## IBCC Colorado River Basin Minutes of Meeting on January 25, 2010

# Main topic: Environmental Impact Statement on Denver Water's Increased Diversions from the Upper Colorado River

- Next Meeting: Monday, February 22, 2010. Glenwood Springs Community Recreation Center,
   1:00 to 4:00. Agenda: Vote on the CBRT's response to the EIS on increased diversions from the Upper Colorado River
- 2. **Reporter: These minutes were prepared by** Ken Ransford, Esq., CPA, 970-927-1200, kenransford@comcast.net.
- 3. **Approve November 2009 meeting minutes.** The November 2009 minutes were passed without any changes.

## 4. **Upcoming meetings**:

- a. February 10, 2010: IBCC meeting regarding implementing Phase 2 of the Water Availability Study. Phase 1, which was recently completed, determines how much water in the Colorado River is being used and Phase 2 determines how much unappropriated water is available for additional projects.
- b. March 12, 2010, Evapotranspiration workshop in Fort Collins.
- 5. **Discussion of recent CBRT vote declining two grant applications to expand reservoirs.** Carlyle Currier was dismayed that the CBRT voted down two separate grant applications to expand Dinkle Reservoir on the flank of Mt. Sopris southeast of Carbondale, and the Hopkins Reservoir near Spring Creek southeast of Glenwood Springs. Of 33 potential votes, 19 CBRT members cast their votes, sufficient for a quorum.
  - a. Louis Meyer voted against each because he believed they advanced private interests. The Dinkle Reservoir expansion would benefit a very wealthy landowner who could fund the improvements, and Hoppy Reservoir would eventually be used to supply water to a high-end planned unit development. Neither would advance agriculture in his opinion.
  - b. Chuck Ogilby voted against them because he is concerned that only \$219,000 remains in unexpended CBRT Basin grant funds. State budget cutbacks mean that less money will be forthcoming, so the CBRT has to be more careful about approving grant requests. House Bill 1177 mandates that the CBRT do a nonconsumptive needs analysis, and money needs to be reserved for that.
  - c. John Redifer noted that the remaining \$219,000 funds can be lent out rather than granted. Jennifer Gimble, the CWCB head, still has additional funds that can be granted.
  - d. Jim Pokrandt noted that there is no means test required in determining whether a grant proposal should be funded or not.
  - e. Mel Rettig recommended that we vote in person whenever possible rather than by email.

f. Attached to these minutes is a record of grant requests that have been approved by the CBRT; 93% of prior grants approved by the CBRT can be sorted into the following three categories:

Category	Notable grants		Total Grants
Agriculture	Vail Ditch Expansion in Grand County	\$1,500,000	\$1,500,000
Reservoir	Enlarge Eagle County Reservoir	\$250,000	\$640,000
enhancement	Bull Creek Res improvements & spillway anal.	\$170,000	
	Old Dillon Reservoir enlargement	\$100,000	
	Thompson Creek feas anal for 3 reservoirs	\$40,000	
	Improve Battlement Reservoir #3	\$80,000	
Studies	Energy water needs analysis	\$300,000	\$795,000
	Non Consumptive Needs Anal – Flow Eval Too	ol \$315,000	
	Roaring Fork Watershed study	\$80,000	
	Grand County Stream Flow Mgmt Plan	\$100,000	
	Total grants awarded in these three categories		\$2,935,000
	Total grants approved by CBRT		\$3,172,900

**6. Report from Ken Neubecker, NCNA update.** Over the past 5 months, the Non Consumptive Needs Analysis scope of work has been enlarged to evaluate geomorphic changes to the streambed and spawning bed maintenance. A panel is scheduled for February to look at riparian issues and recreational flow needs. All work has been subcontracted, and the committee does not anticipate that any additional funds will be needed to complete the study. A bibliography of papers has been compiled, and it is available free for CBRT members and other interested parties on the Camp Dresser & McKee (CDM) website.

## 7. IBCC update from Carlyle Currier and Stan Cazier.

- a. Phase 1 of the Water Availability Study has been completed. At the December IBCC meeting, concern was expressed that while Colorado's climate is projected to increase 4 degrees by 2050, there's little attention being paid to how this will change vegetation.
- b. Stan Cazier noted that conservation is the only source remaining to increase water supplies without harming existing users. It is far cheaper than the cost to build additional reservoirs or pumpback systems to deliver water to the Eastern Slope.
- c. A conservation proposal under discussion is to have different tap fees for indoor water used for human consumption and outdoor water used for lawn and shrug irrigation.
- d. Representative Pace and Senator Gibbs have introduced a Basin of Origin protection bill in the current legislative session, but Stan does not believe it is likely to pass. Word on the street is that House Bill 1177, which created the roundtable process, eliminates the need for a Basin of Origin bill.
- 8. Energy Water Study update Greg Trainor. The subcommittee last met in November, and plans to meet again in February. They have spent \$81,000, or 40% of the budget, and \$120,000 grant funds remain. The groundwater study is completed, and it suggests that there is little groundwater available to supply significant amounts for oil shale development.

- 9. Colorado River Water Conservation District video. Jim Pokrandt showed the fourth and latest video prepared by the CRWCD for public distribution. The 3 major concerns regarding future Colorado River impacts are population growth, energy development, and climate change. The video addressed conservation, re-use technologies such as Aurora's pumping of water in the Platte River back to Aurora for reuse, and agricultural efficiency including ditch lining, pressurized sprinklers, and drip irrigation. Aurora's Mark Pifher recommends that water in wet years be used to recharge Front Range aquifers. Innovative sharing techniques include (1) water banking, where owners of senior water rights put water in a bank for transfer to municipalities; Eric Kuhn estimates it will take 5-15 years to develop a water banking program; (2) rotational fallowing, where agricultural lands lie fallow while water is temporarily leased to municipalities, and (3) transmountain diversions.
  - a. Rachel Richards suggested that further diversions to the Front Range should not be termed as "innovative sharing" since water was being taken and not shared by the Front Range.
- 10. **CBRT Response to EIS prepared by the Army Corps of Engineers for increased diversions through the Moffat Tunnel**. Karn Stiegelmeier, Summit County Commissioner, discussed a draft response that she wrote to be sent by the CBRT Roundtable to the Army Corps of Engineers. This response is due March 1, 2010, unless the Army extends the deadline. (Which it did. New deadline is March 17, 2010). Denver Water has proposed to divert 18,000 additional acre feet from the Fraser River through the Moffatt Tunnel collection system. At present, about 450,000 acre feet is diverted from the Upper Colorado and Fraser rivers by Denver Water and the Northern Water Conservancy District.
  - a. Data underlying the EIS hasn't been released. The Army Corps of Engineers prepared the EIS but CBRT members complained that since the Army had failed to release the data supporting the assumptions in the EIS, the public cannot properly evaluate the EIS. The CBRT will ask the Army to release the underlying data and to extend the comment period to give citizens adequate time to review it.
  - b. **Drinking water effects haven't been quantified**. Louis Meyer remarked that the EIS failed to consider the effects that reducing the river flow would have on drinking water and water treatment systems. The following issues are inadequately addressed in the EIS.
    - 1. **Emerging contaminants**. He noted that the Safe Drinking Act lists 500-1,000 pharmaceuticals, health products, and other chemicals as potential contaminants in drinking supplies. The list has not been updated since 1996, and hundreds of chemical compounds invented since then are not being tested for in drinking water supplies today.
    - 2. This is a problem that will impact the entire basin, from Granby to Rifle to Clifton. Louis noted that engineers can solve these problems, but it is increasingly expensive. Denver Water's proposed diversion would take the best quality water since it is highest in the drainage. There's a direct relationship between the concentration of chemicals in the water and water volume as water flows decrease, chemical compounds increase proportionately. Engineers at Schmueser Gordon Meyer tested water supplies in Rifle in November 2009 and identified 7 contaminants in drinking water that water treatment plans are not presently designed to test for or remove.
    - 3. **EPA** is addressing the issue of emerging contaminants. Jeff Donn of the Associated Press reported on emerging contaminants in an Aspen Times article on December 23, 2009. The EPA recently listed some pharmaceuticals as candidates for regulation in drinking water. No pharmaceutical has ever been listed for regulation under the Safe Drinking Water Act or been made subject to a national water quality standard. Fifty-one million Americans, about one in six, drink water with minute concentrations of drugs including antibiotics, sedatives, and sex

