

## IBCC Colorado River Basin

### 1. November 28, 2016 CBRT Minutes

1. November 28, 2016 **CBRT Minutes** –.
2. **Next Meeting: January 23, 2017, Glenwood Springs Comm Ctr, 12:00 – 4:00.**
3. Upcoming Meetings
  - a. **CAWA agricultural workshop Nov. 29, 2016:** 1-day program to discuss agricultural water issues.
  - b. **Colorado River Risk conference call 10:00 AM,** 888-585-9008, room no. 670 485 897
  - c. **Next Steps December 19, 2016, 12:00:** 2-hour conference call
4. Reporter: These minutes were prepared by Ken Ransford, Esq., CPA, 970-927-1200, [kenransford@comcast.net](mailto:kenransford@comcast.net).
5. **CBRT Members Present:** Art Bowles, Angie Fowler SGM, Mark Fuller, Dan Harrison WCWCD, Mark Hermundstad, Bruce Hutchins, April Long City of Aspen, Ken Neubecker, Chuck Ogilby, Jim Pokrandt, Ken Ransford, Dave Reinertson, Steve Ryken,
6. **Guests:** Kendall Bakich, CPW, Oni Butterfly former EPA Sec. 2 chief and Army Corps groundwater specialist, John Currier, Craig Godbout, CWCB, David Graf, Mark Harris GVWUA, Morgan Hill, Garfield County, Hannah Holm-CMU, Nate Higginson Mid Colo Watershed Council, Brendon Langenhuizen SGM, Heather Lewin Roaring Fork Conservancy, Holly Loff Middle Colorado Watershed Council, Jenn Moore, CMU Math & Science Center, Annamana Ray, Buckhorn Valley Metro Water District, Laurie Rink Middle Colorado Watershed Council, Nick Rzyaska-Filipek Eagle County Watershed Council, Chris Treese CRD, Richard Vangytenbeek & Mely Whiting of Trout Unlimited, Dennis Webb Grand Junction Sentinel
7. **River Forecast.** The Colorado River at Dotsero is flowing 903 cfs, slightly less than the median flow of 940 on this date. The Colorado River is flowing 1,640 cfs at Cameo, slightly higher than the median flow of 1,700 on this date.
8. **Colorado River Risk Study** – Eric Kuhn. At a 4-basin West slope roundtable meeting in Grand Junction in December 2014, participants agreed we needed to study **how Colorado would have to respond to a Compact Call on the Colorado River**. Phase I has been completed, and funding for Phase II is now being solicited. **Front Range roundtables are balking at funding Phase II**, saying either that Phase II should not be done, or the state should conduct the study. Phase I cost \$50,000, and Phase II will cost \$90,000.

- a. John Carron, a contractor with Hydros Consulting, a water resource and water-quality planning and engineering firm based in Boulder, performed Phase I. He learned how to use the Colorado River Support System (CRSS) as a PhD student, which does a good job of recreating depletions from Lake Powell. It is not designed to show what is happening in Colorado. Phase I looked at how much demand management—cutting back human and agricultural consumption—was needed to keep Lake Powell above 3,525' elevation, about 2 million acre-feet above dead pool level.
- b. **Phase I considered 3 issues:** contingency planning to identify **where water consumption could be cut back; managing CRSP reservoirs during a drought to increase releases to Lake Powell;** and, assuming we do these, **determining how large the shortage still is.** If we experience another 2000-2004 drought when Lake Powell lost 15 maf of storage, or another 1950s drought, we would drain Lake Powell with today's reservoir levels. **Phase I** estimates the potential order of magnitude of reservoir depletion, and it **determined that is demand management is clearly necessary.**
- c. Phase II would inform principal 4 of the 7-Point Conceptual Agreement to avoid a Compact Call. **The Front Range Water Council is not convinced that Lake Powell's minimum level should be set at 3,525'.**
- d. The other 3 West slope roundtables want to know where the water cutbacks will occur. **What if rights were cut back under the prior appropriation system?** CRSS won't answer this, but the Colorado Decision Support System (CDSS) could with some refinements. This concerns the Front Range Water Council, since trans-mountain diversions to the Front Range all have priority dates after the 1922 Colorado River Compact.
- e. Jim Pokrandt asked the Front Range roundtables to support Phase II, and they asked the Front Range Water Council; it said they initially did not like it, or if Phase II is done, the state should do it. **The four West slope roundtables have requested the CWCB board consider this grant application at its March 2017 meeting.** If the CWCB declines, **the West slope** roundtables and the two West slope river districts agree (the Colorado and Southwest River Districts), they **can fund Phase II on their own.**
- f. Eric suggests we complete Phase I and explain why 3,525' elevation was picked. Some **providers on the Front Range** are concerned that this will be another water supply study. They **want to "preserve the dream" of another TMD.** The Front Range Water Council operates outside the roundtable process, and it is not transparent. It is a "secretive public entity," while the West slope roundtables are trying to be open. Doing it right and getting consensus is more important

