Interbasin Compact Committee
Basin Roundtables

Gunnison Basin Roundtable

Meeting Agenda

April 2, 2012
Holiday Inn Express
Montrose, CO
4:00 p.m. – 7:00 p.m.

Call to Order

Roll Call/Introductions

Approve Agenda

Approve Minutes from 3/5/2012 Meeting (attached)

Report from IBCC Representatives (action item)

Report from Educational Committee

Report from CWCB Representative

1. **Statewide Portfolio and Tradeoff Tool** – Basin Roundtable Portfolio Development, Schedule and Assistance. Todd Doherty will present information regarding finishing up the process to revise the Roundtable's portfolios, the up-coming work focused on implementing projects and the general long-term schedule for completing the work.

2. **Conservation** – The Roundtable members will discuss the topic of water conservation and what conservation strategies should be considered for water providers and users in the Gunnison Basin. (see attached discussion background developed by George Sibley and the draft of the Updated Metro Roundtable Conservation Strategy)

3. **Basin Roundtable Project Exploration Committee: Flaming Gorge** - Report and Update, Rick Brinkman & Ken Spann.

4. **Basin Roundtable Non-Consumptive Project Planning Workshops** – Non-Consumptive Implementation Plan. The Roundtable members will discuss the development of a non-consumptive implementation plan for the Gunnison Basin Roundtable (see attached e-mail from Jacob Bornstein and Chris Strum)

5. **Non-Consumptive Needs Sub-Committee** – The Roundtable members will consider appointing a new member to replace Steve Glazer on the Gunnison Basin Roundtable's non-consumptive needs sub-committee.

Interbasin Compact Committee
Gunnison Basin Roundtable Meeting
Holiday Inn Express
Montrose, Colorado
March 5, 2012

Voting Members Present:

Thomas Alvey	North Fork WCD
Mike Berry	Tri-County WCD
Jennifer Bock	Environmental
Allen Brown	Hinsdale County
Tim Decker	Montrose County
Cary Denison	Ouray County
Joanne Fagan	Ouray Municipalities
Austin Keiser	Grand Mesa WCD
Wendell Koontz	Delta Municipalities
Frank Kugel	At-Large Member
Rachel Kullman	Montrose Municipalities
Henry LeValley	Crawford WCD
Dixie Luke	At-Large Member
Olen Lund	Delta County
John McClow	House and Senate Ag Committees, CWCB Liaison
Chuck Mitisek	Ute WCD
Michelle Pierce	Hinsdale Municipalities
Neal Schwieterman	Recreational
Ron Shaver	At-Large Member
George Sibley	At-Large Member
Ken Spann	Upper Gunnison River WCD
Bill Trampe	Colorado River Water Conservation District
Rufus Wilderson	Gunnison County

Voting Members Absent:

Rick Brinkman	Mesa Municipalities
Marc Catlin	At-Large Member
Bill Nesbitt	Gunnison Municipalities
Hugh Sanburg	Industrial
Steve Shea	Agricultural
Adam Turner	Local Domestic Water Supplier
Vacant	Mesa County
Vacant	Saguache County

Liaisons and Non-Voting Members Present:
Sharon Dunning (Assistant Recorder), Bob Hurford (CDWR Liaison), Gary Shellhorn (USFS), Jedd Sondergard (BLM), Denis Reich (CSU Extension Liaison)

Public: David Brown (USGS Grand Junction), Hannah Holm (Colorado Mesa University Water Center), Robin Schiro (Mountain Coal Company).

Welcome
The meeting was called to order at 4:00 p.m. by Chairperson Michelle Pierce.

Roll Call/Introductions
Following roll call it was declared that a quorum was not present. Eventually additional members arrived to form a quorum.

Approve Agenda
Tom Alvey made a motion to accept the Agenda. Bill Trampe seconded, and the motion carried.

Approve February 6, 2012 Meeting Minutes
Frank Kugel made a motion to accept the meeting minutes. Carey Denison seconded, and the motion carried.

Report from the IBCC Representatives
Bill Trampe stated that at the Roundtable Summit meeting the basin portfolios were discussed and the IBCC expects the finalized portfolios to be submitted by May. In May the IBCC will take the output from all Roundtable portfolios and put together a representative cross-section and summary.

Bill mentioned that the IBCC is focusing on IP&Ps and the Roundtable should identify those in the Gunnison Basin area. There has been discussion about how most of the projects that have been funded have not specifically been addressed to meet the gaps (basin and state-wide). The IBCC hopes to identify projects that help meet the gap. The IBCC will be sending staff to help the Roundtable identify those projects. The focus will be on those projects that address non-consumptive needs.

Bill stated that there was a significant difference of opinion about conservation identified at the Summit meeting. Further dialog on conservation is necessary.

