IBCC Colorado River Basin

1. September 26, 2016 CBRT Minutes

1. September 26, 2016 **CBRT Minutes –.**

2. **Next Meeting: Nov. 28, 2016, Glenwood Springs Comm Ctr, 12:00 – 4:00.** Potential meeting with legislators.

3. Upcoming Meetings
   a. **Tap fee workshop Oct. 19, Glenwood Springs, 9-4,** 1 day program to discuss demand-based fees, water conservation, for water utilities, cities, and builders
   b. **Next Steps Oct. 24, 2016, 12:00:** 2-hour conference call
   c. **Nov 2-**3, Colorado Mesa University annual water conference

4. Reporter: These minutes were prepared by Ken Ransford, Esq., CPA, 970-927-1200, kenransford@comcast.net.

5. **CBRT Members Present:** Art Bowles, Paul Bruchez, Stan Cazier, Kathy Chandler-Henry, Carlyle Currier, Bruce Hutchins, Diane Johnson, April Long City of Aspen, Louis Meyer, Jim Pokrandt, Ken Ransford, Karn Stiegelmeier, Lurline Underbrink Curran, Mike Wageck, Lane Wyatt, Bob Zanella

6. **Guests:** Steve Aquafresca Mesa County irrigator, Oni Butterfly former EPA Sec. 2 chief and Army Corps groundwater specialist, John Currier, Angie Fowler SGM, Craig Godbout, CWCB, Russell George, CWCB, David Graf, Morgan Hill, Garfield County, Hannah Holm-CMU, Erin Jaynes SGM, Scott Jones, Upper Colorado River rancher representing the Eagle County Conservation District, Greg Lanning City of Grand Junction, Brendon Langenhuizen SGM, Victor Lee BuRec chair of HUP, Jason Lederer Summit County Open Space, Bailey Leppek SGM, Heather Lewin Roaring Fork Conservancy, Holly Loff Middle Colorado Watershed Council, Duncan MacArthur City Council Grand Junction, Ed Moyer Grand County, Mark Nieslanik Crystal River rancher, Laurie Rink Middle Colorado Watershed Council, Lisa Tasker Pitkin County Healthy Streams Board chair, Richard Vangytenbeek Trout Unlimited, Linda Vida, former water librarian at UC Berkeley, Greg Wind, city of Grand Junction, Karen Wogsland Colorado Water Trust

7. **Roaring Fork voters guide.** Heather Lewin of the Roaring Fork Conservancy distributed a 2016 Voter's Guide to Water Issues in the Roaring Fork Valley Watershed, consisting of interviews with 15 politicians running for office in Colorado from the US Senate to local county commissioner races. Eight politicians failed to participate.

8. **Brent Newman's position is open at the CWCB.** Brent has taken a position in his home state of Mississippi, and his role, representing the CWCB at roundtable meetings, has not yet been filled. Craig Godbout is filling in for Brent in the interim.

9. **$374,077 is in the CBRT water reserve account. The statewide WSRA account balance is $773,630.**

10. **The CWCB Board approved new grant guidelines for new grant submissions after Sep. 22, 2016.**

    a. A 25% match is required for basin account requests; a waiver is available if the roundtable agrees.
    b. A 50% match is required for statewide WSRA applications, up to ½ can be waived.
    c. Every roundtable must include a conflict of interest policy in its bylaws.
    d. A new scoring matrix replaces the previous supplemental scoring matrix.
    e. Any contract for over $100,000 must go through a competitive selection process.

11. **River Forecast.** The Colorado River at Dotsero is flowing 1,310 cfs, slightly higher than the median flow of 1,230 on this date. The Colorado River is flowing 2,280 cfs at Cameo, slightly higher than the median flow of 2,050 on this date.

12. **Louis Meyer is resigning from the roundtable** to move to Mancos to live on a farm with his children and grandchildren. He represented Garfield County on the roundtable since 2005 and wrote the first draft of the Colorado River basin roundtable basin implementation plan. He will be missed and the roundtable encourages him to return to future meetings when he is in the area.