- g. **Kuhn's best guess is that if existing projects are completed, there will be 150,000 more acre-feet available to develop.** Chuck Ogilby asked if the Front Range knows about this. **Craig Gabout of the CWCB says that this estimate is in SWSI.** Ogilby pointed out this impasse really highlights that the Front Range does not trust the process. Eric replied that the Colorado River District has been using John Carron for a long time, and that by having the Colorado River District do this rather than the CWCB, it gives the state some wiggle room. A 2000-2004 drought happens more often than earlier thought; **the Front Range thinks Phase II is being skewed by the West slope to indicate that water isn't available.**
  - h. We have to do Phase II in order to know how much demand management is necessary, in order to do contingency planning. Eric thinks **the state will take a more significant role in planning Phase II,** cautioning that we should be **careful what you ask for.**
  - i. Since the **Bureau of Reclamation released its 2012 Colorado River Water Availability Study indicating that 3.2 million acre-foot shortage,** the Lower Basin states have reduced use by 600,000 acre-feet, in addition to 600,000 acre-feet of reductions in the shortage criteria developed as part of the 2007 Interim Guidelines. Thus, **the Lower Basin states are now planning to reduce water consumption by 1.2 million acre-feet.** Ken Ransford asked if the Front Range Water Council has commented on the Bureau of Reclamation's 2012 Colorado River Water Availability Study, and Kuhn said they have not to his knowledge.
  - j. The 7-Point Conceptual Framework educated the Front Range about West slope issues. The Front Range blowback over Phase II is maddening, but it's **important that we pursue a diplomatic resolution** to this. The outcome will likely be a better **explanation and understanding of West slope issues.**
  - k. Ken Neubecker asked if **the Front Range Water Council** is an incorporated organization? Eric Kuhn said he did not know. They are not listed as a business entity on the Colorado Secretary of State's website. Ken Neubecker said they are **a quasi-public entity** since they represent public water providers. He does not believe they **should not be meeting privately.** However, they are not subject to the open records act since they do not have elected officials and they lack decision making authority – ed.
9. Richard Vangytenbeek, **Legacy Project discussion.** On May 23, 2016, Ken Ransford and Louis Meyer recommended the CBRT create a legacy project that could bring together all consumptive and non-consumptive water users on a river reach in order to manage the river to benefit the riparian environment. There was **initial focus on the Crystal River,** but roundtable members felt this was **too specialized for a basin as broad as the Colorado River basin.** Richard noted we are creating stream management plans that **aggregate all of the information we have regarding biology, ecology, agriculture, and municipal use into a single place.**

