

**Interbasin Compact Committee (IBCC)**  
**May 31, 2012; 8:30 – 5:00 p.m.**  
**Beaver Run Lodge, Breckenridge CO**  
**Meeting Summary**

**Attendees**

**IBCC Members**

Rick Brinkman  
Jim Broderick  
Carlyle Currier  
Jeff Devere  
T. Wright Dickinson  
Taylor Hawes  
Steve Harris  
Mike King, DNR

Eric Kuhn  
Jim Lochhead  
Olen Lund  
John McClow, CWCB Board  
Doug Monger  
Peter Nichols  
John Rich  
Senator Gail Schwartz

Travis Smith  
John Stulp  
Wayne Vanderschuere  
Steve Vandiver  
Bruce Whitehead  
Jay Winner  
JimYahn

**Staff**

Heather Bergman – Peak  
Facilitation  
Jacob Bornstein – CWCB  
Viola Bralish – CWCB

Todd Doherty – CWCB  
Jennifer Gimbel – CWCB  
Mikaela Gregg – Peak  
Facilitation

Greg Johnson – CWCB  
Nicole Rowan – CDM Smith  
Dori Vigil – CWCB

Members of the public were also in attendance.

**Meeting Objectives**

- Understand roadmap/path forward
- Agree on scenarios
- Agree on range of portfolios to evaluate across scenarios
- Explore the development of metrics
- Understand adaptive management concepts
- Review meeting schedule and what to accomplish in 2012

**Welcome and Introductions (John Stulp)**

IBCC Director John Stulp opened the meeting with introductions and an overview of the meeting agenda and objectives. Director Stulp went on to discuss the success of the Statewide Roundtable Summit, which occurred on March 1, 2012. The Summit was very successful. The results of a follow-up survey indicate that the vast majority of participants (76%) think the IBCC is moving in the right direction. The themes that emerged from the Summit are critical as the IBCC begins scenario planning and adaptive management efforts; these themes include:

- As there are numerous variables to be considered in planning to meet future interbasin water needs, scenario planning will be utilized as a tool in this process.
- A mixture of projects and methods should be pursued in developing solutions for meeting Colorado's water supply needs.
- Based on the 80% success rate of identified projects and processes (IPPs), this could be a promising and important component for meeting municipal and industrial (M&I) needs. Conservation measures must be implemented, however, and impacts of IPPs should be monitored and quantified.
- The state's water conservation activities and efforts are currently advancing.

- Preserving the future of agriculture in Colorado is a significant concern, and measures must be taken to reduce the risk of agricultural water shortages.
- Specific solutions should be outlined to address the M&I gap, while fully exploring IPPs, conservation measures, new supply, and agricultural transfers. These solutions may be applied to M&I water management, but the preservation of nonconsumptive values should be a high priority.

Director Stulp also reported that the Colorado Agricultural Water Alliance is hosting a tour on September 10<sup>th</sup> in the Greeley/Weld County area, in conjunction with the IBCC meeting on September 11<sup>th</sup>. IBCC members are encouraged to attend.

### **Framing the April 2012 Roadmap**

Todd Doherty (Colorado Water Conservation Board (CWCB)) provided a brief presentation introducing the IBCC's scenario planning and adaptive management framework. Included in this presentation was an overview of this framework's purpose, process, and desired outcomes as well as examples of its application. Highlights from this presentation include:

- Implementing this framework will include portfolio development, scenario planning, and adaptive management, and the basin roundtable and the CWCB Board will be involved in the completion of these tasks.
- CWCB is currently working with the basin roundtables to advance consumptive and nonconsumptive projects and methods, which will make it possible for these projects and methods to inform the IBCC's scenario planning and adaptive management efforts.
- With regard to the current status of the state's water plan, CWCB has begun to outline the methodologies for the State Water Supply Initiative (SWSI) 2016 and to further advance the recommendations in the IBCC's 2010 letter to Governors Hickenlooper and Ritter.
- The work currently being done by the IBCC and the basin roundtables will be the foundation for a statewide water plan.