Ken Spann made a motion to ratify Bill Trampe's IBCC report. The motion was seconded by Ron Shaver. The motion carried unanimously.

Report from the Educational Committee
George Sibley stated there was nothing to report other than information that will be given in Agenda item 3.

Report from the CWCB Representative
John McClow stated that the CWCB has not met since the last Roundtable meeting. The next meeting will take place in 2 weeks in Denver.

1. **Project Proposal** – The Delta Conservation District is requesting $20,000 from basin account funds for invasive weed removal on the North Fork of the Gunnison.

   Tom Alvey stated that the Screening Committee recommends approval of this proposal. The project is focused on a relatively small area in a park near Paonia. The tamarisk removal will be a demonstration project to show what can be done. The Delta Conservation District is planning to spend a total of $60,000 for the complete project, and will be requesting funds from other sources as well. United Companies donated the land.

   Neal Schwieterman added that this was a 3-part project. Beyond the weeding portion of the project, they will take the braided channel that was left from the gravel company's activities, and return it back into a single channel. Riparian replacement will then be the third goal for the project.

   Dixie Luke made a motion to approve the request for $20,000 from Basin funds for the project. Ron Shaver seconded, and the motion carried unanimously.

2. **2012 Education Action Plan** – Review and approval of Revised Plan and Budget.

   George Sibley stated that they have expanded the 2012 education plan considerably to include the 2012 events. He has a new budget, which needs to be approved by the Roundtable in order to start getting money from PEPO.

   George stated that the committee also needs more volunteers, and that they will need to have another meeting to discuss putting together presentations. They have 2 years to accomplish these tasks. George requested suggestions for additions or corrections to the education plan and the budget that was sent around electronically.

   Dixie Luke made a motion to accept the 2012 revised education action plan and budget. The motion was seconded by Neal Schweiterman, and carried unanimously.

3. **2012 Statewide Roundtable Summit** – Report and discussion.

   The discussion began with summaries by all who had attended the meeting. The attendees were: Frank Kugel, John McClow, Jennifer Bock, Michelle Pierce, Mike Berry, Tim Decker, Carey Denison, Ken Spann and Bill Trampe.

   The general feeling was that it was a well attended and worthwhile meeting. Criticism of the process was that there were too many in attendance that were not members of a Roundtable and consequently not well educated on the meeting topics including the portfolio tool.

   The primary focus of the meeting was reviewing the portfolio tool and comparing the results of each Roundtable, and taking another crack at what would be acceptable to each Roundtable. Mike Berry observed that the conversation has shifted from asking the questions over and over to discussing possible solutions. Bill Trampe added that the Governor expects a water plan a year from now.

It was suggested that the Roundtable should revisit the portfolio to refine it and make it more realistic. It was decided to wait for report from the Summit meeting before moving forward on this task. It was reiterated that the end of April was the deadline for submittal of a final portfolio.

Michelle Pierce suggested that the April agenda include a discussion on conservation and then invite the Front Range Roundtables to the May meeting to have some cross basin discussion regarding conservation. Bill Trampe added that the Metro Roundtable has produced a "white paper" regarding conservation strategies. John McClow said he would locate this paper and forward it to Michelle Pierce to circulate to the Roundtable members.

Next Meeting

The next regular meeting of the Gunnison Basin Roundtable will be at 4:00 p.m. on Monday, April 2, 2012.

Adjourn

There being no further business to come before the Roundtable, the meeting adjourned at 5:49 p.m.

_____

Mike Berry, Recorder

Action Items

John McClow will locate the Metro Roundtable's "white paper" on conservation and forward it to Michelle Pierce who will circulate it to the Roundtable members.

When we talk about 'conservation,' what are we talking about?

'Conservation means the greatest good to the greatest number for the longest time.'
- Gifford Pinchot and WJ McGee
Progressive Conservationists around 1900

It is becoming clear that much of the focus for water planning to meet The Gap will come down to whatever consensual agreement can be arrived at, statewide, to answer the question above. SWSI 2010 indicated that a large portion of The Gap could be met through "medium" to "high" use of conservation strategies. A generally respected environmental organization has put forth cogent arguments that all of The Gap could be met through serious adherence to conservation strategies. The Metropolitan area water providers, on the other hand, resist using conservation strategies to meet The Gap, arguing that they need to hold conservation efforts back for the flexibility it affords as a strategy for addressing drought.

The Gunnison Basin Roundtable members have wisely decided to have open discussion about 'conservation' and what position we should take as this debate unfolds statewide. This short paper is an effort to provide some background on how the concept of 'conservation' has evolved in America – and how dramatically it has changed over the course of the 20th century. Most of the quoted material comes from *American Environmentalism: Readings in Conservation History* by Roderick Nash (page numbers noted. Nash, by the way, is a frequent summer visitor to the Upper Gunnison).