- a. Richard recommends that we use the integrated water management plan to coordinate sub-basin plans. The CBRT basin implementation plan (**BIP**) **identifies next steps, and the first one is creating stream management plans** for every sub-basin in the Colorado River basin.
- b. A geospatial database is being created at CMU, and it is the ideal platform for the sub-basin plans.
- c. There's a stream management plan done on the Upper Colorado River in Grand County, the Crystal River plan is nearly done, the Roaring Fork is about to initiate one. The "legacy project" process is already underway. Hannah Holm at CMU says the stream management plans and the integrated water management plan can be integrated together.
- d. Possible next steps include:
  - i. **The integrated water management plan being developed at Colorado Mesa University is scheduled to be completed in November 2017.**
  - ii. Stream management plans should begin as soon as possible, so they can be integrated with the integrated water management plan. Stream management plans will be community-driven and provide a roadmap for how rivers will be managed in the next decades. To do this:
    - 1) **Identify stakeholders** in each stream management plan.
    - 2) **Contact municipalities** in each sub-basin to explain the integrated water management plan, how a sub-basin stream management plan could be integrated with the integrated water management plan and other stream management plans.
    - 3) **Gauge the stakeholder's interest and capacity to support stream management plans.**
- e. **Trout Unlimited has agreed to fund ¼ of Richard Vangytenbeek's time to institute this, amounting to 1 week a month.**
- f. **Hannah Holm** indicated that step 1 of integrated water management plans was **putting together a bibliography; that has been done.** Step 2 was creating a geospatial database. **Step 3 will be identifying water needs** for municipal, agricultural, environmental, and recreation uses.
- g. Ken Neubecker commented that Vangytenbeek's plan was contemplated all along when the integrated water management plan was first proposed and funded by the CBRT roundtable.

- h. Angie Fowler said **the Grand Valley** is already moving forward on this because **TMDL limits are being exceeded on 2 stream** reaches that will be the subject of TMDL analysis and mitigation in 2017. The Clean Water Act designates harmful metals and pollutants, and if they are present in too-high concentrations, allowable total maximum daily load limits must be determined for river reaches, an expensive process that communities should try to avoid when possible. Since pollutants and particularly metals are ever present, **allowable concentrations tend to be exceeded when river flows drop.**
  - i. Chris Treese asked if the BIP or Colorado's Water Plan had legacy projects in mind, specifically whether WSRA funding was available. Craig Gabout replied that there is an emphasis for stream management plans in the Colorado's Water Plan, but there is no category for legacy projects. There is CWCB money available for both Stream Management Plans and under the WSRA grant process.
  - j. Chris Treese asked how this would be rolled out to other roundtables, particularly on the Front Range that benefit from diversions in the headwaters. **The Blue, Eagle, and upper Roaring Fork Rivers need stream management plans** just as one was created in Grand County for the upper Colorado River. Ken Neubecker commented that **Front Range providers would have to be involved in these sub-basins.**
  - k. The more a sub-basin knows about its water supply, the more it will provide answers to questions the Front Range has been asking, such as how much water is available.
  - l. Jim Pokrandt says it is fulfilling the next steps that we identified in the BIP, and encouraged the roundtable to not get hung up on the word "legacy project."
  - m. **Funds** that the CBRT roundtable has **allocated to PEPO**—Public Education, Participation and Outreach—are **available** for this.
  - n. Vangytenbeek said he needs the CBRT's endorsement to go forward with this legacy project. **The legacy project committee includes Ken Neubecker, Kim Albertson, Hannah Holm, and Mike Wageck** will join Richard as a technical advisory committee to promote this. Ken Ransford made a **motion that the CBRT report to Trout Unlimited that it supports the legacy project concept**, Ken Neubecker seconded it, and **it passed unanimously.**
10. **WSRA funding update.**
- a. Craig Gabout said that the Basin Account is \$374,000, and the statewide account balance is \$533,000. Of the \$374,000 CBRT WSRA account balance, \$150,000 is being reserved for a "rainy-day fund" and \$20,000 for PEPO educational grants, leaving **\$204,000 available to be allocated.**