### **Scenario Planning and Adaptive Management**

- To view the PowerPoint presentation from this discussion, please click here: [IBCC Meeting Presentation](#). This presentation includes slides for all CWCB staff presentations referenced in this summary. The presentation is large and may take a few moments to load.
- To adequately consider and prepare for the range of possible impacts to Colorado's water supply future, we are moving away from single-event planning and are instead beginning to employ scenario planning and adaptive management practices.
- The IBCC's approach to scenario planning and adaptive management is depicted in a figure from this presentation. This process entails outlining a set of water supply and demand scenarios, or possible futures, as well as the development of portfolios (from the roundtables) that reflect solutions for meeting the state's water needs under each scenario. Metrics for evaluating the performance of each portfolio will be developed, and the metrics will also inform the identification of no-regrets management actions. All of this information will culminate in the development of a state adaptive management plan, which additionally outline triggers, projects and methods, and outcomes. To view this diagram, follow the link above to this presentation.
- An overview of the IBCC meeting schedule for the remainder of 2012 and into next year was also covered, and details are shown in a slide from the presentation. During the September meeting, the IBCC will focus on defining and developing metrics and will begin evaluating portfolios under the identified scenarios. If appropriate, the IBCC will also start identifying no-regrets management actions during this meeting. The metrics and portfolio evaluation process will be finalized during the November IBCC meeting, and discussion of the implementation of no-regrets actions will begin. The IBCC will work to begin implement the adaptive management plan

during 2013, and will focus on refining projects and methods, and developing outcomes. This schedule may too aggressive, in which case the schedule can be adapted to ensure a successful dialogue.

#### Question/Answers

***Why does the definition of “demands” refer only to M&I demands? Why are other demands, agricultural demands in particular, not included? It will be difficult to identify “no regrets” strategies if agricultural demands are not met.***

- The intent of the portfolios is not to manage for other types of water demands, but to address the M&I gap and identify tradeoffs associated with meeting these supply needs. While this approach may seem oversimplified, it provides a reasonable starting point and could be refined as this process moves forward. Prior to the next IBCC meeting, metrics will be developed and eventually used to assess the impacts (both positive and negative) of the various portfolios on agricultural, nonconsumptive, and environmental uses and values.
- Addressing M&I demands provides an opportunity to address nonconsumptive demands as well as other issues that are of concern and relevant to discussions of future M&I supply needs. There will be opportunities for the IBCC to consider the effects of water management strategies on the well-being of watersheds and forest ecosystems across the state.

***What is the end goal for adaptive management planning and the development of a state water plan?***

While there are general notions of how this plan may turn out, it is not 100% clear at this point, and it is probably not productive to spend a lot of time trying to define the end point before we get there.

***Will “scenario” planning be operationalized as hypothetical planning?***

- The purpose is to look at future scenarios involving variables that the state is unable to control such as climate change, drought, increased development, and economic variability. In carrying out scenario planning, the goal is to identify a wide array of possible futures in order to create a more comprehensive management and response plan.
- Developing “no regrets” actions will require moving beyond the status quo. Undertaking this process will also necessitate producing more clear examples of “no regrets” actions or portfolio elements for each of the “four legs of the stool” and nonconsumptive needs.
- Some members of the IBCC are concerned that the conservation component of the Portfolio Tool presumes low to medium conservation. This appears to be an unambitious goal, and it was suggested that a “no regrets” approach should entail at least medium conservation strategies. Additionally, it was recommended that nonconsumptive use be embedded in scenarios being considered during scenario planning.

***Will there be water policies suggested with these goals?***

- Before policy can be considered, it will be necessary to get further into this process because details cannot be addressed at this stage.
- The IBCC is moving forward and needs to continue in the same direction because the path that has been outlined seems appropriate. While there may not be full agreement on some of the numbers that have emerged during the planning process, there will be opportunities to further discuss this and refine the plan down the road.
- There can be regrets in some actions, and there can be regrets in taking no action as well. When it comes to responding to agricultural water needs, the status quo is a path of regrets, and this should be kept in mind moving forward in the planning process.