Progressive Conservation: Theodore Roosevelt and Gifford Pinchot

The 19th century in America was an epoch of huge expansive growth, horrendous resource waste and environmental destruction. The Rocky Mountain West was still being settled when Americans began to notice the waste and destruction back in the rural areas of the East and Midwest, where flooding, silt-choked rivers ran uncontrolled off of lands that had been logged or mined and abandoned, and in cities where the air was barely breathable and the water barely drinkable – deteriorating environments pretty much everywhere, even as the nation grew wealthier, as wealth tends to be measured.

Into this situation rode a 'renegade Republican' who ascended somehow to the presidency, Theodore Roosevelt, and his trusty sidekick, forester Gifford Pinchot. They set about addressing the deteriorating situation in a politically progressive manner, through 'conservation,' but with the conviction that it did not mean ceasing resource development, just incorporating awareness and efficiency into it. Pinchot advocated three principles of "conservation" *(76-8),* addressing that challenge:

- *'The first great fact about conservation is that it stands for development. There has been a fundamental misconception that conservation means nothing but the husbanding of resources for future generations. There could be no more serious mistake. Conservation does mean provision for the future, but it means also and first of all the recognition of the right of the present generation to the fullest necessary use of all the resources with which this country is so abundantly blessed.'*
- *'In the second place conservation stands for the prevention of waste.'* (Pinchot's discussion of waste focused mostly on forest fires – which led the nation into a century of expensive and ultimately counter-productive efforts to conserve forests through eradicating wildfire, an effort that proved ultimately impossible, and led to situations like the current epidemic of beetles in over-mature forests.)
- *'The natural resources must be developed and preserved for the benefit of the many, and not merely for the profit of a few. We are coming to understand in this country that public action for public benefit has a very much wider field to cover and a much larger part to play than was the case when there were resources enough for everyone, and before certain constitutional provisions (14th Amendment) had given so tremendously strong a position to vested rights and property in general.'*

In this progressive idea of conservation, the concept of 'waste' is important. For Roosevelt and Pinchot, to 'mine' the trees or grass from the land with no thought to the continuity of forests or grasslands was 'waste.' But so was a forest on fire from natural causes, *or a river running off to the ocean unused, in a two-month flood.* Reclamation was thus a conservation strategy: instead of 'wasting' fresh water to the ocean, we build structures to put it to beneficial uses that employ people in improving their own situations and that of others.

Pinchot spoke often of 'efficiency,' but he saw efficiency not as a conservation strategy, but as the outcome, or measure, of good conservation of our resources:

> *'The outgrowth of conservation, the inevitable result, is national efficiency. In the great commercial struggle between nations which is eventually to determine the welfare of all, national efficiency will be the deciding factor. So from every point of view conservation is a good thing....' (79)*

An aspect of progressive conservation that is a concern for the West Slope minority population in Colorado (still only ~11 percent of the total), is the emphasis on democratic access in Pinchot's third principle, and *'the greatest good for the greatest number for the longest time.'* How does a minority in a democratic society protect itself against that majority? The two best answers thus far are probably the concept of "compensatory storage" for transmountain diversions as encoded in the Conservancy Act (1943 amendment), and through an emphasis on the importance of keeping water in the rivers for 'nonconsumptive uses' by the same people whose water providers would dewater those rivers. Do people make that connection? Should we help them?

Environmental Conservation: Rod Nash and Aldo Leopold

Aldo Leopold preceded what we call "the environmental movement' by two or three decades, but he was a 'voice in the wilderness' doing a lot to articulate what Rod Nash calls 'the Gospel of Ecology' that to a great extent drives the environmental movement. Leopold had a straightforward definition for 'conservation':

> *'Conservation is a state of harmony between men and land. By land is meant all of the things on, over, or in the earth. Harmony with land is like harmony with a friend; you cannot cherish his right hand and chop off his left. That is to say, you cannot love game and hate predators; you cannot conserve the waters and waste the ranges; you cannot build the forest and mine the farm. The land is one organism. Its parts, like our own parts, compete with each other and co-operate with each other.... If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of eons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering.' (173)* (Keep that pikeminnow and sage grouse!)

To attain to that state of harmony, he proposed a 'land ethic,' noting that humans had ethics – standards of conduct and behavior – for 'the relation between individuals' and 'the relation between the individual and society' but needed to enlarge that with a relation to the land: *'The land ethic simply enlarges the boundaries of the society to include soils, waters, plants, and animals, or collectively: the land.'*

Rod Nash builds on this, in observing that *'after 1960, old-style utilitarian or resource-oriented conservation decreased in importance relative to environmental quality. Americans expanded their understanding of this idea to include not only scenic and recreational amenities but also the health of the habitat. As an indicator of this change, the term* conservation *lost favor to* environmentalism.*' (187)*

To some extent, then, the concept of 'conservation' that (mostly) guided water development through the first two-thirds of the 20th century fell out of the public discourse in the age of environmentalism.

