5-6 years. It's hard to know **how to adequately compensate growers if hay crop doesn't recover for 5-6 years**.

5. **The Upper Gunnison district board has endorsed the positions of the Colorado River District and the Southwestern Water Conservation District**. They are confident they are well-represented in the state. Moving forward, communication is going to be the key.

Steve Anderson, Uncompahgre Water Users Association

1. Steve's family owns a family farm in Olathe; formerly an orchard, the farm now produces corn, beans and alfalfa, seed potatoes and squash for specialty markets. Steve is a director of the

CWCB and also on the board of the Uncompahgre Water Users Association; his father was its manager from 1964-78, and his grandfather served on its board in 1940s.

2. **The only time the Uncompahgre Water Users Association water right has been called out** in order to deliver water to farmers in Grand Junction **was when the Shoshone call wasn't on due to repairs.**

3. **Water rights are tied to the farms**, and they can't be sold apart from the farms in the Uncompahgre Water Users Association. **The Lower Arkansas and Owens Valley buy-and-dry could not happen in Montrose**.

4. Farmers are skeptical that Demand Management is another attempt to get our water. Farming is a tough business. **I was happy to see** there's been some change in the term "sustainable agriculture," and **a move to using the term "productive" or "prosperous agriculture."** In many years, the commodity price is less than the cost to produce it. **For many farmers, their only payday is at the end when they sell their ranch**.

5. I have some reason to look at this with some fear, but I also look at it as **an opportunity that farmers might receive some cash. The Uncompahgre project is well over 100 years old**, and has been maintained well, but **many facilities need additional maintenance**. Projects to reduce dissolved salts and selenium from the Colorado River have lined about 100 miles of canals and laterals on the east side of the project area. A Demand Management program could provide a lot of benefits for the Uncompahgre project. We must have shareholder consensus. What keeps me awake at night is not the water supply; I know that if we receive 80% snowpack, we'll be ok next year. If we have another 2017-18 winter, all bets are off. We can't farm all the acres on the project if this winter repeats itself in 2018-19.

6. They maintain their canals constantly. In order to fix them will cost millions of dollars, and they need a method to obtain funding for that.

7. As a director of the Uncompahgre Water Users Association, the Drought Contingency Plan is a huge win. **Getting the Lower Basin to recognize the structural deficit was very important and a huge win for the Upper Basin**. We must maintain Lake Powell storage levels because the UWUA's budget is paid by federal power revenue. Demand Management could be a second line of defense. The basin roundtables can drive this policy, and I think they should. **The biggest issue in Demand Management is funding**.

8. If Grand Junction farmers in the Grand Valley received $1 million to reduce consumption by 3,000 af, that means **we need to be paid at least $100 million for 100,000 af**.

9. We must figure out how to shepherd water down to Lake Powell. **We'll have a water bank in Lake Powell as soon as we agree on how to protect it.**

10. **Demand management policy should be based on the Colorado Water Plan and state law, and it should be voluntary, temporary, and compensated**. I'm 1 of 4 Western slope board members on the 9-member CWCB board. I'm concerned that the Drought Contingency Plans are not enough. **I believe the West slope still has a target on its back**, and I don't see how we get around that. **We have to ensure the fire hydrants in western cities have water to fight fire with**. I believe Colorado is the leader in the Upper Colorado River Commission. We need a consensus from all of Colorado to support the federal legislation.

Questions

1. **What are the Drought Contingency Plan issues your basin is concerned with?**

    a. Whitehead—**establish protections for the West slope before mandatory restrictions are put in place**.

    b. Mueller Colorado River District—concerned that hydrology remains horrendous. **How do we as a community protect our quality of life? If the predicted hydrology occurs**, we have to be very creative and careful about how we use water to protect the Western Slope.

    c. McBride—**we're experiencing our first call on the river. We have very little storage in the Yampa basin**, only 2% of the total in the state, so farmers aren't used to being bailed out by reservoirs. Not one of our agricultural users has asked about Drought Contingency Plan or how to be compensated; **the only compensation has been to speculators, and that's the concern that people have shared**. People want to stay productive.

    d. Anderson—**the one thing that would help us is storage, to be able to store more for dry years**.

    e. Kugel—Upper Gunnison basin is concerned about **how to shepherd water downstream with all the transit losses in Lake Powell**. This is one of the major challenges to overcome.

2. **Pessimistic hydrology—are there opportunities with Drought Contingency Plan where a drought could be beneficial?**

    a. The 2017-18 drought pulled down all storage. The Drought Contingency Plan is a good thing, but inter- and intra-state issues are connected. With appropriate protections, **users can be compensated**.

    b. Mueller—**Infusion of cash into family farms** to improve on- and off-farm infrastructure would be good. Water delivery systems can be modernized. Salt and selenium money has helped improve water deliver systems in the Gunnison river basin. **Demand Management in the Upper Basin won't help unless the Lower Basin solves its structural deficit of water**. Their structural deficit is 1.1 to 1.3 maf per year, and they have to meet this every year.

    c. McBride—We don't know the future hydrology, but we are keeping our chips on the table. **We aren't paying enough attention to the hydrologic cycle**.

    d. Kugel—He is **concerned about speculative transfers on the West slope to take advantage of money flowing to farmers to use less water**.

    e. Kugel—it's alarming to look at how quickly Lake Powell is dropping. 36' in the last year. We'll reach 3,525' in 2 years at this rate.

    f. Whitehead— the Colorado River District and Southwestern Water Conservation District must demand **equitable contributions by both the East and West slopes**.