- It is important to view Colorado's water system as a larger network of watersheds and associated ecosystems. Policies and specific efforts should be coordinated not only to protect these watersheds, but also to support the US Forest Service in fulfilling its mission.

### **Applications of Scenario Planning: Panel Discussion (Jennifer Gimbel)**

Jennifer Gimbel, Director of CWCB, moderated a series of presentations and a question/answer session on scenario planning. Jim Lochhead, CEO of Denver Water, discussed Denver Water's past experience with scenario planning. Taylor Hawes provided information regarding the Colorado River Basin Water Supply and Demand Study and its approach to scenario planning. These presentations can be found on the CWCB website, or by clicking the links to these presentations below. Eric Kuhn also joined the panel discussion to provide a Western Colorado/Colorado River District perspective. Highlights from the panel discussion are below.

### **Presentations**

[Taylor Hawes Presentation – Reclamation: Managing Water in the West](#)

[Jim Lochhead Presentation – Lessons from Scenario Planning](#)

### **Moderated Discussion**

#### ***How is Denver Water engaging in scenario planning?***

Denver Water is conducting its own scenario planning process, and it is one of the first water suppliers in the state to carry out this process and is thus serving as a leader for other water providers. Through this scenario planning process, Denver Water's efforts have shifted from "no regrets," which is ideal, to a more feasible "low regrets" directive.

#### ***What from the Colorado River Basin Study can be used in Colorado?***

- The metrics utilized in this study are well developed and offer an effective means of comparing the risks and impacts of water management solutions implemented in Colorado.
- The Basin Study process is not just looking at scenarios, but also at what projects and efforts could be used to address the needs in each scenario.
- The IBCC's conversation has been primarily focused on a bottom-up strategy, and there may be a need to look at institutional options and the potential for the implementation of statewide efforts.
- In comparison to the way that variations in supply were evaluated in the Basin Study, the IBCC has been less advanced in the approach to these types of analyses. Thus, there may be a need for the IBCC to re-evaluate Colorado's water supply in further detail.

#### ***Is there a need to look at models before initiating the process?***

Denver Water has done a significant amount of research behind the scenes to set the foundation for the use of modeling during water planning. There appears to be a need to look beyond water supply development and to explore ways to incentivize growth in areas with existing utility services. What this means is that addressing the M&I gap requires a broad approach that is not focused on the water supply alone.

#### ***How does risk management factor into the process?***

- Risk management is a means of reducing the risks associated with future events that can be neither predicted nor controlled.
- The IBCC should consider a response strategy to prepare for the event of the Colorado River water supply being less than predicted. There is no simple answer to the question of how to incorporate risk management into this planning effort, but scenario planning provides a starting

point. Without effective risk management, achieving broad support for additional transmountain diversions would be a difficult prospect, so scenario planning can serve as a foundation from which to move efforts and projects forward.

- Scenarios represent future conditions, so the next step in the planning process will be to identify a set of solutions to address these conditions.

#### Questions/Answers and Discussion

##### ***How do the Metro Roundtable's efforts to outline a supply option that includes both a new transbasin diversion and agricultural transfers correlate with the IBCC scenario planning process?***

- These efforts overlap because each requires determining our vision for Colorado. The outcome of engaging in this process could take stakeholder groups in differing directions in both the short term and further into the future.
- Over the course of the planning process, no potential options or outcomes should be precluded from the conversation, and all options for moving forward should be preserved. This is especially important with regard to protecting agricultural land from drying up in meeting M&I demands.

##### ***Is there something that needs to be changed within the state to facilitate risk management planning and the ability to predict how the state might respond if less water is available in the future?***

- There is a need to go beyond just water planning to look at water infrastructure and transportation planning, conservation efforts, etc. There are policies and programs not yet in place to address these additional future water planning issues.
- Commitments that have been made in some basins seem to add another level of constraint to risk management planning. At the same time, we need to honor these commitments and preserve economies that rely on healthy streams and other nonconsumptive values.