The situation now: The Front Range urban water suppliers still operate, a little under the level of public discourse (don't want to bother the people with details), on the 'old-style utilitarian' model. But the West Slope basins are being expected to cater both to their utilitarian needs (transmountain diversions), and also to the 'environmental conservation' most of their users want practiced here for their mountain playgrounds (rivers running free). So what is conservation, in this situation? What is a reasonable balance (and how far past it have the diversions maybe gone)? What should the West Slope request, and what could we demand?

Updated Metro Roundtable Conservation Strategy

Purpose

The purpose of this memo is to present an estimation of potential future water demand reductions which the Metro Basin Roundtable can reasonably expect[1] by 2050 based on current and future water conservation programs and improved water use efficiencies. In keeping with SWSI and other state water conservation policy efforts, estimated demand reductions relate to three basic processes or influences on water use:

- Passive saving reductions related to the natural replacement of customer water using fixtures and appliances;
- Other changes in water use behaviors (e.g., state legislation, changes in land use, drought impacts, etc.); and
- Active water conservation program impacts related to implementation of water conservation programs sponsored by water utilities and special districts.

Noteworthy is that current water demand is trending downward due to a combination of these three influences. Similarly, future demand reductions will require that water utilities, NGOs, water customers, and state and local officials work together to support and ensure that meaningful, permanent water conservation programs are developed and implemented.

This shared responsibility for future water conservation does not dismiss the important role of water utilities to act as good stewards of the State's water resources. But the work of managing water in Colorado is not solely the responsibility of our water utilities. It requires the cooperation and collaboration between all members of the water community.

Estimations and Limitations

The estimated water demand reductions presented in this memo were developed in a manner consistent with the needs of the IBCC's Portfolio Tool. Additional analysis and evaluations of the estimates provided herein will be developed in the future as more data is collected characterizing the benefits and costs of water conservation. As economic and political climates change, the opportunities for conservation will change as well. Therefore, the Metro Basin water utilities will continually conduct monitoring and verification efforts, through data collection and analysis in the future, which will be used to inform and sharpen future programs and demand reduction estimates.

Water Demand Reductions since 2000

Since the first SWSI report in 2000, water demand in the Metro Basin has declined by approximately 100,000 acre feet.[2] During this time, the basin's daily per capita use (gpcd)

---

[1] These demand reductions are to be used to assist in characterizing future water supply needs in the Metro Basin using the IBCC portfolio tool and other statewide water supply planning models.

[2] State of Colorado 2050 Municipal & Industrial Water Use Projections, July 2010. Part of the change in per capita use could be errors in reporting, meteorological anomalies, lasting impacts of drought, impacts of utility water conservation programs, as well a temporary reductions in use due to the economic downturn.

has declined from 191 gpcd to 155 gpcd. The Metro basin supplies nearly half of the state's population and conservation has been an integral part of most water utilities water resource management programs as they serve an increasing population and growing economic base.

The 2010 SWSI conservation strategies report identified additional savings opportunities for the next 40 years. According to the study, the Metro basin may be able to save an additional 90,000–225,000 acre feet from the low to the high strategies.[3] Noteworthy is that regardless of the water conservation strategy that is achieved, additional water supply will be needed to meet the 2050 projected water demand as demonstrated in the following table.

Table 1 – Summary of Future Total Water Use Based on Potential 2050 Water Conservation Strategies

Year	2000	2010	2050		
			Low	Medium	High
GPCD	191	155	135	118	106
Total Use (AF)[4]	556,691[5]	451,765[6]	626,653	547,741	492,039

These future water use estimates presented in the CWCB's SWSI 2010 Municipal and Industrial Water Conservation Strategies Report include the impacts and benefits from all three influences on future water demand including passive savings, state and local ordinances, and active water conservation programs conducted by water utilities. This memo attempts to identify water demand reductions that can be reasonably expected based on current trends and programs – independent of new future regulation, substantial changes in land use, and other influences beyond the control of our water providers.

Recommendation

The Metro Basin Roundtable recommends that it pursue conservation programs that would reduce per capita water use from a baseline of 191 gpcd in 2000 to 129 gpcd by 2050. This goal would require that savings achieved since 2000 be maintained and an additional 120,000 acre feet be saved by 2050 including the influences of passive savings.

From the baseline of 191 gpcd in the year 2000, this is a 32 percent reduction in water use for a total of 225,000 acre feet. Metro water providers will have to ensure that the savings achieved through behavioral changes during and after the 2002-2004 drought become permanent, help put regulations in place that will achieve future passive savings, and continue to offer programs to achieve active savings.