hormones. The Pharmaceutical Research and Manufacturers of America association states that trace amounts do not pose a human health issue, but other researchers fear that minute concentrations over decades can harm human health. A recent EPA study found over 40 pharmaceuticals in 9 publicly owned wastewater treatment plants. Millions of pounds of waste drugs escape into waterways from hospitals, drug plants and other factories, farms, and the drains of American homes. A solution is to deliver unused drugs to collection centers for incineration. George Mannina, an environmental lawyer in Washington, says the EPA should do more to keep drugs out of the nation's water supplies and not rely on expensive filtering systems at water treatment plants.

- 4. **Increased salt concentrations.** Decreased water supplies also increase salt concentrations since saline waters migrate higher up into the water table as river flows decrease. With increased salt concentrations come increased iron and manganese. High manganese concentrations have linked to Parkinson's disease.
- 5. Rifle is pilot testing a new water treatment plant, and wrestling with what to do with brine water byproducts. In the past, it has been put back into the Colorado River, but at some point in the future, this is likely to be banned. Wastewater treatment plants are not supposed to increase salinity above 400 Mg per liter, but most municipality entities currently violate this standard. It takes significantly more energy to treat water with higher concentrations of contaminants.
- c. **CBRT isn't privy to global settlement**. Pitkin County Commissioner Rachel Richards noted that since the CBRT is not involved in the global settlement between Denver Water, Summit County, Grand County, and other participants, it is difficult to view the Moffat Tunnel EIS in isolation.
- d. **Shoshone call is not addressed in the EIS**. Lurline Curran of Grand County noted that the Shoshone Call is the linchpin to all other assumptions regarding water flows and quality on the Colorado River and the EIS fails to consider what could happen if the call is turned off.
  - 1. Xcel Energy, a publicly traded corporation whose allegiance is to its shareholders, owns this call right and it can be freely transferred under Colorado water law. At the July 2006 CBRT meeting, Bill Bates of the Denver Water Board discussed the 2006 Shoshone power plant agreement between the City of Denver and Public Service Company (Xcel) in which Denver secured a call reduction of up to 550 cfs at the Shoshone power plant between March 20 and May 20 each year in years that Denver Water's projected reservoir storage capacity is less than 80%. Dave Merritt of the Colorado River Water Conservation District estimated that the agreement may generate 6,000 to 10,000 maximum additional acre feet for Denver in any year that Denver Water's projected reservoir storage capacity is less than 80%.
  - 2. **Every year is a dry year in Grand County**. Curran noted that after the Moffatt Firming Project takes higher spring flows there's not much left, with the result that every year is a dry year. She believes that the EIS makes undisciplined use of statistics. For instance, water temperature is addressed on an average basis throughout the year, ignoring the warmer temperatures that will increase with lower flows in the summer months and that is so devastating to aquatic life. Or, dry years from 1995-1997 and from 2002-2004 are excluded from an analysis of projected future flows.
  - 3. **The right to revisit this in the future is needed**. Grand County's conclusion is that, if the statistics projected in the EIS don't pan out, there should be mechanism to stop the proposed diversion in the future if riparian health is crashing. The EIS states that impacts to the river will be insignificant. If this is not true there should be a way to revisit this issue.

- e. **Impact to minimum in-stream flows should be considered**. Chuck Ogilby noted that he is currently proving up a ½ cfs right with a 1902 priority, and he has to prove that a junior minimum in stream flow right in the Crystal River would not be impacted by his ½ CFS diversion. Denver Water should be required to likewise consider the impact that its proposed 18,000 acre foot diversion (which is at least 100 times greater than Chuck Ogilby's proposed diversion) will do to minimum stream flows on the Fraser and Colorado rivers.
- f. Wait until Phase 2 of the Water Availability Study is completed. This will address the cumulative impact of all conditional water rights on the Colorado River if exercised. The EIS does not view Denver Water's 18,000 acre foot diversion in the overall context of these potential future diversions, but rather considers it in isolation. Since Phase 2 of the WAS will be completed within a couple of years, it is premature to decide on Denver Water's request now.
- g. Impact on base flows must be considered. David Graff, Water Specialist on the western slope with the Colorado Division of Wildlife, stated that the DOW is a party to the global settlement negotiations, and discussions are stalled on what proper base flows are necessary to maintain a healthy fish population in the Upper Colorado River. The DOW has seen a long term downward trend in riparian and fish health since the last diversion occurred in 1980. The EIS should address this before permitting any further diversions.
- h. **Flushing flows will be inadequate on the Fraser**. Ken Neubecker of Trout Unlimited noted that if Denver Water's proposed diversion is approved, the annual hydrograph showing monthly fluctuations in river flows on the Fraser River will be flat. There will be inadequate flow to flush sediments down the river (much of which results from sanding Berthoud Pass for winter car traffic to Winter Park), to say nothing about flows needed to flush coarser sediments and larger gravel down the river.
  - 1. **Grand Lake impacts are ignored**. Grand Lake water quality will decline because oxygen levels will decrease and nutrients, algae and temperature will increase with the proposed diversion. The EIS does not consider these impacts.
  - 2. **Twenty of 31 diversions on Fraser tributaries completely dry up the diversions.** There are no bypass flow requirements that require any water to be left in these streams. 65% of the Fraser River's average annual flow is already diverted, and the EIS fails to consider the cumulative impact that the additional 18,000 diversion will have when coupled with these diversions.
  - 3. **Indicator species are in decline.** Stone flies, whose 2" exoskeletons can be seen clinging to rocks at river level on the Colorado River, have declined on a 20-mile stretch of the Colorado River between Windy Gap and Parshall. Likewise, sculpin, a pretty resilient fish that used to be prevalent in this stretch of the river, has disappeared.
- i. **The CRWCD should comment.** Rachel Richards requested that the Colorado River Water Conservation District comment on the EIS at the March CBRT meeting.
- j. **Impact on 10825 water.** Rachel Richards noted that it has been very trying to come up with an agreement to provide 10825 water to protect endangered fish in the 18 mile stretch of the Colorado River upstream of its confluence with the Gunnison River in Grand Junction. The EIS should consider how the diversion will impact the delivery of this water.
- k. **Other alternatives such as conservation should be addressed.** Jim Pokrandt noted that the Army is required under NEPA (National Environmental Policy Act) rules to consider alternatives to the