- b. The projects bill submitted each year to the Colorado legislature will include \$10m for WSRA grants—\$6.4 million for the CWCB, and \$3.6 million for the roundtables (**\$400,000 per roundtable each year**). The projects bill will also request \$10 million for ATMs, and \$5 million for Chris Sturm’s conservation programs, for \$25 million total funding **in each of 3 years**. This is the only funding available to implement Colorado’s Water Plan. Another \$50 million for loan guarantee funds will also be made available to the CWCB. If this request passes, the funds will be made **available in July 2017**. Severance tax revenues, which fund the CWCB and the roundtable process, will be down to 6% of normal for the next several years.
11. Conflict of Interest procedures for WSRA grants. **Ex parte communications between a roundtable member who will benefit** from a grant with another roundtable member are **barred outside of roundtable meetings**. Roundtable members who benefit from grants are also barred from voting on grant requests.
12. Mark Harris of the **Grand Valley Water Users Association requested \$50,000** for the following improvements **to rehabilitate the roller dam at Cameo**.
- a. Task 1—Upgrading the roller dam electrical and control systems.
  - b. Task 2—Rehabilitate the canal headworks.
  - c. Task 3—Rehabilitate the roller tracks and canal concrete
  - d. Task 4—replace the radial gates at the Canal Station 22 spillway. It is not a good idea to spill water out the siphon gates, and repairs are needed to prevent this. Water is diverted do the Orchard Mesa power plant all year long to generate electricity.
  - e. GVVUA previously received \$55,000 from the CBRT roundtable in two grants and is now asking for \$50,000, for total CBRT basin WSRA funding of \$105,000. GVVUA has already spent \$1 million of its own funds on the improvements.
  - f. The GVVUA has had no debt since 1968; it is looking into increasing its borrowing authority to rehabilitate the dam and canal system. The roller dam is part of \$100 billion of water resources that the Bureau of Reclamation must maintain. BuRec is not planning to add any new projects, it now must figure out how to maintain them.
  - g. Ken Ransford asked about the volume of water being diverted through the roller dam and the Grand Valley Irrigation Canal; he said that **760,000 acre-feet is being delivered to farms in the Grand Valley** in an average year **compared to** the 21,650 acre-feet (twice the “**10,825 water**”) that the US Fish and Wildlife Service’s programmatic biological opinion says must be delivered to the 15-mile

reach. Mark said that previous diversion system improvements have resulted in 60,000 additional acre-feet being left in the Colorado River.

- h. Ransford noted that the CDSS Structure Summary Reports indicate that **up to 90% of the fields being irrigated** by the BuRec's Grand Valley Project diversion at Cameo and the Grand Valley Canal diversion at Palisade **still use flood-irrigation, and that the primary crop being grown is hay and alfalfa**. Harris said, "With respect to farm irrigation efficiency improvements—**there's not a lot of incentive for farmers beyond gated pipe,**" the 4" white pvc pipe that permits water to flow through 1" holes to flood irrigate a field. Harris believes there's more bang for the buck in cover crops and soil amendments. In the Grand Valley a lot of tail water goes into the river; by contrast, in the Gunnison basin, tail water is reused, and downstream neighbors will be injured due to efficiency improvements. **In the Grand Valley, changing what they farm may have greater benefit.**
  - i. The crop-water nexus is getting more attention. **Agricultural products need to be dense enough to ship, such as seeds.** Alfalfa doesn't meet this criteria—**it is not cost-effective to ship hay or many other agricultural products in the Grand Valley.** Mark suggested that it was not cost-effective to use less water from sprinklers. Mark said that sprinklers don't work if farmers are growing corn, for instance.
    - i. The Structure Summary Reports indicate that 14% of the irrigated acres in Grand Junction grow corn, and 2% grow fruit that Grand Junction orchards are famous for. In the Republican basin, which gets water by pumping the Ogallala Aquifer, corn is the primary crop being grown and nearly all of it is irrigated with sprinklers—ed.
  - j. The CWCB recently lent \$1.7m to each of the Orchard Mesa Irrigation District and the Grand Valley Water Users Association for system improvements.
  - k. Some of the water goes to the power plant; The Bureau of Reclamation has a water right for 800 cfs to generate power. If this power water right were to go away, there would be far less water in the 15-mile reach.
13. Laurie Rink passed out summaries of the Middle Colorado Watershed Plan.
14. Abrams Creek **WSRA grant request for \$45,000 to improve irrigation efficiency and river flows to improve habitat for an endangered Green-Lineage sub-group of Colorado River cutthroat trout.** This is 10% of the total cost; the applicants are requesting \$405,000 from the statewide water reserve account balance, \$450,000 total. Mely Whiting of Trout Unlimited and a Southwest basin roundtable member and David Graf of Colorado Parks & Wildlife made the presentation. This is a system efficiency project, to help Buckhorn Valley Metro Water District to **deliver water in irrigation**

**pipes rather than a leaky ditch** to a field that is just south of the Eagle County Airport. The fish is listed as a threatened species, and this project could prevent it from being listed as endangered.

