

Water Resources Review Committee
Hearing Concerning Measures to Conserve Municipal Water used for Outdoor Purposes
IBCC – Municipal Representative Testimony

Thank you for inviting me to speak at today's committee meeting. My name is Joe Stibrich. I'm the Deputy Director Water Resources for Aurora Water, where I am responsible for the management and operation of the City's existing raw water supplies and the planning and development of our future supplies to meet both short and long-term projected growth of the City. I am also a member of the IBCC as a representative of the Metro Roundtable, where I am the Arapahoe County municipal water provider representative.

I am going to talk about the IBCC's role in the conservation discussion, the goals developed around conservation in the IBCC Consensus Agreement, and to offer some of my views on how conservation fits within the overall framework of Colorado's Water Plan.

Conservation has been a fundamental component of the IBCC conversation since we were established in 2005 under House Bill 05-1177. We have recognized from the start that water conservation is one of the original four legs of the stool for planning Colorado's water future, along with IPPs, agricultural transfers/ATMs, and new supply. Reuse has also been part of the conservation discussion, and is incorporated into the conservation measures identified in the IBCC Consensus Agreement. Prudent water supply planning begins with effective conservation. From a municipal water provider perspective, conservation is often the most economical measure we can implement, provided it is done in a thoughtful and effective manner, with the full understanding of the associated benefits, costs, and effects to our system.

The IBCC has a number of subcommittees, including the Water Conservation subcommittee that includes municipal, environmental, and agricultural members from the Metro, Arkansas, Southwest, Yampa/White, and Rio Grande Roundtables and Governor Appointees. This subcommittee has explored conservation at a greater level of detail than could be accomplished at the IBCC meetings. In addition, the Metro Roundtable has developed a white paper on Conservation Strategies, which documents the effectiveness of ongoing water conservation efforts and recommendations for achievable goals in the future. The results from all of these were incorporated into the IBCC No and Low Regrets Action Plan and the overall IBCC Consensus Agreement, copies of which we have brought you today.

The Consensus Agreement was developed by the IBCC over the last year and submitted to the CWCB Board for inclusion in Colorado's Water Plan at the July Board meeting. The Agreement sets the framework for future negotiations on a potential new transmountain diversion. The purpose of the document is to provide an initial conceptual agreement about how a future increment of Colorado River water could be developed. Though specific to New Supply, the Agreement incorporates components of water conservation that are consistent with other aspects of Colorado's Water Plan. As such, the overarching statement regarding conservation is that "Colorado will continue its commitment to improve conservation and reuse." The Agreement includes the following water conservation recommendations and expectations:

1. Conservation actions identified in the No and Low Regrets Action Plan should be substantively completed, including development of conservations standards for communities planning to use agricultural transfers or new water supplies for future needs. It is expected the focus of conservation to be on incentives, legislative options, and support for indoor water use



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- conservation measures, and legislative options and support for outdoor water efficiency standards.
2. Proponents of New Supply projects should demonstrate a commitment to working toward enhanced conservation goals, with active conservation plans and activities approved by the CWCB in place prior to project implementation. Reuse programs should also be in place for those with other fully consumable water supplies.
 3. Discussions on whether entities using water from a new transmountain diversion project should be held to a higher conservation standard than others was held, but not resolved. Further discussion is planned, including refinement of the terms “high” and “higher”, recognizing that opportunities for conservation may vary from one community to another.
 4. Conservation goals should have measurable outcomes. Examples that were considered include target gallons per capita per day (gpcd) values, establishing target indoor/outdoor water use ratios (such as has been considered under SB 14-017), and best management practices. Only best management practices were endorsed.
 5. Land use practices changes that would help reduce water consumption should be encouraged and supported. However, further work is needed to determine strategies and partners, and the parties in this discussion needs to include municipalities, counties, local planning agencies, and elected officials as these decisions will not be made on a water provider level.