- proposed diversion, and to reject it if less damaging alternative are available. One alternative is increased conservation and xeriscaped landscaping in Denver, and this is not addressed in the EIS.
- 1. **How water quality affects agricultural yields.** Dale Tooker, manager of the Clifton Water District, noted that the EIS fails to consider how decreased water in the Colorado River will impact agricultural yields.
- m. **Denver Water will not respond to EIS comments.** Bill Bates noted Denver Water is not planning to respond to EIS comments, since the Army is required to do that.
- 11. CBRT vote to extend the EIS comment period. Ken Neubecker made a motion to request the Army to extend the EIS comment period, Rachel Richards seconded it, and it passed unanimously. Jim Pokrandt of the CRWCD was charged with writing a letter to request this. Following the meeting, the deadline was extended to March 17, 2010.
- 12. CBRT will vote on the EIS comment at its next meeting on February 22, 2010.
- 13. Kim Albertson recommended that the CBRT Vision Committee should meet again.

## **Appendix: Summary of Prior Meetings**

## December 12, 2005

The Bylaws of the Colorado River Basin Roundtable (CBRT) were approved.

Elect IBCC Round Table representatives Stan Cazier and Carlyle Currier.

## January 23, 2006

- 1. Lyn Kathlene presented results from a survey of stakeholders on water issues in Colorado.
- 2. Eric Kuhn discussed Colorado Big Thompson project, the Blue River decree, and other water projects.
- 3. Louis Meyer made a motion that was seconded and approved that the CBRT break into subgroups at future meetings.

## February 27, 2006

- 1. Small groups determined issues to address in future meetings.
- 2. Lane Wyatt presented the Upper Colorado Study.
- 3. Richard Proctor discussed the Grand Valley Water User's Association.
- 4. A motion was made by Mark Fuller, and seconded by Louis Meyer, and unanimously passed that all future projects that affect the Colorado River Basin, including those that have already initiated the permitting and DEIS process such as the Moffatt Tunnel and Windy Gap, be open for review and discussion by the Roundtable.

## March 27, 2006

1. Discussion of short term and long term goals of the CBRT.

## April 24, 2006

- 1. Karla Brown, outgoing Executive Director of the Colorado Foundation for Water Education, made a presentation regarding the Director's Notebook.
- 2. Subgroups presented goals. The four subgroups were:

Consumptive use Non-consumptive use Water availability Education

3. Louis Meyer made a motion that was seconded and approved to discuss the topic of determining the baseline data for minimum stream flow needs in the Colorado River basin, for discussion at

the May, 2006 meeting.

## May 22, 2006

- 1. The Colorado Basin Roundtable decided that a quarterly meeting with other Roundtables is a good idea.
- 2. Presentation by Gary Severson, Executive Director of Northwest Colorado Council of Governments, on demographic trends in the Upper Colorado Basin.
- 3. Colorado Department of Natural Resources Handbook, *Water Supply and Needs Report for Colorado Basin*, was handed out.

## June 26, 2006

- 1. Russell George, Director of Colorado Department of Natural Resources, presented a discussion on the \$10 million/year IBCC grant requests (\$40 million total).
- 2. Don Carlson of the Northern Colorado Water Conservancy District (Northern), discussed Northern's plan to take over the Bureau of Reclamation's operations and maintenance of the Colorado Big Thompson project, except for operations at the Green Mountain Reservoir.
- 3. Jim Pearce of the Colorado River Water Conservation District made a presentation on the Green Mountain Reservoir pump back.
- 4. A motion was made to request the Colorado congressional delegation to ensure that the Grand Junction office of the Bureau of Reclamation maintain oversight of the Green Mountain Reservoir operations and maintenance.

## July 24, 2006

- 1. Bill Bates, Denver Water Board, discussed the 2006 Shoshone power plant agreement between the City of Denver and Public Service Company (Xcel) in which Denver secured a call reduction of up to 550 cfs at the Shoshone power plant between March 20 and May 20 each year in years that Denver Water's projected reservoir storage capacity is less than 80%. The actual water saved will vary from year to year, due to the complex relationship between Xcel's Shoshone call, downstream priorities, water availability at diversion points and actual native flow available in the stream. Dave Merritt estimates that the agreement may generate 6,000 to 10,000 maximum additional acre feet for Denver in any year that Denver Water's projected reservoir storage capacity is less than 80%.
- 2. Bob Smith, news anchor for KKCT television station in Grand Junction, made a presentation to promote Grand Valley Lake, a proposed 195,000 acre foot reservoir on Orchard Mesa.
- 3. The roundtable discussed recommendations to the CWCB for how to allocate the SB 179 \$10 million grants.

4. The roundtable unanimously agreed to revise the June 2006 resolution to recommend that the Grand Junction Bureau of Reclamation office manage Green Mountain Reservoir. The revised resolution recommends that the reservoir be managed by an unprejudiced agency in a fair and impartial manner.

## August 26, 2006

- 1. Presentation by Connie Woodhouse, Tree Rings and Past Flows on the Colorado River.
- 2. IBCC Report: New IBCC subcommittees were created: (1) Needs Assessment Work Group to study instream flows and water quality; (2) Education and Outreach: How to get public input back to the IBCC, so that special interest groups do not dominate; and (3) Water Supply Reserve Account Guidelines to determine how to allocate SB-179 grant money.
- 3. Changes to the SB 179 Grant Guidelines were discussed and agreed upon to forward to the IBCC and CWCB.

## September 25, 2006

- 1. CBRT Bylaws were approved, and the officer slate was re-elected, with no change from the prior year to either the bylaws or the officer slate.
- 2. Subcommittees met to determine potential Water Supply Reserve Account grant applications.
- 4. Stan Cazier recommended that a representative from XCEL energy come to the November CBRT meeting to discuss Shoshone power plant operations, and that the CBRT discuss drafting the letter and meeting with Denver after that discussion. Ken Neubecker seconded the motion, and it passed unanimously.