3. Describe a **market-based solution**.

a. Mueller—**we're asking for a guided market, not an open market**. "Temporary" needs to be defined; to us, it means limits on the percentage of any 1 operation's fallowing, and a limit on the number of years a rancher can participate. **We want this to work for families, but not for hedge funds**. How we do this is critically important.

Final Q&A panel

1. Can the West slope's role be meaningful in this process?
    a. Yes.
2. Voluntary, temporary, and compensated. With uncertain hydrology, **where's the compensation coming from**?
    a. Mueller—**the federal government and NGOs (public charities)** are sources.
3. **How much storage in Lake Powell has been lost?** Kuhn: **Lake Powell storage has been downgraded only once, about 500,000 af**, about 2% of Powell capacity. **Another one is likely**.
4. With each year we fall below average, the risk of a Colorado River Compact call goes way up. **As the risk increases, the risk to the Front Range junior uses goes up**, and that increases pressure on the West slope. 2011 really helped us meet the 92 maf delivery obligation we must meet every 10 years; if the extra 5-6 maf that year produced had not occurred, then we would be in trouble today. **They delivery obligation isn't 75 maf, it's 82.3 maf**, and this is the number that matters so much.
5. **Most West slope water rights are pre-Compact, so why should the West slope be affected by a compact call**?
    a. Kuhn: The West slope uses about 2.5 maf—after subtracting 300,000 af of evaporation, consumption is Colorado is 2.2 maf. **Most municipal use is post-Compact**—the water rights were perfected after 1922. **Green Mountain reservoir is a post-Compact water right**, and it delivers much of the water used in August and September, so Grand Valley will be impacted due to the need for storage in dry years. **When there's no water in the river, it doesn't matter if your water rights are pre-1922**.
    b. Mueller: **In Colorado, cities can condemn water rights, which is what they'll likely do**. The Secretary of Interior won't allow ag uses to consume so much water. We have a Secretary of Interior controlling federal water rights and a constitutional condemnation right.
    c. **Many major West slope water projects, including McPhee Reservoir, are post-Compact uses**. The pain gets spread out more than you'd think.
6. **How do individual end-users make decisions** within their sub-basins?
    a. Kevin Rein: We hope there's not an impact to end user, by ensuring **the no-injury rule** is met. If we need **to administer a Compact call, we do so by applying prior appropriation**. The pre-Compact rights would not be affected in this exercise. If we need **to implement a Compact call, we need to develop rulemaking** procedures to administer it. It's more difficult than simple prior appropriation.

b. The **postponement doctrine** doesn't apply in distinct basins, so **water users outside a water district could not contest adjudications in the district**. No one in the Colorado river district will call out someone in the Yampa who wasn't part of the case.

c. Mueller: **The modeling we're doing is directed specifically at this question—how deep are the cuts, and how would they affect end users in the basin**.

7. **Do we have time to create this temporary, voluntary, compensated program? End users are more concerned about this than they're being given credit for**. (There were no breakout sessions at the meeting to enable rancher water users, who made up at least 30-50% of the 200+ participants, to share their ideas—ed.)

    a. **Brent Newman—it's up to the roundtables to engage the public in order to do this**.

    b. McBride—there's got to be **more CSU extension participation**.

    c. Whitehead—**Yes, we have time** to work on the Demand Management part of the Drought Contingency Plan. It's a contingency plan. **No states are willing to move forward on Demand Management until the Upper Colorado River Commission decides how to implement this**. They do so by reaching a 4/5 vote-ed.

8. Ken Ransford asked **whether systemwide conservation can be done higher in Colorado West slope river basins so rivers benefit as it flows all the way down to Utah**.

    a. Amy Ostdiek: There has been a system conservation program higher up in the basins in other states.

    b. Mueller: Our push is to see that the water is equitable contributed by the West and East slopes. If Front Range trans-mountain diversions are contributing water, this will come from the headwaters. **We need a way to verify that** contributions of water from **voluntary reductions of use stay in the river—shepherding**—and how to address the problem that **grass suffers long term damage** if it is not watered for a year. This is working against Upper Basin conservation. **The Colorado River District's primary concern is not putting agriculture completely out of business**.

    c. Whitehead: Don't focus on the environmental benefit of leaving water in rivers; **irrigating land has environment benefits** as well. **Water in the river doesn't necessarily mean it's a net environmental gain.**

    d. Rein: Shepherding water on the West slope. We do it regularly on the West slope, in the Gunnison River Basin. There's a weekly Colorado river conference call. **It takes a special water right to get it to the state line. I question whether we have that type of water right in Colorado** (that is, whether foregoing a diversion to leave water in the river to meet a Compact call is a beneficial use—ed.). The next step is getting it to Powell, and that's another issue we are struggling with.