These items all garnered considerable discussion amongst members of the Water Conservation subcommittee and the IBCC. From the water providers perspective, defining “one size fits all” goals does not work in Colorado as the ability to reach higher levels of conservation is dependent upon what has already been accomplished to date. As an example, Aurora’s population increased by 82,000 people (33%) from 1997 to 2011; however, total water use increased by only 1000 acre-feet (2%) during this same period. This has resulted in our per capita water use rate dropping by 23% from 163 to 126 gpcd. Other factors affecting a provider’s ability to reach higher conservation levels include geographic location, the relative mix of uses in a service area among single-family, multi-family, irrigation, commercial, and industrial customers, and the ability of a provider to influence those types of use. All of these factors can make the comparison of water use gpcd targets irrelevant.

The setting of arbitrary indoor to outdoor water use ratios is also problematic. While simplistic in concept, the reality is that the necessary changes to accomplish such targets are much greater than what might be expected. Examples are shown in the table on the following page. For instance, if the water use ratio in an area is currently 50/50, and no reduction in indoor water use occurs, achieving a 60/40 ratio will actually require a reduction in outdoor water use of 33%, not 10%. If indoor use decreases as customers replace appliances with high-efficiency water use appliances, say by 10%, the decrease necessary in outdoor use is now 40% to achieve the 60/40 ratio! This disparity increases with a 70/30 ratio, as suggested in the original proposal. Some changes have been seen over the last decade as a response to market conditions and not any legislated change. For instance, Aurora current use is at about 58/42, with outdoor use declining at a faster rate than indoor use, but the sustainability of such a decline is unknown, and mandating such targets may be unachievable.

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	<u>Indoor Use</u>		<u>Outdoor Use</u>		<u>Total Use</u>	
	Units	%	Units	%	Units	%
Baseline	50	50%	50	50%	100	100%
No change in indoor use, 60/40 target	50	60%	33	40%	83	100%
<i>Change</i>	<i>0</i>	<i>0%</i>	<i>-17</i>	<i>-33%</i>	<i>-17</i>	<i>-17%</i>
10% reduction in indoor use, 60/40 target	45	60%	30	40%	75	100%
<i>Change</i>	<i>-5</i>	<i>-10%</i>	<i>-20</i>	<i>-40%</i>	<i>-25</i>	<i>-25%</i>
10% reduction in indoor use, 70/30 target	45	70%	19	30%	64	100%
<i>Change</i>	<i>-5</i>	<i>-10%</i>	<i>-31</i>	<i>-61%</i>	<i>-36</i>	<i>-36%</i>

Before mandates such as contemplated in SB14-017 are enacted, the numerous and far-reaching negative effects and the financial and socio-economic costs associated with reducing irrigation in urban environments need to be better understood. Such impacts include reduced tree canopy, increased “heat island” effects, increased stormwater runoff and accompanying water quality degradation, reductions in property values, and reduced enjoyment of outdoor spaces. Utilities recognize that healthy rivers and ecosystems, a robust recreation-based economy, and other environmental and recreational values frequently identified as “musts” by Western Slope Roundtables are important for maintaining Colorado’s economy and quality of life. Equally as important to Colorado’s economy and quality of life is maintaining urban environments with sufficient open areas and healthy landscapes. It will be difficult to convince future generations of Front Range citizens of the need for healthy rivers or sustainable agriculture if they spend the vast majority of their lives indoors or playing on concrete. Perhaps an approach should be considered that focuses on determining what constitutes a “reasonable residential experience” and developing a consensus on what might be a corresponding “unreasonable” municipal outdoor water use.

While there was not a consensus on what measurable goals should be regarding gpcd targets or indoor to outdoor use ratios, there was consensus by the IBCC that implementation of best management practices (BMPs) could be defined goals with measurable outcomes. Achieving the desired outcomes through increased conservation can be accomplished, in large part, by implementing many of the BMPs identified in CWCB guidance and the Guidebook of Best Practices for Municipal Water Conservation in Colorado by Colorado Water Wise. These BMPs include, but are not limited to the following:

- Conservation-oriented rates and tap fees;
- Increased levels of public education and outreach;
- Implementation of water waste ordinances;
- Landscape water budgets, coupled with real-time water use feedback to customers;

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- Rules for landscape design and installation (e.g., soil amendment requirements);
- Certification of landscape professionals; and
- Irrigation efficiency evaluations.

BMP goals and implementation plans could be incorporated into water conservation plans submitted to the CWCB for approval.

Thank you again for this opportunity to speak to you today.