## October 23, 2006

- 1. The CBRT report to the legislature for 2005-06 was edited, with changes stressing that the CBRT believes SWSI inadequately addressed consumptive and nonconsumptive needs assessment and, in particular, failed to address energy development's impact on water supply and availability.
- 2. CDM (Camp Dresser McKee) was introduced as the engineering firm charged with performing the needs assessment.
- 3. Group broke out into consumptive and nonconsumptive groups to discuss SB 179 and HB 1400 grant requests, and decided to prioritize these at the November 2006 meeting.
- 4. No motions were voted upon. However, the CBRT members discussed and stated its strong belief that a basin wide needs assessment is needed.

## November 27, 2006

- 1. The CBRT approved unanimously a motion by Lane Wyatt that CDM prepare a non-consumptive needs assessment of the Colorado River basin.
- 2. The CBRT approved unanimously a motion by Lurline Curran that the CBRT join the Arkansas, Denver Metro, and South Platte roundtables in requesting that SB 179 funds be used for a 10825 Water nonconsumptive needs assessment.
- 3. Tom Pitts, P.E., water user's representative for the Upper Colorado River Endangered Fish Recovery Program, discussed minimum stream flow requirements to protect endangered fish in the Colorado River through Garfield and Mesa Counties.
- 4. Tim Sarno, Town Manager of Palisade, and Pete Atkinson of WATER, requested \$100,000 from SB 179 to fund the Palisade whitewater park at the Price Stubbs roller dam just upstream of Palisade on the Colorado River. Decision on the grant request was postponed until the December CBRT meeting.

## December 18, 2006

1. The CBRT voted on the following grant requests; 18 votes needed to forward to the CWCB for consideration:

CBRT	CBRT	Applicant and Grant Purpose	CBRT	CBRT
Approval	Approval		Vote to	Vote to
to Spend	to Spend		spend	spend
CBRT \$	CWCB \$		CBRT	CWCB
			Funds	Funds
\$40,000		Ruedi Power Authority – Roaring Fork	27	7
		Watershed Plan		
30,000		Grand County – Stream Management Plan	27	6
		methodology		
	250,000	Eagle County – Increase Eagle Park Reservoir by		24
		155 acre feet		
	1,500,000	Grand County – Purchase share in Vail Ditch		26
	300,000	CBRT – Join with Yampa Roundtable for Energy		25
		Development Water Needs Assessment		
	200,000	CBRT – Join with Metro Denver and South Platte		25
		Roundtables for analysis of 10825 Water and		
		Endangered Fish Recovery Program		
		Bull Creek Reservoir Co. – Enlarge reservoir.	13	16
		\$150,000 request, did not pass		
		Palisade – Price Stubbs Roller Dam Whitewater	5	10
		Park - \$100,000 did not pass		

- 2. A non-consumptive needs assessment working group was established to develop the parameters of a grant request for a non-consumptive needs assessment. Ken Neubecker, Rose Ann Sullivan, Louis Meyer, Bruce Hutchins, Phil Overeynder, Ken Ransford, Tom Hilleke, and Lane Wyatt volunteered to join this committee
- 3. Tom Clark, Greg Trainor, Mark Fuller and Mike Wajeck formed an energy-needs assessment committee to study energy extraction impacts on Western Slope water.
- 4. The CBRT approved changes to Amendment 18 that was being discussed by the CWCB. Amendment 18 would permit the CWCB to set aside 20% of severance tax Revenue allocated to the Department of Natural Resources for new water projects. The CBRT voted to limit the scope that the severance tax revenues could be used for to the following types of water projects: "addressing compact calls, drought mitigation, endangered species, instream flows, river restoration, and recreation."

## January 22, 2007

- 1. The CBRT voted unanimously to send a letter to Governor Bill Ritter commending Russell George's leadership in the roundtable process.
- 2. Ken Neubecker reported that a subcommittee met to discuss the non consumptive needs assessment required by HB 1177, and listed 8 areas the non-consumptive needs assessment should cover.
- 3. The 2006 Shoshone Reduction Agreement between Denver and Xcel energy was discussed, with presentations by Bill Bates, Randy Rhodes, Bill Sappington, Ken Neubecker, and David Graf.

## February 26, 2007

- 1. Chips Barry, head of Denver Water, held a question and answer session with Eric Kuhn and other parties regarding the current mediation between Denver Water and several Western Slope water entities to address the Moffat firming project, and the Blue River Decree.
- 2. Kirby Wynn, USGS, and Cathy Kay, Western Colorado Congress, discussed water requirements for oil shale and mineral development on the Western Slope
- 3. Rick Brown, CWCB, discussed and suggested improvements to recent SB 179 grant applications.

## March 26, 2007

- 1. James Pritchett, CSU agricultural economist, discussed the impact to local tax revenues if irrigated agricultural land is taken out of production when agricultural water uses are redirected for municipal and industrial uses.
- 2. Eric Kuhn, Colorado River Water Conservation District, discussed the potential impact of global warming on Colorado water resources, and the need for Colorado to determine how it will respond to a call on the river by lower basin states.

3. Ken Neubecker, Trout Unlimited, explained the components of a non-consumptive needs assessment.

## April 23, 2007

- 1. Lynn Kathleen, PhD., conducted a network analysis survey funded by the IBCC Outreach and Education Subcommittee to determine spheres of influence among water stakeholders.
- 2. Rick Brown, CWCB, led a discussion of the grants requested by Grand County and the Roaring Fork Watershed Group, and whether the results of the studies funded by these grants could interfere with existing water rights.
- 3. John Sikora discussed the energy subcommittee's progress in determining energy development's water needs, and attempts to discover water rights owned by energy companies on the Colorado and White rivers.

## May 21, 2007

- 1. Art Bowles presented a request for \$25,000 from the Basin Reserve Account for well monitoring equipment and a study in Missouri Heights, in Carbondale.
- 2. Irvin Johnson presented a request for \$120,000 from the Statewide Reserve Account to maintain and improve Bull Creek Reservoir No. 4.
- 3. Irvin Johnson presented a request for \$50,000 from the Basin Reserve Account to pay for engineering studies of Bull Creek Reservoir No. 5.
- 4. David Merritt of the Colorado River Water Conservation District and CBRT chair, discussed salinity and selenium in the Colorado River.