Table 2 – Estimate of Future Water Demand Reductions Associated with Active and Passive Water Conservation Impacts

Year	2000	2010	2050
GPCD	191	155	129
Total Use (AF) (based on 2050 medium population)	886,598	719,491	597,758

[3] SWSI 2010 Municipal and Industrial Water Conservation Strategies.
[4] Total water use estimates in 2050 are based on using the medium population estimate of 4,144,000 for the Metro Basin predicted by CWCB for 2050.
[5] Based on 2010 Metro Basin population
[6] Based on 2010 Metro Basin population

Water providers will have to take an active role in continued water savings. Recommended measures include:

- Continue educational, marketing and advertising programs to ensure recent savings become permanent;
- Pursue statewide legislation to require only high-efficient indoor water fixtures can be sold;
- Provide audits and incentives to residential, commercial, industrial and institutional customers to replace inefficient fixture and improve processes;
- Provide targeted audits for inefficient use, both indoors and out;
- Capitalize on an assist with customer's willingness to change landscapes;
- Prepare financially for the future investment by water utilities and their customers to maintain distribution systems and hold water loss rates down as much as practically possible;
- Continually monitor and evaluate conservation programs and pursue new conservation opportunities.

Ultimately, the success in achieving higher levels of conservation will rest on improving technology of water using fixtures and landscapes; the political will to encourage greater efficiency in water use through codes and regulations; and seizing new opportunities to save water as they emerge leveraging partnerships between water utilities, state and local officials, NGOs and our citizenry.

Detailed Estimates

Residential Indoor

Currently the Metro basin is among the lowest in indoor residential use at 44 gpcd; the statewide average is 51 gpcd. The low, medium and high strategies from the 2010 SWSI report are shown in the table below.

Residential Indoor Use (gpcd)

		2050	
Baseline	Low	Medium	High
43.7	40	35	30
	-8%	-20%	-31%

According to the SWSI 2010 reports, 100,000 acre feet could be saved through indoor use from residential and non-residential customers. The estimates suggest that indoor residential use could be driven down to nearly 30 gpcd (the high scenario) through the passive replacement of water fixtures. This is an aggressive projection that will likely need active participation among water providers to be successful.

To illustrate this point, the assumption in the passive savings report is that in 2050 the average flush volume of toilets will be 1.0 gallons per flush (gpf). In 2005 Denver studied its residential customer's use and found that the average flush

volume was 3.14 gpf. There are very few 1.0 gpf toilets in the residential sector right now, and they are not yet widely available at "big box" retailers. This means that a high percentage of toilets would have to be replaced with 1.0 gpf toilets within 40 years. With a replacement rate of 1-4 percent per year, new regulations would have to be put into place within the next five years to reach the projected flush volume.

Recommendation: Medium strategy 20 to 25% savings

Given the aggressive projections of passive savings and the need to enact regulations quickly in order to meet the high strategy, a more realistic goal is the medium strategy. This will still require water providers to actively pursue new ordinances or legislation.

Residential Indoor Use

Measure	Baseline 2010	2050	Reduction
Gpcd	43.7	34.0	9.7
Total AF	202,850	157,824	45,026
% Reduction			-22%

Non-residential Indoor

Non-Residential Indoor Use (gpcd)

	2050		
Baseline	Low	Medium	High
37.5	31.9	28.1	26.3
	-15%	-25%	-30%

There may be fewer opportunities to save water in non-residential indoor use. As the Metro area continues to grow its economy water needs will grow as well. The non-residential customer base is a diverse group of customers that have had varying degrees of success reducing water use. Less is known about this group of customers, as the last Water Research Foundation study was done in the early 1990s.

Many Metro water providers offer programs to improve efficiency in commercial, industrial and institutional water uses. In our experience, increasing business productivity and economic growth can mask achieved efficiencies. As an example, Denver Water's industrial class of customers has reduced their use by only 2 percent since 2000, while the residential class has reduced their use by more than 20 percent. Denver Water has entered into several contracts with industrial customers to improve efficiency. The results have shown the companies using

water more efficiently and productively, but corresponding increases in production have diminished the total water savings.

Recommendation: Low Strategy 15 to 20% savings

Economic growth will continue to be promoted and water use will increase to meet those growing needs. Efficiencies will be gained through replacing bathroom fixtures, changing industrial processes and reducing cycle concentrations on cooling towers. Water providers can offer a variety of programs from audits, education and incentives. Additionally, rules for new developments are being implemented in more and more Metro communities.