13. **John Currier, chief engineer, Colorado River District, $10,000 Grant Request for Phase 2 of the Colorado River Risk Study.** Each of the West slope roundtables are being asked for $10,000, and the Colorado and Southwest River Districts will pick up the balance to do Phase 2 of the study. The purpose of Phase 1 of the Colorado River Risk Study was to get the West slope roundtables and the entire state to focus on the risk of shortages from additional water development in Colorado. Phase 2's purpose is to develop a plan to deal with future shortage in order to keep Lake Powell above minimum power level (3,490' elevation).

    a. How do we reduce the risk of going below minimum power at Lake Powell? Participants in the study **recommend that Powell not dip below 3,525', 35' above the power tubes at 3,490' elevation**. As you approach 3,490', **cavitation** problems arise—air gets sucked into the penstocks and wreaks havoc on the turbines. However, participants in the study have asked why we cannot adopt a lower minimum level of 3,510'.

    b. There are 3 ways to address future shortages:

        i. Operate CRSP reservoirs upstream to **deliver one-time slugs of water** to Lake Powell.
        ii. **Demand management (i.e., by reducing consumption**).

iii. **Cloud seeding**—it is very difficult to quantify but cheap to implement, as cheap as doing studies.

c. We could **move 2 maf from CRSP reservoirs to Lake Powell now, but that is a one-time fix**. Blue Mesa, Flaming Gorge, and Navajo reservoirs make up the CRSP, and Flaming Gorge is the largest source of water. At 3,525', Lake Powell has about 6 million acre-feet; at 3,490' it has 4 maf.

d. **Colorado is on the hook for the excess share that it is now using**—the Upper Division states are using about 4 maf, and Colorado is using 55-58% of the total, more than its 51.75% share. Participants of the Colorado River Risk Study assume **Colorado will have to reduce its share to 51.75% now**, so there will be an immediate reduction in use. Eric Kuhn's letter to the Colorado River District board dated Sep. 13, 2016, states "Colorado's share of the total consumptive use in the four states ranges between 55-58%. It would be reasonable to assume Colorado's share of demand management would be in this range."

e. **Risk is a function of 3 factors: the starting level of Lake Powell**, future **precipitation (referenced as "hydrology"), and water consumption (referenced as "demand management"**).

i. Lake Powell now has 13 maf. If we experience a drought like 2000-2005 in the next 5 years, we would have to cut back our use because Powell would drop below 3,525'.

ii. **If we increase use** by 400,000 acre-feet over what the Upper Basin is now consuming, known as the "current trends" or Schedule A from the 2012 Bureau of Reclamation Colorado River Water Availability Study, the odds of a future shortage requiring demand management exceed 50% based on the 1988-2012 hydrology.

iii. If the Upper Basin adopts a **slow growth strategy**, referred to as Schedule D-1, and further reduces use by 10%, **the odds a future shortage occurs and we have to cut back consumption still exceed 20% by 2036** assuming the 1988-2012 hydrology.

f. It also depends whether we **decide not to worry about the risk at all**. We never know if a low water year will be followed by a high water year. At higher demands the risk goes up significantly. With Schedule A consumption, there is a significant likelihood that the Upper Basin would have to deliver 1 to 1.5 million acre-feet to keep Powell sufficiently high. With consumption dropped to 90% of D-1, the slow-growth scenario the risk drops to about 25% of the Schedule A, but it still exists. The CRSP reservoirs could deliver this, but then that water bank would be gone.

g. Currier said that **we might easily have to reduce demand by 1.5 to 2 million acre-feet in the entire Upper Basin**, particularly if we have a 2000-05 drought on top of a low Lake Powell. This is after we have delivered 2 maf from the CRSP reservoirs to Lake Powell. We don't know how to do massive demand management.

h. A water bank could solve this issue. **What if we bank 50,000 af every yea**r in Lake Powell, so when you need it, it's there? That raises political issues, because under the Interim Guidelines adopted in 2007 to manage levels in Lake Mead and Lake Powell, if Powell levels increase, "equalization releases" must be made to keep the 2 reservoirs comparably filled. That means that **Colorado's water banked share in Lake Powell could be inadvertently delivered to Lake Mead**, and no longer be available in the event Powell drops below 3,525.'