##### ***What is needed to protect those economies while also allowing for flexibility in future water development?***

- Large-scale legislation is not necessarily the best option, but there may be a need to address some of the incentives existing within current legislation or revisit ordinances for land use development that encourage the inefficient use of water. Our policies should be managed to support smart growth and development.
- There is hope that the focus can be more on enabling conditions and how we can create what we want to see in the future. We want to be careful not to stray down a path that hinders our capability to achieve win-win solutions.
- The To Be Determined visioning process sponsored by the Governor focuses on addressing all the key issues that currently affect the state and need to be addressed when envisioning Colorado's future.

##### ***What are the causes of the significant gap on the Colorado River?***

- Growth is a key component of this gap, as the Compact did not look at growth constraints. Hydrology is another factor influencing this gap. The Colorado River system is being fully utilized today, and any additional growth consequently expands this deficit, whether it is within or beyond the Compact entitlement.
- Something that should be kept in mind in considering this gap is that allotments between the Upper and Lower Basin states are not distinguished. The Lower Basin has never taken a shortage in its allotment, but the Upper Basin takes a shortage every day. The results of the Basin Study should be examined to discern a way that the shortages may be shared.

***What can we do today, based on the experiences from Denver's scenario planning?***

There is a natural tendency to jump into conversations about details rather than focusing on the larger vision for the state's future. The most productive way to move forward is to take a high-level approach to discerning commonalities, and to avoid arguing about major decisions and project implementation at this stage. Details can be discussed at a later time, when it becomes necessary.

***What is within the IBCC's control in terms of implementation strategies in the near term?***

Instead of concerning ourselves with what the IBCC does and does not control, we should work to identify solutions and ideas that we support as a group. If we are able to come to agreement on specific goals and tasks, this will allow us to generate significant momentum.

***Is the use of Portfolio Tool the best way to approach addressing this issue, since its focus is on supply rather than demand management?***

Conservation alone cannot solve the full M&I gap. Scenario planning that is based on the Portfolio Tool could tell us how growth drives water demand, which could then be used to come up with new strategies to incentivize smarter land use planning. Conservation will be a substantial piece of this strategy, but it is necessary for there to be other components as well.

***What is the big picture role of water providers?***

- Stakeholders from industries across the state should be engaged at a higher and more in-depth level. Planning requires evaluating demand, and relationships should be built with stakeholders across the state because any decisions we might make about water have a statewide impact on the economy.
- While there is concern about protecting the environment on the West Slope in the face of increasing water demand, there are few existing tools that can be used to address this concern. Mechanisms to protect nonconsumptive needs should be developed for use in both the short term and long term for communities reliant on nonconsumptive resources.
- There is still a need to address water supply and demand issues collectively in order to progress. The aim of the IBCC's conversation is to identify and discuss all the issues and options in an effort to develop win-win solutions.

**Identify a Set of Portfolios to Evaluate Against a Range of Scenarios**

Jacob Bornstein (CWCB) walked the IBCC through some draft scenarios developed by staff based on the roundtables' portfolio work. Following a brief summary of how the portfolios will be evaluated using these scenarios (see the Metrics discussion below for more detail), the IBCC discussed all nine scenarios and considered what changes should be made before each is finalized.

- Some IBCC members expressed concern about limiting the scope of the scenarios to factors related to Colorado River supply and demand. Working only with these supply and demand issues could result in not considering the full breadth of scenarios needing to be addressed, which could push the discussion in the wrong direction. Scenarios are useful because they can generate compelling future visions. Confining the scenario planning process to Colorado River supply and demand may not be a creative enough approach to address the potential variability of the state's alternative futures.
- Factors influencing the varying levels of supply (e.g., climate change) and demand (e.g., population growth) represented in the nine scenarios should be sufficiently outlined to facilitate a comprehensive scenario planning process. Focusing scenarios on the drivers of supply and demand variation will help ensure that these drivers of change can be addressed through solutions outlined in the portfolios.