## June 25, 2007

- 1. The Missouri Heights well monitoring grant request for \$25,000 from the Basin Reserve Account was approved with 22 votes in favor and 0 opposed.
- 2. The grant request to improve Bull Creek Reservoir No. 4 for \$120,000 from the Statewide Funding Account was approved with 22 votes in favor and 0 opposed.
- 3. The grant request to study the spillway at Bull Creek Reservoir No. 5 for \$50,000 from the Basin Funding Account was approved with 20 votes in favor and 1 opposed. Phil Overeynder opposed the grant request because he did not feel that Bull Creek Reservoir Company adequately explained how it would pay for the spillway improvements once the engineering studies were complete.
- 4. Jeff Baessler and Linda Basin made a presentation on Colorado's In Stream Flow program administered by the CWCB.

5. Eric Hecox of the CWCB made a presentation regarding progress on the Non Consumptive Needs Analysis (NCNA) study of water in Colorado.

## July 23, 2007

- 1. Dave Merritt presented an overview of the Water Availability Study, designed to determine water available for current and future development in Colorado.
- 2. A handout described Aaron Million's Green River Pumpback proposal. A memo by Eric Kuhn encouraging the CRWCD Board to oppose the project until the consumptive, non-consumptive, and energy needs assessments are completed, and a response by Million's attorneys to allow the proposal to go forward and be evaluated under the NEPA process were also included.

## September 24, 2007

1. Eric Hecox led a discussion of the Water Availability Study scope of work. Tyler Martineau and Ken Spann, Gunnison Roundtable members, attended and commented.

Handouts included the Bylaws for the CBRT, a 15-page Colorado River Water Availability Study Scope, September 12, 2007 draft, and a magazine by the Colorado Water Education Foundation regarding groundwater in the Denver Basin was distributed.

## October 22, 2007

- 1. The CBRT held a joint meeting with the IBCC. Dave Merritt presented the major issues affecting the Colorado River Basin to the IBCC.
- 2. The minutes summarize water issues that concern counties represented in the Colorado Basin Roundtable. Tables in the minutes describe current transbasin diversions to the East Slope that total nearly 500,000 AF, and a list of Colorado River Basin reservoirs that total over 1,340,000 AF storage.
- 3. Dan Birch, a Yampa Roundtable member and engineer with the CRWCD, described the Yampa pumpback proposed by the NCWCD.
- 4. The proposed Green Mountain pumpback to pump water upstream to Dillon was discussed.

Handouts included an updated Colorado River Water Availability Study Scope, October 19, 2007 draft, a press release by the Colorado River District urging the State Engineer to delay adopting rules to administer a Compact Call until the Water Availability Study is completed, Dave Merritt's summary of Colorado Basin issues, and a summary of comments on the Water Availability Study that were sent to the CWCB.

## November 26, 2007

1. John Redifer of the CWCB explained CWCB's proposed Policy 18, which would permit the CWCB to set aside 20% of its Severance Tax revenues to invest in water projects in return for

- water rights that the CWCB could sell or lease. The CWCB presently only holds water rights for Instream Flow (discussed at the June 2007 CBRT meeting).
- 2. Grant proposals were presented requesting \$327,900 from the CBRT Basin Account. To date, \$115,000 has been allocated from this account, and \$1 million is available over 6 years.

#### December 17, 2007

- 1. The CBRT Non-Consumptive Needs Assessment committee held a meeting that discussed the timetable of the Non-Consumptive Needs Assessment data would be collected (18 months), and a discussion of the data collection techniques to quantify minimum flows required to maintain healthy river ecosystems.
- 2. The CBRT approved grants totaling \$300,000 from the CBRT Basin Account and \$127,900 from the Statewide Account. To date, \$415,000 has been allocated from the CBRT Basin Account out of \$1 million total available over 6 years. The grants approved include:

Proposal	CBRT \$	CWCB \$
Grand County Phase 2 Stream Flow Mgmt Plan	100,000	
Roaring Fork Watershed Study Phase 2	40,000	
Old Dillon Reservoir Enlargement	100,000	
Fraser River Berthoud Pass sand collection facility	60,000	127,900
Total	\$300,000	\$127,900

3. Jim Broderick, Executive Director of the Southeastern Colorado Water Conservancy District, Pitkin County Commissioner Rachel Richards, and Aspen City Engineer Phil Overeynder discussed the PSOP, or Preferred Storage Option Plan, for increased storage alternatives in the Fryingpan-Arkansas basin. The Southeastern Colorado Water Conservancy District recommends increasing dam heights to store 75,000 additional acre feet in Pueblo Reservoir and 14,000 additional acre feet in Turquoise Lake.

## January 28, 2008

- 1. Scott Balcomb, Glenwood Springs attorney, discussed the Upper Colorado River Commission the Shortage Criteria recently adopted by the 7 states that are participants in the Colorado River Compact, and Colorado's need to develop a response to a forthcoming Compact Call.
- 2. The settlement between Denver and the Eagle Water and Sanitation District was discussed in which Eagle settled its lawsuit against Denver for failure to exercise due diligence in perfecting its conditional water rights. Denver relinquished conditional water rights it held in the Eagle River upstream of Minturn and in the Eagles Nest Wilderness Area, but retained the right to develop the Wolcott Reservoir and fill it with withdrawals from the Eagle River and Piney River.
- 3. John Bickerman discussed the Global Settlement negotiations.

## February 25, 2008

- 1. Stan Cazier and Carlyle Currier led a discussion of what the CBRT would like the Colorado River to look like in 50 years with respect to water supplies. Roundtable members recommended that sources of water be addressed in local land planning decisions; that agriculture should not be dried up to permit bluegrass lawns and ornamental shrubs on the Front Range; that agriculture should be preserved in Colorado; the Front Range conserve more water; and that the water availability, consumptive and non-consumptive needs analyses be completed before additional east slope diversions occur.
- 2. Mark Levorson of URS described the impact that natural gas drilling in Garfield County is having on water supplies. Drilling activities can permit saline water from deep water aquifers to migrate up through vertical fractures into potable water supplies, and permit saline plumes to migrate to the Colorado River.
- 3. A preliminary report on the energy demand water needs assessment was presented.

## March 24, 2008

- 1. The CBRT discussed the CWCB's denial of the Roaring Fork Watershed and Grand County Stream flow Management Plan grant applications on the grounds that they constitute unacceptable challenges to Colorado water law.
- 2. Lane Wyatt reported on the Non-Consumptive Needs Assessment committee progress. The NCNA committee selected the Roaring Fork River and the Colorado River between Kremmling and Dotsero in order to do model NCNAs.
- 3. Rod Sharp discussed educational town meetings, and suggested that each CBRT Roundtable member schedule a town meeting in their area promoting the CBRT process.

## April 28, 2008

- 1. Eric Kuhn discussed his draft "Vision for a West Slope Water Future."
- 2. The Grand County Stream Flow Management Plan, Phase II, was discussed by consultants Peggy Bailey and Thomas Wesche.