- a. Kendall Bakich, Colorado Parks & Wildlife, said the Abrams Creek lineage is a special genetic type that is unique to this river. They are more different than nearly every other cutthroat trout sub-species in Colorado. This is the one pure fish in the Eagle River basin. A man-made barrier put in the river on a golf course constructed as part of the Eagle Ranch development keeps the subspecies distinct. There are maybe 300 members surviving; this puts it on the highest priority for conservation efforts.
- b. They are listed as threatened as part of the greenback population; if they are separated as a unique haplotype, they will be listed separately as threatened under that genetic type. **It is the only cutthroat trout population in Colorado that is not being invaded by non-native trout.**
- c. **Flow alteration caused by diversions is a major threat—there are nearly 3 times as many fish above the ditch diversion as below it.** At its peak, this stream runs 15 cfs, and the JPO ditch takes 8 cfs. Every cfs counts. The extra cfs will flush sediment downstream and lower turbidity; it will also scour out pools and increase aquatic bug life that fish depend on.
- d. If a fire occurred near the river, **fire debris could damage the stream and exterminate the population.** This project will make them more resilient.
- e. The fish screen preventing cutthroat trout from getting into the Buckhorn irrigation ditch is rudimentary and will be replaced.
- f. **In 1906 Julius Olsen came up Abrams Creek and dug 5 miles of the Buckhorn Ditch with a shovel, mules, and a plow, to irrigate a potato field.** The 110-year old ditch still irrigates 90 acres, half for landscape irrigation, and half for agriculture.
- g. Most of the money is being spent for **5 miles of pipe, permitting 40% of the water now being diverted to remain in the creek.** The ditch will cease diverting if flows drop to 1.25 cfs. Flushing flows may deliver more than 40% of the amount diverted. In all, they expect 300 acre-feet per year will be retained in the river. **The tiny irrigation district has spent well over a \$100,000 (mostly for attorneys), and is ready to request a permit from the BLM.**
- h. Ken Neubecker said this was identified as a non-consumptive IPP in the Colorado River basin BIP; he can't think of a more important project than this one.



- i. The Eagle River Watershed Council supports this project; this is the most pure strain of Colorado River cutthroat trout they know of.
  - j. Mely Whiting says **the BLM supports this, and it is also requesting another instream flow designation on the creek.**
15. **Jenn Moore requested \$25,000 from the CBRT roundtable for a water display at the John McConnell Math and Science Center at Colorado Mesa University;** she is asking for a similar grant from the other 3 roundtables. Moore is the Center's executive director; previously she worked for the USGS for 5 years in Grand Junction, and taught hydrology at Colorado Mountain College in Leadville. They are **raising \$5.5 million to build a 13,000 sq foot John McConnell Math and Science Center.** John McConnell is a retired physicist in Grand Junction with a passion for water and river dynamics.
- a. **The water center currently occupies 6,000 square feet in a math and science center in the Orchard Mesa school district, educating 15,000 students a year.** They offer free field trips to every elementary school child in Mesa County; this is a **big aid to elementary school teachers who typically lack a science background and therefore do not teach science in Colorado schools.**
  - b. The center hopes to build 150 hands-on water exhibits for visiting school children to use. They hope to build a model dam structure, such as a roller dam model of Cameo. **Every child in Mesa County will learn where their water comes from in the exhibit.**
  - c. The building will be next to the engineering building at Colorado Mesa University and increase connections between engineers and water educators. Currently, about 15 teachers new per year receive science education at CMU.
  - d. Jenn's team has raised \$1.5 million in the past 2 months toward the center. Ute Water committed \$65,000, and Dave Reinertson said Clifton Water is also considering making a grant.
  - e. **Jim Pokrandt supports this** because it will be a permanent water education display, available for all future generations, rather than temporary displays that tend to be used only once. **Pokrandt stressed the proximity with water engineers and science teachers at Colorado Mesa University.**
  - f. David Graf also said his 3 children went through the Math & Science Center, and he said it was a very effective program. There is no other resource for kids to explore science. He said that housing it on the Colorado Mesa University campus is a great idea.