Non-residential Indoor Use

Measure	Baseline 2010	2050	Reduction
Gpcd	37.5	31.9	5.6
Total AF	174,070	147,960	26,111
% Reduction			-15%

Outdoor Use

Outdoor Use (gpcd)

	2050		
Baseline	Low	Medium	High
62.8	53.5	48	43.3
	-15%	-24%	-31%

Outdoor use has changed dramatically over the last ten years. The 2002-2004 drought gave a new appreciation for using water for lawns. Many customers have lowered their water use to at or below efficient levels for bluegrass. The Metro area is seeing more and more conversions from bluegrass to low water using landscapes.

There are still opportunities to save water by targeting inefficient users and capitalizing on a willingness to change landscapes. Approximately 20 percent of Denver Water customers use more than 18 gallons per square foot, which is the efficient level of watering bluegrass in our climate. The average use in the Denver Water service area, however, is approximately 16 gallons per square foot. This means that some customers are deficit irrigating and others have converted their landscapes to need less water.

There is some risk of losing outdoor savings. Many Metro providers have seen a sharp decline in outdoor use in the past three years, particularly in its residential sector. Some of this could be due to the economic decline and as it turns around in the coming years, water use could rebound as homeowners recover lawns and landscapes.

Recommendation: Low Strategy 15% savings

There are opportunities in outdoor water use from inefficient watering and conversions to lower water using landscapes. Water providers will have to offer audits, incentives and substantial education to continue to gain savings.

Outdoor Use

Measure	Baseline 2010	2050	Reduction
Gpcd	62.8	53.5	9.3
Total AF	291,510	248,340	43,169
% Reduction			-15%

Water Loss

In the next 40 years, water providers will incur enomous costs to repair and maintain the water infrastructure that currently provides reliable tap water to their customers. The vast majority of water infrastructure in the Metro basin has been built since the 1950s and no water provider has been faced with large replacement and upgrade needs to this point; however as water infrastructure ages, it is likely to require increasingly large repair and maintenance costs.

In addition, water distribution leaks and other water loss (both real and apparent) are expected to increase if proper best management practices are not implemented. Currently, system water loss for water providers in the Metro Basin range from 3 to 15%, averaging about 10%.

Recommendation: Low Strategy – 0 to 15% Savings

Any goal to improve water loss, given what water providers are facing in maintenance costs will involve better management practices, system wide water audits and other third party water accounting reviews. Currently, few water providers utilize these practices; however, it is unlikely that overall systemwide water loss management can reduce losses to less than 7% on average based on the current state of the industry based on joint-industry research. The goal presented below assumes a reduction in the baseline water loss of 10.9% to 8.5 % (or potential demand reduction of 11,140 AF).

Water Loss

Measure	Baseline 2010	2050	Reduction
Gpcd	10.9	9.4	1.5
Total AF	50,596	43,634	6,963
% Reduction			-14%

Historic Savings Calculation

Historic savings from 2000 to 2010 in the Metro basin were calculated using SWSI per capita use figures and population estimates. The 2010 SWSI study shows that daily per capita use went down from 191 to 155[7] in the ten-year period. The SWSI report states that the change could be due to a number of "factors including conservation efforts, behavioral changes from 2002 drought (i.e., a 'drought shadow'), changes in a community's socio-economic conditions, and / or better data.

Denver Water and Aurora have verified with their demand figures that the SWSI demand figures from 2010 look relatively accurate. It may be true that some of the reductions may be temporary for a number of reasons cited above; however, the SWSI portfolio tool is treating all of the changes in demand in the last ten years as permanent savings that will be used to meet the gap in water supply.

The calculation below using SWSI 2010 figures shows that the Metro basin has reduced its use by over 100,000 AF. It is debatable that all of these savings are permanent, but the SWSI portfolio tool is treating them as permanent and applying all of the savings to meeting the supply gap; therefore, this must be included in the calculation of how much of the conservation savings will be used to meet the future supply gap.

Metro Basin 2000-2010 Conservation	2000	2010	Difference
Population		2,602,000	
Daily per capita use	191	155	36
Total annual demand (af)	556,691	451,765	104,926

[7] State of Colorado 2050 Municipal & Industrial Water Use Projections, July 2010, Figure 5-1.

Michelle Pierce

From: Jennifer Bock [jen@hccaonline.org]
Sent: Monday, March 19, 2012 10:30 AM
To: Michelle Pierce
Subject: FW: Basin Roundtable Non-Consumptive Project Planning Workshops
Attachments: announcement 2012 CBRT ncna workshop.docx; NonconsumptiveWorkshopAgendaTemplate.docx; NCNA Funding Workshop Agenda.docx

Hi Michelle,

I just got this email from Jacob Bornstein. I believe Steve Glazer was the chair of the non-consumptive committee of the roundtable. Has the roundtable appointed a new chair yet?

If not, I'm happy to help non-consumptive representatives on the roundtable and other interested members begin moving forward with the process Jacob has outlined.