## May 19, 2008

- 1. Carlyle Currier discussed efforts to conserve water consumed in agricultural operations.
- 2. Harris Sherman asked the Roundtable to address what the State should look like in 50 years and to comment on the IBCC/Roundtable process.
- 3. Rick Brown discussed SWSI Phase II.
- 4. Water Reserve Account grant requests were discussed.

Proposal	CBRT \$	CWCB \$
West Divide Water Conservancy District proposal for feasibility study of 3 Thompson Creek reservoirs.	\$40,000	
Battlement Reservoir #3 reconstruction to provide habitat for	80,000	
Colorado native Cutthroat Trout		
Membrane treatment study to result in zero level discharge and	200,000	600,000
reduce wastewater byproducts to solids that can be stored in		
landfills.		
Total	\$320,000	\$600,000

## September 22, 2008

- 1. Jewlya Lynn and Lyn Kathleen discussed how a board without legal authority such as the CBRT can make a difference. The CBRT discussed past issues that have been voted upon, and policies that could be decided upon in the future by the CBRT.
- 2. Eric Hecox gave an update on the IBCC vision statement.
- 3. The CBRT unanimously voted to oppose Amendment 52, which is designed to cap severance tax revenues to 1.7% of oil produced (this is the tax currently being levied) and to divert severance tax revenues from the Department of Natural Resources to funding improvements on Interstate 70.

## October 20, 2008

- 1. Sherri Thompson, BLM Program Manager for the Programmatic Environmental Impact Statement (PEIS), discussed the PEIS. It is being forwarded to the governors of Utah, Wyoming and Colorado for their comments.
- 2. Greg Trainor reported the Phase 1 Final Draft of the Energy Water Needs Assessment commissioned by the Water and Energy Subcommittee. Estimates of water needed for energy development in the Colorado and Yampa-White River basins range from 30,000 to 410,000 acre feet, with oil shale accounting for 380,000 af. The Roundtable unanimously voted to approve the draft and forward it to the IBCC, the CWCB, and the Governor for consideration prior to his approving the PEIS.
- 3. Jewlya Lynn and Lyn Kathleen presented a model that the CBRT can use to adopt policies and to promote the policies to interested stakeholders. The CBRT used the model in approving the Phase 1 Energy Water Needs Assessment.

#### November 24, 2008

1. Lane Wyatt reported that the CWCB has declined to fund the Non-Consumptive Needs Assessment as required by House Bill 1177.

- 2. Eric Kuhn reported on the Colorado River Compact Curtailment Commission, which has been created to develop a statewide plan to respond to a Compact Call.
- 3. Jim Pokrandt reported on the 4 basin roundtable meeting in Gunnison on November 14, and discussed the CWCB's prediction that meeting the Gap will result in a 35-70% reduction in irrigated acreage in Colorado.

## January 26, 2009

- 1. Eric Hecox and Jacob Bornstein reviewed the Vision Statement that is being presented to the CWCB and the IBCC.
- 2. The CBRT approved \$315,000 from the Basin Reserve Account to pay for a nonconsumptive needs analysis. The CWCB had earlier agreed to fund this, but failed to do the analysis, so the CBRT agreed to fund it. The goal is to develop a flow monitoring tool and to test it at 3 locations on the Colorado River between Pumphouse and Dotsero. If successful, the flow monitoring tool will be an inexpensive alternative to site specific analyses, which cost up to \$50,000 per site to determine river flows necessary to maintain riparian health. The grant proposal will be discussed by the CWCB at its March board meeting.

## February 23, 2009

- 1. Eric Hecox and Jacob Bornstein discussed agricultural water issues statewide and as they pertain to the Colorado River basin.
- 2. Blaine Dwyer updated the CBRT on the progress of the Water Availability Study and requested input into the model and the assumptions that are being made in it.

## April 27, 2009

- 1. Eric Hecox discussed Identified Projects and Processes including Aaron Million's Green River Pumpback, the Yampa Pumpback, and the Green Mountain Pumpback, as well as conservation efforts, and requested Colorado Basin Roundtable members to comment on them.
- 2. Denver Water and Northern discussed environmental mitigation efforts they are offering to preserve stream flows in the Upper Colorado River.
- 3. Eric Barber of the Arkansas Roundtable visited and requested that the CBRT spend \$15,000 to study whether Fry-Ark water can be stored in underground aquifers in the Arkansas Basin.
- 4. Ray Tenney, engineer with the CRWCD, described town meetings that have been held regarding Aaron Million's Green River Pumpback from Flaming Gorge Reservoir to Denver.

## August 24, 2009

1. Chris Treese commented on progress in the global settlement negotiations, and on the IBCC meetings.

- 2. Ken Neubecker reported on progress of the water flow evaluation tool (WFET) and Front Range concerns about the use of the tool.
- 3. Kristen Maharg reported on the member survey results of the survey conducted by the Colorado Foundation for Water Education
- 4. The Roundtable voted unanimously to hold a workshop to explain the WFET to skeptical Front Range interests.

## November 23, 2009

- 1. Chris Treese commented on progress in reaching an agreement for 10825 water.
- 2. The CBRT Voted unanimously to continue the non-consumptive needs analysis.
- 3. Bill Bates of Denver Water described Denver Water's proposed Moffatt Tunnel firming project. The CBRT Voted unanimously to draft a response to the EIS created for the Moffatt Tunnel firming project.
- 4. Clark Anderson of the Sonoran Institute discussed linking water supplies to future land development proposals.
- 5. Mark Nieslanik on behalf of the Tybar Ranch owned by Betsy Considine requested \$100,000 from CBRT Basin Reserve Account to construct a spillway and repair broken pipe at the outlet of Dinkle Lake, southeast of Carbondale on the north flank of Mr. Sopris. The CBRT voted this down.
- 6. Tim Beck on behalf of Spring Valley Holding LLC, which owns and plans to develop 6,000 acres into a residential PUD, requested funds to improve Hopkins Reservoir 6 miles east of Glenwood Springs. The CBRT voted this down.

## January 25, 2010

- 1. A CBRT response prepared by Karn Stieglemeier, Summit County Commissioner, to the Army Corps of Engineers Environmental Impact Statement for Denver Water's 18,000 acre foot proposed diversion from the Upper Fraser River into the Moffatt Tunnel collection system was discussed.
- 2. Louis Meyer described the threat of emerging contaminants in the river.
- 3. The CBRT voted unanimously to request the Army Corps of Engineers to extend the comment period for the Environmental Impact Statement beyond March 1, 2010.