i. The goal of the grant is to **run additional CRSS model runs using paleo-hydrology** data, but Currier shared his concern that this will only complicate matters. It is **expensive** to run these models. Denver Water has a PACSIM model, Platte and Colorado Simulation, that they have an entire staff working on al the time.

j. Currier said that **groundwater banking is unlikely** to be very helpful in the entire Upper Colorado basin because there isn't enough underground storage in the Upper Basin. The best storage vessel is Lake Powell itself, but that raises political and legal issues. Or, the best storage might be in the CRSP reservoirs. Or, we could build another reservoir just to hold the water we bank in Colorado.

k. Louis Meyer – Demand management means **cutting people's consumptive use** by large numbers. How realistic is this? Currier said the Colorado River District has been working on a water bank since 2007, primarily from agriculture. The 2 big power plants in the Yampa-White basin consume about 50,000 af, and the Front Range receives about 500,000 af through trans-mountain diversions (TMD). The only other large consumptive use on the **West slope is agriculture**.

l. If we drop below the power pool, the state of **Colorado should figure out how we will administer a Compact Call**. John Currier agreed that we need to address this as we have on other administered basins in the state like the Arkansas River and the Republican basin, where administration means to call out junior uses so they cease receiving water.

m. Steve Aquafresca – **Colorado River water diverted to the Front Range makes those users part of the problem over here**. That water is 100% consumptive, so we should bring them in on this discussion. Our consumption is 5% municipal and industrial and 30 to 40% agriculture of the amount diverted, but TMD water is 100% consumptive, meaning none of it returns to the system.

n. The Phase 1 study assumes there will also be 1 to 1.2 maf reduction in consumption in the Lower Basin. Reductions of 500,000 af will occur when Lake Mead drops below 1,025' elevation, to be borne solely by Arizona and Nevada. They have banked about 300,000 acre-feet already in Arizona to plan for that.

o. But **a Compact Call occurs when the Upper Basin fails to deliver 83 or 84 million** acre-feet over a 10-yar period. Article III(d) of the 1922 Colorado River Compact requires the Upper Basin to deliver 75 million acre feet every 10 years. Article III(c) requires the Upper Basin to deliver ½ of the Mexico Treaty obligation, another 7.5 maf, but the Upper and Lower Basins disagree whether the Upper Basin must deliver this. The Upper Basin says it is not obligated to deliver water to Mexico if there is surplus water; the Lower Basin says there has been no surplus water available since 1998, and that the Upper Basin should also be charged with transit losses of 100,000 af per year between Lees Ferry and the Mexican border where water is delivered. If the Lower Basin's position prevails, the Upper Basin must deliver 83.8 million acre feet every 10 years. **From 2001-2010, the Upper Basin delivered 84.8 million acre-feet**, just 1 million acre-feet extra.

p. Stan Cazier motioned and Lurline Curran seconded a motion to approve the $10,000 grant request, and it passed unanimously.

14. Richard Vangytenbeek – CWCB approved a match to the **Ware and Hinds Ditch** grant the CBRT earlier approved in order to **rehabilitate a low-head diversion** on Elk Creek near Newcastle in order **to improve fish passage**. This project has been fully funded, and construction should begin next spring.

15. Jason Lederer, Summit County Open Space, reported on the **Swan River Stream Restoration in the Upper Blue River Valley**. WSRA grants from the CWCB and CBRT of **$975,000** are funding nearly ½ of this project. The project is underway, about 11 miles northeast of Breckinridge. Miners dredge-mined the Swan River in the 1800's and turned the river upside down. Lederer commented that they were productive in terms of destroying the existing landscape, which used to be a meandering valley stream. Much planning took place from 2009-2013, and construction began this summer.

a. Downstream from the Swan River is the 4-Mile Bridge section on the Blue River, where a similar restoration project was done. Previously, that stretch of the Blue River had little aesthetic benefit to the community. Now, a thriving trout population indicates the stream is healthy; it is popular with fly-fishing companies and is an economic generator in Breckinridge.

b. There are **15 different partners** including Colorado Trout Unlimited, Colorado Parks & Wildlife, the Blue River Watershed Group, US Fish & Wildlife Service, US EPA, and the Colorado Div. of Water Quality.