Thanks!
Jennifer

From: Bornstein, Jacob [mailto:Jacob.Bornstein@state.co.us]
Sent: Monday, March 19, 2012 8:59 AM
To: wendy@sanjuancitizens.org; jen@hccaonline.org
Cc: Bralish, Viola; aprildmontgomery@yahoo.com
Subject: FW: Basin Roundtable Non-Consumptive Project Planning Workshops

Hi Wendy and Jen,

I believe as two of our new members the email below and attached items may have missed you.

April, I thought you'd be curious as well.

Thanks,
Jacob

Jacob Bornstein
Colorado Water Conservation Board
Department of Natural Resources
Program Manager, Water Supply Planning Section
1580 Logan Street, Suite 200
Denver, CO 80203
(303) 866-3441 x3248
(303) 704-1869 (cell)
www.cwcb.state.co.us

From: Bralish, Viola
Sent: Friday, March 16, 2012 5:11 PM
To: seettam@gmail.com; Reed Dils; qglane@nwccog.org; kenransford@comcast.net; eagleriver@sopris.net; 'Steve Glazer'; mambomamba@paonia.com; davidnickum@msn.com; Jeff Shoemaker; Barbara Vasquez; Rio de la Vista; bstreeter; greg.kernohan@gmail.com; cwanner@frontier.net; Jenny Russell; gblakeslee@tnc.org; kent@steamboatpowdercats.com
Cc: Melinda Kassen; Taylor Hawes; jstibric@auroragov.org; mpifher@csu.org; pnichols@troutlaw.com; Bornstein, Jacob;

Sturm, Chris
Subject: Basin Roundtable Non-Consumptive Project Planning Workshops

Dear Nonconsumptive Committee Chairs,

The IBCC recently adopted a strategy that includes two vital components for nonconsumptive needs that should be pursued concurrently.

As you know, the first component is the implementation of 3-5 non-consumptive projects per basin by the end of 2012.

The second component is the development of a nonconsumptive implementation plan for each basin. The plan will prioritize projects and methods that fill nonconsumptive gaps in a strategic manner. It should include initial cost estimates, potential partners, and potential lead entities.

The Colorado River Basin Roundtable hosted the first workshop on 3/15. They decided this was the best way to move forward with the IBCC nonconsumptive needs strategy. About 20 people came to share their projects that are ready to move forward.
Please see the attachments, including the announcement for the Colorado River Basin non-consumptive project planning workshop, their agenda, and a draft workshop agenda.

CWCB staff is available to facilitate similar efforts for your basin. In addition, some technical support is available, such as providing new maps, a list of the nonconsumptive IPPs in your basin, answering some technical questions, such as the % of <<insert species name>> habitat in your basin's focus areas that have protections>.

Please reply to this email if you are interested in a workshop for your basin and if you want help from us. We'll be discussing this with your roundtable chairs during the all-chair call the first week of April, so you might consider working with them to gage the level of support.

If you haven't yet had a chance to check out the nonconsumptive fact sheet, that can be downloaded here.

Sincerely yours,
Jacob Bornstein & Chris Sturm

Jacob Bornstein
Colorado Water Conservation Board
Department of Natural Resources
Program Manager, Water Supply Planning Section
1580 Logan Street, Suite 200
Denver, CO 80203
(303) 866-3441 x3248
(303) 704-1869 (cell)
jacob.bornstein@state.co.us
www.cwcb.state.co.us

Chris Sturm
Colorado Water Conservation Board
Department of Natural Resources
Stream Restoration Coordinator, Watershed and Flood Protection Section
1580 Logan Street, Suite 200
Denver, CO 80203
(303) 866-3441 ext. 3236
(303) 866-4474 (fax)
chris.sturm@state.co.us
www.cwcb.state.co.us

Xxx Basin Roundtable

Nonconsumptive Implementation Workshop

Place

Date and Time

Meeting Purpose: The xxx Basin Roundtable is soliciting projects for environmental and recreational water needs. Funding for these projects is from the Colorado Water Conservation Board's (CWCB) Water Supply Reserve Account (WSRA). As much as $6M may be available for competitive grants statewide for meeting both consumptive (municipal, industrial, and agriculture) and nonconsumptive (environmental and recreational) needs. Although there is no limitation to grant requests, typical nonconsumptive grants are about $200,000. The roundtable hopes to identify 3 to 5 projects for near term funding and implementation, other projects may be considered for long term prioritization.

The Roundtable is sponsoring an informal workshop to help potential project applicants in the Basin determine if their project is appropriate and guide them through the application process.