## Glossary

10825 water. The Bureau of Reclamation designated 10,825 acre feet in Ruedi Reservoir as being available to support the Endangered Fish Recovery Program (EFRP). This was discussed at the November 2006 CBRT meeting. In an agreement scheduled to expire 12/31/09, Denver Water has voluntarily released ½ of that amount, or 5,412.5 cfs, from Williams Reservoir, and the Colorado River Water conservation District has released the remaining 5,412.5 cfs from Wolford Reservoir. If the agreement is not extended beyond 2009, prior water project approvals which permitted water appropriations from the Colorado River may not comply with the Endangered Species Act, and may be called into question. See www.grandriver.us\10825 for a history of the 10825 program

20% Gap. The CBRT created the Statewide Water Supply Initiative (SWSI) to study long term water needs in Colorado. SWSI Phase 1 determined that by 2030, there would be 20% greater demand than supplies existing in 2005; this is known as the 20% Gap.

Aspinall Unit. The Aspinall Unit includes three reservoirs on the Gunnison River: (1) Blue Mesa Reservoir, designed for water storage; (2) Morrow Point Reservoir, a dam with a lot of head in a narrow canyon designed to generate hydroelectric power; and (3) Crystal Reservoir, which collects Morrow Point Reservoir releases and moderates further releases into the Gunnison River at more constant flow levels.

Blue Mesa Pump Back. A proposal to drill a tunnel below the Collegiate Range to transport water from Blue Mesa Reservoir on the Gunnison River to the Eastern Slope.

Blue River Decree. A conditional water right granted to Denver Water to withdraw water from Dillon Reservoir through the Roberts Tunnel into the North Fork of the South Platte River.

CBRT: Colorado Basin Roundtable

CDM: Camp, Dresser, McKee, the engineering firm selected by CWCB to assist the Roundtables in perform the needs assessment called for in Section 35 75-104(2)(c), CRS (as created in HB 1177).

CDSS: The Colorado Decision Support System, a computer modeling program developed by the CWCB that predicts river flows in Colorado. The CDSS is accessed at: http://water.state.co.us/pubs/datasearch.asp.

CRWCD - The Colorado River Water Conservation District. This State Agency was founded in 1937 in response to plans by Denver Water and the NCWCD to divert Colorado River water to the Eastern Slope through the Adams and Moffatt Tunnels. The CRWCD was chartered to be "the appropriate agency for the conservation, use and development of the water resources of the Colorado River and its principal tributaries in Colorado." The CRWCD's office is in Glenwood Springs.

CWCB - Colorado Water Conservation Board: This is an agency of the State with a board appointed by the governor. It was created in 1937 for the purpose of aiding in the protection and development of the waters of the state. The agency is responsible for water project planning and finance, stream and lake protection, flood hazard identification and mitigation, weather modification, river restoration, water conservation, drought planning, water information and water supply protection. It is the sole entity which can receive grants of conservation easements of water flows. It also administers grants from the Water Supply Reserve Account called for by SB 179.

Compact call. A call by Lower Basin States (California, Arizona and Nevada) that would require Upper Basin States (Colorado, Utah, Wyoming, and New Mexico) to limit diversions from the Colorado River and its tributaries. No Compact Call has ever been made.

Colorado River Compact - the 1922 agreement among the Colorado Basin States, and ratified by Congress in 1929. It was based upon an assumption that the average annual flow in the Colorado River at Lee Ferry is at least 15 million acre feet (maf), and that the Upper and Lower Basins would each receive 7.5 maf, to be divided among the Basins as they agreed. The 1922 agreement was predicated upon a concern that development in California was outpacing development in every other Western state, and that California would appropriate most Colorado River water unless changes were implemented to recognize the rights of each state to develop a certain amount of water in their own time frame.

Conditional water rights. Water rights that are not yet developed, but represent an intent to develop for a specific purpose in the future. They establish a priority date over later granted water rights.

Endangered Fish Recovery Program. Four fish, the Colorado pikeminnow, Razorback sucker, Humpback chub, and Bonytail, are listed as endangered species; they reside in the Colorado, Yampa-White, and Green Rivers.

Energy Development Water Needs Assessment. A study that estimates the water required for energy development in the Colorado and Yampa-White basins. The study was commissioned by the Colorado and Yampa-White Basin Roundtables and paid for by a \$300,000 Water Supply Reserve Account grant. Phase 1, released in October 2008, estimated that 30,000 af to 410,000 af is needed for energy development, with potential oil shale production accounting for about 380,000 acre feet of this. Phase 2 addresses where the water is likely to come from; it will consider the impact of redirecting the extensive conditional and absolute water rights already owned by energy industry to energy development.

<u>Firming project</u>. The process of transforming a conditional water right to an absolute water right. It includes legal adjudications in water court and also the construction of storage facilities or diversion points to actually put the water to beneficial use.

Green Mountain Pumpback. 300 cfs would be pumped from Green Mountain Reservoir to Dillon Reservoir with a yield of 53,000 AF. This would permit Denver Water to divert more Dillon Reservoir water through the Roberts Tunnel to the North Fork of the South Platte. A new reservoir is sited at Wolcott to hold 25,000 to 85,000 AF to replace releases that will no longer be made from Green Mountain Reservoir down the Blue River. A pumping plant on the Eagle River with 250 cfs pumping capacity would fill the proposed Wolcott Reservoir.

Green River Pumpback. A proposal by Aaron Million to divert water from the Flaming Gorge Reservoir on the Green River and pump it east along Interstate 80 and then south along Interstate 25 to the Front Range.

House Bill 1177: Passed in 2005 by the Colorado legislature, this sets up nine roundtables around in the following drainages to discuss how to meet the water demands by year 2030:

Western Slope Eastern Slope

Colorado Arkansas Yampa-White Rio Grande Gunnison North Platte San Juan South Platte Denver Metro

HB 05-1177 permits basins to study and implement voluntary transfers between basins in Colorado, while reaffirming existing water rights and the prior appropriation system. It states in relevant part:

37-75-102. Water rights - protections. (1) It is the policy of the General Assembly that the current system of allocating water within Colorado shall not be superseded, abrogated, or otherwise impaired by this article. Nothing in this article shall be interpreted to repeal or in any manner amend the existing water rights adjudication system. The General Assembly affirms the State Constitution's recognition of water rights as a private usufructuary property right, and this article is not intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law.

## HB 1177 has 5 stated goals:

- 1. Consumptive needs analysis
- 2. Non- Consumptive needs analysis
- 3. Water availability study
- 4. Solve the 20% gap
- 5. Public education of water issues facing Colorado

In-stream flow. A flow rate appropriated by the Colorado Water Conservation Board which represents the amount of water deemed necessary to protect the environment to a reasonable degree. This determination takes into consideration the availability of water under water rights administered. An In-Stream Flow right is administered in priority, along with all other water rights on the stream.

<u>Identified Projects and Processes (IPPs)</u>. These are water diversion and storage processes that have been identified by the CWCB in each major river basin in Colorado that provide additional water to meet future municipal and industrial (M&I) water needs. The IPPs are in various stages of development, and are projected to provide about 500,000 additional acre feet. Many are expansions of existing water projects. The CWCB estimates that Colorado will need up to 1.75 maf under a high growth scenario in 2050.