- The extent to which IPPs can be successfully implemented will have a strong effect on the future availability of water supplies, and some IBCC members are therefore interested in exploring the potential to factor IPPs into scenarios rather than the portfolios.
- While there are benefits to starting the planning process using general scenarios, detailed narratives could be used to more clearly describe how Colorado would look under the different conditions illustrated through each scenario. This information could be reviewed by each basin roundtable (BRT), and the IBCC could use the narrative-based scenarios to develop no-regrets adaptive management solutions. Issues of timing and water delivery could be better captured in scenarios that are developed as narratives.
- The IBCC has already begun the scenario planning process through initiating a statewide planning effort that diverges from the status quo and focuses on adaptive management and strategic planning to meet Colorado's M&I needs while protecting other values that are important to residents around the state.

### **Summary Set of Portfolios**

Jacob also provided an overview of high-level data from the 34 BRT portfolios and outlined how CWCB staff narrowed this information down to ten summary portfolios. He explained that staff chose to use this approach to better facilitate the IBCC scenario planning and adaptive management process. Two summary portfolios were developed based on low-demand scenarios, four were developed based on mid-level demand scenarios, and four were developed based on high-demand scenarios. The portfolios provide a means of having "board-level conversations" based on the information included in SWSI 2010.

### Question/Answers and Discussion

#### ***How are IPPs included in the summary portfolios?***

The success rate of all of the BRTs' IPPs was approximately 80%, so this average rate is what was used during the development of portfolios.

#### ***How was the 80% IPP success rate average calculated?***

This rate is a weighted, yield-based average. The 80% was approximately the IPP success rate used in every roundtable portfolio, so, as was discussed at the Summit in March, this was identified as a common element of the portfolios.

#### ***Do the medium-demand portfolios only apply to the medium-demand scenarios?***

- The idea behind the scenario planning process is to apply each of the nine supply and demand scenarios to each of the portfolios in order to assess the effectiveness of each of the portfolios in meeting the water needs outlined in each scenario.
- When working with the portfolios, it might be beneficial to consider a dual approach to meeting M&I demands similar to what was utilized in the Metro Roundtable's approach; that is, it could be useful to consider the potential variation of the sources of water supply during drought years versus wet years in assessing portfolios under different scenarios.

#### ***How will the IBCC protect the water needs of agriculture with the scenarios and portfolios being developed?***

In moving forward, it is assumed that the group will want to develop agriculture-related metrics in order to assess the effects of the established portfolios on agriculture under each scenario. A similar process will also be carried out to assess impacts to nonconsumptive water needs. The Yampa/White Roundtable was the only BRT that specifically factored in agricultural protection components to the portfolios they developed.

### **Evaluation Metrics**

Greg Johnson (CWCB) provided the IBCC with an overview of how the portfolio evaluation process requires the development of metrics to evaluate the performance of each portfolio under each scenario. A diverse group of IBCC members will need to form a Metrics Task Group to identify evaluation metrics to assess potential impacts (positive or negative) from portfolios.

- The metrics will be based on the vision goals that were developed by the IBCC in its early stages.
- The metrics will not be incorporated into the Portfolio Tool, but they will be used by the technical team to evaluate the various portfolios in each scenario.
- The Nonconsumptive Needs Subcommittee has developed a list of recommended nonconsumptive metrics, and many of these are based on the BRT discussions and portfolios as well as the IBCC guiding principles. These metrics and the Subcommittee's discussion will carry over to the work of the Metrics Task Group.
- The metrics can be qualitative as well as quantitative, and the Metrics Task Group will need to discuss these methodologies. These considerations will provide a good opportunity for addressing agricultural issues as well as nonconsumptive values.
- While the metrics will be used to help inform the adaptive management process, they cannot serve as a deterministic model for generating a final set of solutions to the M&I gap (i.e., the portfolio that gets the best "score" on the most metrics is not necessarily the "right" portfolio for that scenario or for the future of Colorado).