c. **Goals – create a natural channel, restore a riparian wetland, enhance water filtration, restore a cutthroat trout fishery**, and have it become an **economic generator.** How can we celebrate our mining past by reclaiming it for the future?

d. The Swan River is 3-4 miles of degraded stream channel. Summit County Open Space owns about 50% and the other half is privately owned and still being mined. Four reaches have been identified. Reach A at the downstream end has less gravel, and Summit County owns it so it can be restored now. The channel length is 2,100', and they hope to expand the river length to over 5,000' with additional sinuosity. It is covered with rock and cobble; the first step is to move this away—it is good for use in cement aggregate. Then, they must import soil—finding that much soil is difficult. Then they need to seed and mulch it to stabilize it.

e. The **project cost is $2.4m,** of which under $40,000 was in-kind. At this rate, it would **cost $6 million per mile to rehabilitate the 4 mile degraded stretch of the Swan River**, or about $25 million for the entire 4-mile stretch. The CWCB's WSRA grant of $975,000 in 2015 is the single biggest funding source. Six qualified proposals were received, and Ecological Resource Consultants was chosen to rehabilitate the site. Construction began in May 2016.

f. The biggest change going from conceptual design to actual restoration involved eliminating a fish barrier, to segregate cutthroat trout. This was delayed until later in the project.

g. One challenge was opposition from **local homeowners who don't like noise from crushing rock on site, or all the truck traffic**. They delivered a lot of material for use as road base throughout Summit County. With a couple big machines, this happens quickly, but it alarmed the public and necessitated several public meetings. They also published signs to assure the public that a Wal-Mart wasn't being built onsite.

h. By early August, the stream channel had been dug, and fish shortly found their way into the river, much to the surprise of the workers—through interstitial spaces in the rocks? They don't know! Woody debris is being placed in the stream. Root balls create pools and also help anchor the streambed, but they also serve as raptor perches so fish don't hang out below them. Lederer said they could be hammered further into the ground to prevent them from serving as perches.

i. The soil onsite is being reworked and amended; it had 3-5% organic content, which is about average for our environment; they are confident this can be used to re-vegetate the site. Another problem are motorbikes, so they are building a lot of buck and rail fencing to prevent that. This is a concern long term.

j. As an old mining area, there is always the chance they can come across an old mineshaft or a lot of old mine waste. They found a huge pile of mine waste, and the project partners including federal and state agencies agreed on a solution. It will stay in place, and cost a few hundred thousand more dollars, but the project was delayed less than a month. When no one in a project objects, state and federal permits are quickly granted.

k. The Swan River has unusual dredge-mined hydrology. It is a subsurface stream, not groundwater, and is **a gaining stream over most of the site**. They have built a sub-surface liner for part of the valley but not the entire valley. Lederer said the site is like a barrel with marbles in it. It is a productive fishery with the largest sculpin population in the upper Colorado River headwaters, an indication that the fishery will be very productive.

l. The project will shut down Oct. 20 for the winter; next spring they will do advanced landscaping. Colorado Parks and Wildlife gave a $60,000 grant for landscaping. The project will be completed by the fall of 2017. **Full restoration is not anticipated until 2040, nearly 25 years away**! Monitoring will be primarily geomorphologic (i.e., changes to the landscape), documenting visual changes to the channel width and channel movement. Colorado Parks and Wildlife is very interested in how this stream continues to evolve, and it will do a fish survey next summer.

m. **The subsurface liner consists of fine-grained materials allowing communication between surface and groundwater**. They did not have to line the entire project, just the region with mine waste. The restored river channel is 20-25' wide, and the liner is 70' wide. They would have liked to line the entire channel, but that cost too much. **Most of the mine waste is being left in place**, although some was moved onsite and capped. They know where it is, and will know if the stream is meandering into it.

n. There was no available information regarding what the stream looked like before it was dredge-mined, so they chose the stream channel based on a best-guess fit. The goal is not to lock the channel in, but to let it change through avulsion and degradation.