Nonconsumptive Implementation Workshop Potential Agenda Topics:

- Welcome and Introductions
- Roundtable / Interbasin Compact Committee (IBCC) & Water Supply Reserve Account (WSRA) Grant Process
    - Purpose of the roundtables
    - IBCC nonconsumptive request
    - CWCB available technical support
    - WSRA Grant Process
- Roundtable Nonconsumptive Needs Assessment Work
- Roundtable Nonconsumptive Identified Projects and Processes (IPPs)
- Discussion about additional projects that are ready to be implemented (Note: some coordination prior to the meeting may be required for this with interested project proponents)
- The path forward – strategically meeting nonconsumptive needs (this may be a separate meeting)
    - Nonconsumptive Decision Tree
    - Nonconsumptive Toolbox

Pre-Meeting Preparation: Parties interested in applying for WSRA grants should prepare a short summary of their project and bring it to the workshop. NOTE: Projects will be considered for approval by the CWCB in September, 2012. Complete project applications must be approved by the Roundtable 60 days prior to the CWCB meeting.

For More Information: Download the Nonconsumptive Fact Sheet by clicking here. For additional questions, contact Nonconsumptive Subcommittee Chair <<Contact information>>

ANNOUNCEMENT
Project Grant Availability

What: The Colorado River Basin Roundtable (CBRT) is soliciting projects for environmental and recreational water needs. Funding for these projects is from the CWCB Water Supply Reserve Account. As much as $2M may be available for competitive grants statewide. Although there is no limitation to grant requests, typical grants are about $200,000. CBRT hopes to identify 3 to 5 projects for near term funding and implementation, other projects may be considered for long term prioritization.

The CBRT is sponsoring an informal workshop to help potential project applicants in the Colorado River Basin determine if their project is appropriate and guide them through the application process.

How: Parties interested in apply for these grants should prepare a short summary of their project and bring it to the workshop. The summary should briefly address the criteria that will be used by the CBRT to select projects, see attachment A.

When: The CBRT Project planning workshop is March 15, 10:00 to 12:30. Projects will be approved for funding by the CWCB in September, 2012. Complete project applications must be approved by the CBRT 60 days prior to the CWCB meeting.

Where: The Blue River Room in the North Branch Summit County Library, 651 Center Circle, Silverthorne 80498.

For More Information: Contact Jacob Bornstein, CWCB (303-866-3441) or Lane Wyatt, CBRT (970-468-0295 ext 116).

Attachment A – CBRT Non-consumptive Needs Project Review Criteria

Eligible projects must be located within the Colorado River Basin and be consistent with the evaluation criteria of the CWCB's WSRA. Eligible projects will be assessed and prioritized by the CBRT based on merits. The merit of eligible projects shall be defined using the following considerations:

Appropriateness.

Is the project consistent with the CWCB WSRA evaluation criteria (see http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Documents/WSRACriteriaGuidelines.pdf).

Need for Project
Does project address existing or potential attribute issue as identified in CBRT NCNA matrix, or have site specific documentation of need?

Project Description.
Is the project clearly defined and described?

Budget.
Is the description and documentation of project costs clear, accurate and comprehensive?

Funding:
Is there a high likelihood of full funding from all proposed sources? Has other funding been acquired and/ or assured? Are funding sources diverse and/ or secure?

Milestones & Timelines:
Is project timeline described and documented in a clear, appropriate and well-organized fashion? Is there a clear path for completion within a year, or within the proposed timeframe, as appropriate?

Technical Adequacy.
Is there a high objective probability of technical success? Is there a high likelihood that the project will perform as designed?

Project Effectiveness.
Is there a high likelihood that project objectives will be met? Will the project be effective and efficient?

Sponsor's Capability.
Does the project sponsor have the ability and track record to perform this type of project?

Cost Effectiveness.
Is the cost of the project reasonable given anticipated benefits? Does it represent a good investment?

Participation.
Are there multiple participants and/ or number of beneficiaries? Does the project involve or benefit a number of individuals or entities?

Other:
Are there intangible benefits to the project? This could include: project uniqueness (i. e., Does the project employ new methods which may serve as an example or potential solution for similar problems? Does the project provide a water education benefit? Does the project increase public safety? etc.)

COLORADO RIVER BASIN ROUNTABLE

Workshop on Nonconsumptive Needs Project Grants

March 15, 2012, 10:00 – 12:30

North Branch Summit County Library

651 Center Circle, Silverthorne 80498

AGENDA

1. Introductions and Purpose of Workshop
2. Background on HB 1177 and Nonconsumptive Needs Process
   - CBRT Attribute Table and WFET Maps
   - Existing Planned Projects (IPPs)
   - Statewide Funds and Basin Funds
3. Participants Q&A on Potential Projects for Near Term Funding
   - Additions to IPP List for Priority Future Funds (Project sponsors are encouraged to bring one page description of potential project responding to criteria listed in Attachment A of Selection Approach)
   - Potential Assistance in Developing Grant Applications
4. Meeting Nonconsumptive Needs in the Long Term
5. Questions?