### **Discussion**

#### ***What do the potential additional metrics regarding agricultural economics and agricultural reliability encompass?***

- With regard to agricultural economics, work is currently being done on the concept of the agricultural "tipping point" and the agricultural production base. In the Colorado River Basin Study, the link between M&I and agricultural water needs was examined as well as the reliability of the agriculture water supply. Among the metrics included in the Portfolio Tool is a measure of agricultural irrigated acreage.
- Other suggested additional metrics include energy use and risk (or M&I reliability) across different sectors and across the state as a whole.
- There is concern that if the metrics are quantified, the risk management conversation may become too detail-oriented and the group could end up spending excessive time discussing the meaning of the metrics. It may be more valuable to define the metrics at a qualitative level to connect with the overarching and long-term goals.
- Metrics regarding vulnerability and risk were developed in the State's Drought Plan, and these could be referenced to help support the IBCC's evaluation process. A quantitative set of vulnerability levels was utilized in developing these metrics, so this could be an approach worth exploring during the IBCC's work as well. The State is doing work assessing the potential impact of drought on recreation and tourism and is looking to develop a set of metrics to be piloted in the Southwest Basin. This information could also serve as a valuable resource.
- In the beginning of the process to develop metrics, it could be useful to employ a qualitative approach, such as writing a storyline for each metric that clearly outlines the pros and cons.
- Beginning with quantitative metrics is also a possibility, as there will likely to be a need to quantify at least some of the metrics later in evaluation process. Because quantitative values used for metrics could vary based on the situation or scenario, they would be outlined as a range or according to prioritization.



### **Additional Questions/Comments**

***Does the IBCC have the ability to pass a resolution or set of comments opposing the Colorado Water Law Amendment, also known as the Public Trust Doctrine (Initiatives 3 and 45)?***

- This is not common practice for the IBCC; however, the IBCC could potentially discuss this Amendment, as it is a water issue of significant concern to many. It may be more valuable to wait and see how far the initiatives get before granting this topic merit for discussion.
- Several members of the IBCC believe that Initiatives 3 and 45 are destructive to the statewide water supply planning process and that the IBCC has the responsibility to formally comment on the proposed Amendment.
- There are other entities, such as Colorado Water Congress, that are better positioned to take a formal stance regarding this issue.

### **Closing Remarks**

Director Stulp closed the meeting with the following comments:

- The IBCC has reached a point in the planning process at which some very critical and salient thoughts are beginning to come to the surface.
- It will be of significant value for the Scenario Task Group to outline narrative descriptions of the scenarios, as they will ultimately lay the foundation for this adaptive management effort.
- Remembering that the IBCC's scenario planning effort is an iterative process is important, and it is expected that IBCC members will take the information discussed today back to the BRTs to create a more informative and informed process.
- Quite a bit of work has been laid out and must be completed before the September and November meetings, but it is worth emphasizing that the group is making substantial progress and is heading in the right direction. All of the support for this process from IBCC members is greatly appreciated.

### **Next Steps**

- **Scenario Narrative Task Group**
  - Members: Jeff Devere (Chair), T. Wright Dickinson, Melinda Kassen, Eric Kuhn, Peter Nichols, Bill Trampe, and Mark Waage (on behalf of Jim Lochhead)
  - The Scenario Task Group will develop narratives for the draft scenarios and work to narrow the current set of nine scenarios down to a key set of five or six scenarios.
  - The scenarios will be presented to the IBCC at the September meeting for discussion and will subsequently be shared with the BRTs.
  - Jeff will develop a "straw man" set of scenarios with the assistance of Jacob. The Task Group's meeting will involve reviewing and revising these draft narrative scenarios.
- **Metrics Task Group**
  - Members: Taylor Hawes (Chair), Steve Harris, Olen Lund, Wayne Vanderschuere, and Eric Wilkinson; Veva Deheza and Taryn Hutchins-Cabibi from CWCB's Office of Water Conservation & Drought Planning will also participate in the Task Group.
  - The Metrics Task Group will meet two to three times over the course of the summer to develop metrics deliverable to the IBCC at the September meeting.
- Staff will circulate the CWCB Board resolution that was submitted regarding Initiatives 3 and 45, and the IBCC can use this as a starting point for a discussion on this issue.