16. Erin Jaynes, a contractor with SGM Engineers in Glenwood Springs, gave a project update for the **Irrigation Asset Inventory Program in the Eagle River Conservation District**, a project funded with a WSRA grant by the Colorado River Basin roundtable. Scott Jones, a rancher on the Upper Colorado River near Derby, and Scott Schlosser of the Eagle Valley Irrigation District attended as well. The ERCD mission is to conserve natural resources in its area, which includes both the Colorado and Eagle River watersheds. This project reflects the **dual Colorado BIP goals to improve agriculture and stream health**.

a. Do an **inventory of irrigation structures**. The project goals were to support regional agriculture, prevent ditch emergencies, provide a resource finder describing the ditch history and, with the consent of ditch owners, to modernize ditches. A secondary goal is to maintain a level of privacy that all ditch owners are comfortable with.

b. The inventory **created a priority list of projects** that need funding. Contacting ditch owners and getting them comfortable with the project was the biggest challenge. Erin interviewed ranchers to learn the history of the ditch and maintenance needs, and walked along the ditch with a GPS device to mark environmental concern points, identify structures, and denote when they were put in. Then she created a map in the office for each irrigation ditch and wrote a report.

c. **The summary report including an aerial map, a ditch structure review, a list of the top priority issues**, and historical water decrees was provided to each ditch owner. The general location of the **headgates are shown on a map, but purposely kept vague to maintain privacy**.

d. A checklist was created to estimate:

   i. When repairs would be needed;
   ii. What would happen if a headgate blew out;
   iii. Environmental benefits that projects would have to nearby streams including water quality, sedimentation (one of the main benefits), and aquatic transport; and
   iv. Whether the project would help maintain agriculture.

e. Erin showed photographs of a **metal pipe so corroded** that it sat in a pool of water; **a flume that needed backfill** and other work such as adding vegetation to hold soil in place; **a headgate leaning over**, at risk of completely detaching and falling off; and **a large sinkhole next to a ditch**, caused by gravel in the soil, a common problem that can be solved by lining the ditch.

f. The survey identified ditch improvement projects including a **ditch that had filled in with sediment**, which could be solved by placing a culvert in the ditch; **another ditch had a 2 cfs leak**; how a ditch headgate repair could **protect a riparian area by permitting bypass flow around a headgate**; and how fixing a headgate could improve the instream flow of the adjacent stream.

g. Overall, the ditch participants gave positive feedback, although some had privacy and water rights concerns. Erin reported that those who did participate were very pleased. Many were happy to get general ditch advice because they did not know what they were doing. **Newer ranch owners were more likely to appreciate the survey and prognosis for repairs**.

h. So far, 23 of the 25 selected ditches have been investigated, on budget. The team still needs to make final site visits to distribute the final reports and prioritize ditch projects. 14 funding partners and stakeholders have been identified. **Determining the cost for ditch improvements is phase 2 of the project**.

i. What percentage of the big ditches have been inventoried? Erin did not know. They used CDSS data to identify the ditches within the conservation district boundary, and they **surveyed 25 out of 500 ditches in the Eagle County Conservation District**. Erin reported that ranch owners in general were very interested in this and would like to see more of this done.

j. Most contacts were new to the area and had just purchased land, or had obtained NRCS grants previously. The NRCS will pay up to 65% of the cost to install sprinklers. In order to address privacy concerns, Scott Schlosser said that he and Scott Jones on the upper Colorado River **reached out to ranchers by word of mouth**, emphasizing that they need to make the initial contact, not the consultant. Schlosser considers the project, which ranged from Derby Mesa to the north along the Colorado River to Brush creek and Gypsum Creek south of Interstate 70, a big success. Scott Schlosser said this indicated that **our agricultural structures are failing**.

k. A matrix identifies the following for each ditch

i. Conditional rating report of each ditch report – Hi Med Low
ii. Whether a ditch improvement benefits multiple ag parties or objectives
iii. **Estimated remaining years until structure fail**s: 0-5 years, 5-15 years, over 15 years
iv. Impact on ditch operations: Hi Med Low
v. Size of structure: 10 cfs, 5-10 cfs, under 5 cfs.
vi. **Environmental impact**: water quality, riparian impacts, sedimentation, aquatic habitat
vii. Whether an improvement can sustain agriculture