Maybell Pump Back: A proposal by the Northern Water Conservancy District to pump water from the Yampa River to the Eastern Slope.

NCNA. Non consumptive needs assessment conducted pursuant to HB 1177 to determine the

amount of water needed to meet environmental and recreational uses.

Northern or NCWCD: The Northern Colorado Water Conservancy District, the agency that contracts for delivery of water from the Colorado Big Thompson Project that diverts water from the Upper Colorado River at collection facilities in Grand County for distribution to the eastern slope.

PHABSIM: Physical habitat simulation. A technique developed in the 1970s by the US Fish and Wildlife Service to determine optimal and critical river flows necessary to maintain healthy river ecosystems. A river site is first selected that has favorable fish habitat. At each selected site, river volumes are measured at ten transects (a transect is a line across the river that is perpendicular to the river flow), at 3 different times during high, medium and low flows from early spring to late fall. A Habitat Suitability Curve is developed for each site that indicates critical flows below which fish habitat is imperiled.

PBO: A Programmatic Biological Opinion for the Recovery of the Endangered Colorado River fish, which requires a number of measures which function as "reasonable and prudent alternatives" for diversions that would otherwise harm endangered fish in the Upper Colorado River.

Produced Water: This is water that has been produced from human activity, such as water reclaimed through sewage treatment, or water which has been pumped to the surface in the course of coalbed methane drilling activities.

PSOP: The Preferred Storage Option Plan, a discussion of water storage options to capture additional water from the Roaring Fork River for delivery to the Eastern Slope, discussed at the November 2007 CBRT meeting.

RICD: Recreation In Channel Diversion. A water right awarded in order to protect recreational boating in the river.

Senate Bill 179: Passed in 2006 by the Colorado legislature, this allocates \$10 million per year for four years to be allocated among the 9 roundtables to pay for water projects or studies (aka the Water Supply Reserve Account).

Shoshone Call: Xcel energy has a call on the Colorado River with a priority dating to 1907 permitting it to run 1,250 cfs through the Shoshone power plant turbines. In 2006, Xcel and Denver Water entered into an agreement which permits Denver to reduce the call by 550 cfs at the Shoshone power plant between March 20 and May 20 in years that Denver Water's projected reservoir storage capacity is less than 80%; discussed at the July 2006 CBRT meeting.

**SWSI**: CWCB manages the Statewide Water Supply Initiative (SWSI), which was created to study long term water needs in Colorado after the Big Straw Initiative failed in 2003.

<u>Upper Colorado River Commission</u>: A commission created in 1948 pursuant to the Upper Colorado River Compact of the four Upper Basin States: Colorado, Wyoming, Utah and New Mexico. It controls the Colorado River upstream of Lees Ferry, and is charged with monitoring that each the Upper Basin state delivers its quota toward the 75 maf required to be delivered to the Lower Basin states every 10 year period.

Water Availability Study: SB 07-122 appropriated \$500,000 to study the extent of Colorado water available for current and future needs. The Water Availability Study is designed to identify whether Colorado still has water available under the 1922 Colorado River Compact for development, and what risks are associated with developing it. Phase 1 of the Water Availability Study is expected to be completed by July 2009.

Wolcott Pumpback: A plan to build a reservoir on a tributary to the Eagle River near Wolcott. This would store water that could be exchanged back to Dillon Reservoir to enhance Denver Water's yield from the Blue River (Dillon Reservoir/Roberts Tunnel).

Yampa Pumpback: A proposal to pump 300,000 acre feet from the Yampa River near Maybell to the Front Range, first discussed in detail at the November 2407 CBRT meeting.

## Summary Table of Grant Requests and Funding Decisions

CBRT Approval to Spend CBRT \$	CBRT Approval to Spend CWCB \$	Applicant and Grant Purpose	CBRT Votes for/opp'd to spend CBRT Funds	CBRT Votes for/opp'd to spend CWCB Funds	CBRT Vote Date	Date CWCB Approved or Denied	Amount CWCB Approved
\$40,000		Ruedi Power Authority – Prepare Roaring Fork Watershed Plan	27	7	12/18/06	Approved 3/23/07	100%
		Grand County – Stream Management Plan methodology. \$30,000 approved, but Grand County turned down due to CWCB constraints.	27	6	12/18/06	Approved 3/23/07	100%
	250,000	Eagle County – Increase Eagle Park Reservoir by 155 acre feet		24	12/18/06	Approved 3/23/07	100%
	1,500,000	Grand County – Purchase shares in Vail Ditch		26	12/18/06	Approved 3/23/07	100%
	300,000	CBRT – Join with Yampa Roundtable for Energy Development Water Needs Assessment		25	12/18/06	Approved 3/23/07	100%
	25,000	CBRT – Join with Arkansas, Metro Denver and South Platte Roundtables for analysis of 10825 Water and Endangered Fish Recovery Program		25	12/18/06	Approved 3/23/07	100%
		Bull Creek Reservoir Co. – Enlarge reservoir. \$150,000 request, did not pass	13	16	12/18/06		
		Palisade – Price Stubbs Roller Dam Whitewater Park - \$100,000, did not pass	5	10	12/18/06		
25,000		Missouri Heights well monitoring program	22 / 0		6/25/07	Approved 8/15/07	100%
50,000		Bull Creek Res. #5 spillway analysis	20 / 1		6/25/07	Approved 8/15/07	100%
	120,000	Bull Creek Res. #4 reservoir improvements		22 / 0	6/25/07	8/15/07 failed	0%
100,000		Grand County Phase 2 Stream Flow Mgmt Plan		19/0	12/17/07		
40,000		Roaring Fork Watershed Study Phase 2		20/0	12/17/07		
100,000		Old Dillon Reservoir Enlargement		17/2	12/17/07		
60,000	127,900	Fraser River Berthoud Pass sand collection facil	16/3	11/2	12/17/07		
40,000		West Divide Water Conservancy District			5/19/08	Approved	

		proposal for feasibility study of 3 Thompson Creek reservoirs.			June 2008	
80,000		Improve Battlement Reservoir #3 to protect Native cutthroat trout habitat		5/19/08	Approved June 2008	100%
315,000		Develop flow evaluation tool (FET) and conduct 3 site assessments on the Colorado River between Pumphouse and Dotsero to test the FET.	18/1	1/26/09		
		Tybar Ranch owned by Betsy Considine requested \$100,000 to construct a spillway and repair the outlet pipe at Dinkle Lake 8 miles southeast of Carbondale.		Dec. 2009	Turned down	
		Tim Beck on behalf of Spring Valley Holding LLC, which owns and plans to develop 6,000 acres into a residential PUD, requested funds to improve Hopkins Reservoir 6 miles east of Glenwood Springs.		Dec 2009	Turned down	
\$850,000	\$2,322,900	Total approved				