17. Richard Vangytenbeek, Colorado Trout Unlimited, made a **grant request for $9,000** from the CBRT WSRA to re-water 1.3 miles of **4-Mile Creek**, south of Glenwood Springs on the way to **Sunlight Ski Area**. Colorado Trout Unlimited will match the grant. This stretch of the **river is dewatered by a small hydro project**. It could provide a cold-water refuge for trout moving up from the Roaring Fork River in late August and September. Small streams are very important to small trout because there are not a lot of predators. The study hopes to determine if there is a possible solution to restore water to the river. After refusing entreaties for years, the **hydropower operator has recently signaled he would be willing to discuss whether it is possible to leave more water in the dewatered stretch**.

a. 4-Mile Stream is 4 miles upstream from Roaring Fork and Colorado River confluence in Glenwood Springs. Based on a R2 Cross study, Richard said the **river needs 1.3 cfs to keep stream alive and active**. The dewatered stretch is 4 miles below Sunlight. 4-Mile Ditch is the senior priority. Atkinson Ditch, the second priority, is upstream. It has a hydropower right to take water out of the creek and run it through a turbine below, dewatering a 1.3-mile stretch of the river. The water comes back into creek just before 4-Mile Ditch. Below the 4-Mile Ditch diversion is private property, so it is not clear what happens to the creek.

b. The hydropower operator has a right for 1.6 cfs and would have to give up the right to this water in order to cease dewatering the stream. Or, an upstream reservoir could store and supply the water. **180 acre-feet are needed to deliver a constant flow of 1.6 cfs for 60 days**. Options to get more water include expanding an upstream reservoir, or resurrecting Bershenyi Reservoir, which was abandoned and is no longer used. The West Divide Conservancy District owns the reservoir above and also owns water in Atkinson Ditch.

c. Or, **the hydropower operator could be paid for the electricity the operation is now generating**.

d. Richard indicated that the Next Steps committee looked at the grant request in August and approved it for funding so we can vote on this at this meeting. However, a grant-scoring matrix was not prepared or circulated, and Jim Pokrandt was not at the meeting to describe the discussion.

e. Lurline said this is a good opportunity and favors funding this project.

f. Paul Bruchez said that **if a private landowner is willing to work on this we should try to accommodate the landowner as quickly as possible**.

g. Lisa Tasker said the Pitkin County Healthy Streams Board could be a potential funding partner.

h. **Carlyle Currier**, one of the roundtable's two representatives to the IBCC committee, is concerned that by funding this project, we are saying that an instream flow is more valuable than hydroelectric water. He **questioned whether it is the roundtable's role to be choosing winners and losers**.

i. Richard said this is a willing water right holder. It's not playing one water right against another. **The study is designed to understand the system, measure the stream flows, document other users on the lateral, and determine whether taking the hydropower water will impact other ditch users**. The first phase will measure the hydropower ditch; next step is to bypass water from hydropower and see if it restores the river, and prevent other water users from taking it. The

CWCB won't apply for an instream flow on this stretch unless it can be assured of a constant flow.

j. The roundtable agreed to discuss this at the October 24 Next Steps Committee meeting, complete the grant matrix, and decide on this by email vote. Roundtable members expressed concern that since the hydropower owner agreed to discuss this after years of refusing to do so, we should respond as quickly as possible.

18. **Lean decision-making process update** by Lane Wyatt: The Dep't of Natural Resources, EPA, and federal permitting agencies all play a role in permitting water projects. A goal in Colorado's Water Plan is to streamline this permitting process, generally through better coordination by the permitting agencies. **A sequential process now takes place**, with impacts to fish & wildlife first addressed, then Clean Water Act section 401 certification is obtained from the Division of Water Quality, and then the county issues a 1041 permit.

a. In addressing how to streamline NEPA (the process to create environmental impact statements), would it be **better if one aquatic life study could be used for all of these permits**? The Dep't of Natural Resources just released an email seeking a pilot project that may trigger NEPA and involve another agency like the Colorado Dep't of Public Health and the Environment, a county, or some other permitting agency.

b. Is there a project willing to be put under the limelight? Currently, proposed projects come to the **local county government last in seeking a 1041 permit, so counties look obstructionist** and are criticized for bringing up concerns late in the game.

19. Legacy Project Update – Louis Meyer and Ken Ransford. The roundtable separated into breakout groups in order to discuss progress on the six themes in the basin implementation plan, where the future focus of the roundtable should be, whether we should develop a legacy project, and what the biggest threats to the basin are. **The 6 themes are**:

- Protect and restore healthy streams, lakes, and riparian areas.
- Sustain agriculture.
- Secure safe drinking water.
- Assure dependable basin administration.
- Develop local water conscious land use strategies.
- Encourage a high level of basin-wide conservation.

a. Lisa Tasker reported on a group largely from Grand junction.

i. The **recent stream management plan on the Crystal River demonstrates that this is a potential legacy project**.

ii. **Future focus: Workshops to develop stream management plans**. Workshop at Colo Water Congress in steamboat, Colo Watershed Assembly.

iii. **Biggest threat – no water, insufficient money for restoration projects, population growth, and drought**.

iv. **Sustain agriculture by making irrigation more efficient: Grand Valley Canal efficiencies**, irrigation efficiency improvements, timing irrigation water releases, help improve water quality. The **Ute Water** Conservancy District **is working with Orchard Mesa Irrigation District OMID to pipe ditches**; working with OMID. Threat is economic.

v. Secure safe drinking water – future focus should be increase gray water use, **3 tiers of water—separate pipes for ditch water, gray water, and potable water to reduce use of potable water for landscapes**.

vi. Basin administration – more coordination; inconsistencies in water court. **The biggest threat is a Lower Basin Compact Call.**

b. David Graf, Brendan Langerhuizen table.

i. Recent success Wheeler Ditch; **Windy Gap bypass is a recent success**.

ii. **Continuing irrigation ditch assessments**; funding for this could sustain agriculture, **frame it as helping the ag community**.

iii. **Encourage high level of basin wide conservation. Water banking** and lease-fallow are opportunities.

c. **Paul Bruchez represented a table with Grand County** concerns. They focused on several **recent successful joint projects that sustain agriculture and protect healthy streams – ILBK project to improve ditch deliveries** while preserving Colorado River flows, **Grand County Stream Management Plan**, 5,412 acre-feet of water **released from Granby Reservoir, half of the 10,825 water** required for endangered fish recovery in the 15-mile reach of the Colorado River above the confluence with the Gunnison River coming down the Colorado River from Granby can be used by agriculture. **Windy Gap bypass** to re-route the Colorado River around Windy Gap Reservoir.

i. We are understanding that **we are one basin**.

ii. Future focus – building trust, conducting demonstration projects, improving ditch efficiency, showing how all these work with water rights.

iii. Secure safe drinking water: Bruce Hutchins' project to rehabilitate sewage treatment ponds, Jim Creek bypass in CRCA

iv. **Priority in basin – protect the Shoshone call**.

d. Kathy Chandler Henry described Eagle County and Middle Colorado River concerns:

i. **Integrated water management plans** are needed for all basins.

ii. **River restoration** in Swan Creek, 10-Mile Creek, Gore Creek, Cattle Creek and the Roaring Fork River.

iii. **Biggest threat – funding**, stakeholder buy-in, getting projects implemented, controlling **aquatic nuisance species**.

iv. Support continued NRCS funding.

v. **Aging agriculture infrastructure is the biggest threat**. Misperception of agriculture on all sides.

vi. **Secure source water and stream restoration** – upstream improvements help everyone.

vii. Next phase of Colorado risk study.

viii. More work defining high conservation goal.

e. Ken Ransford described Roaring Fork Valley and Summit County concerns.

i. Every river basin should develop **integrated water management plans so they can speak with one voice.** Communities have more power than individual water right holders.

ii. **The biggest threat is climate change**.

iii. The **water bank could be used to improve river flows by shepherding water from the highest streams in West slope basins all the way to Lake Powell**.

iv. To do this, **more river gages are needed**. Richard Vangytenbeek mentioned that he surveyed the West slope and counted 188 operating gages, compared to 90,000 diversions from Colorado rivers statewide.

v. A single legacy project for the basin may not be realistic since the upper Colorado River basin is so diverse. **Developing basin-wide stream management plans may be a better long-term legacy**.