To the Colorado Legislature, Interim Water Resources Review Committee:

Thank you very much for providing this opportunity to comment on Colorado's State Water Plan.

The Audubon Society of Greater Denver is a grassroots conservation organization founded in 1968, with approximately 3,000 members in the Denver metro area. Our mission is to advocate for the environment, connecting people with nature through research, education and conservation.

We commend the Governor and the Colorado General Assembly for their willingness to create a long-term plan for water resources management in Colorado. The challenge is to formulate a plan that will provide for human use and will also protect our native rivers, streams, lakes, riparian ecosystems and river substrates, the wildlife (including fish) that inhabit those ecosystems, and the recreation and tourism that depend on our wildlife and fish resources. We believe the State Water Plan should include the following components:

Water Conservation. The Plan should include a significant focus on water conservation (the cheapest, easiest and fastest way to "create" more water), including municipal water conservation, municipal reuse, agricultural efficiency, and water-efficient energy supplies. These measures can save substantial amounts of water and can help ensure that no new water diversions are needed from our already-depleted streams; they can make water available to restore degraded stream reaches. Some of these measures may require changes in Colorado law. We support conservation measures such as:

- Municipal and industrial wastewater reuse and recycling; water metering, tiered pricing, leak detection and repair, xeriscaping incentives, limiting development near stream banks, restoration of stream banks, and incentives for upgrades to water-saving appliances
- Temporary water sharing agreements between agriculture and cities when agriculture has surplus water
- Regulations that ensure that adequate and proven long term water supplies are available, before new developments are approved.
- Significant increases in water efficiency by agricultural users.

Quantification of Non-consumptive water needs. So far the documentation for the Plan has focused on quantifying the need for water for agricultural, municipal and industrial uses - the consumptive uses of water. However, Colorado's economy and our Colorado lifestyle benefit from a strong tourist industry based on our scenery, fish and wildlife resources, and these non-consumptive uses should also be quantified and

added into any consideration of future water allocation in Colorado. Non-consumptive uses or "attributes" have been mapped, but much more work is needed to quantify the amounts of water required to keep our rivers healthy and productive. Rivers need scouring flows in the spring, adequate winter flows to support aquatic life and summer/fall flows to maintain invertebrate and vertebrate aquatic species and riparian vegetation.

River and stream restoration. Over the last 100 years we have drained, dammed and diverted our rivers and streams to the detriment of most species and to the detriment of the rivers themselves. As you are fully aware, we are not starting out in this planning process with healthy rivers! Most of Colorado's rivers are imperiled, diminished and sometimes drained completely dry. Any further diversions will cause the loss of the water-based recreation (such as rafting and fishing) and wildlife resources that add billions to Colorado's income each year. The State Water Plan needs to outline a strategy to restore ecological health and balance to our rivers and streams and preserve and enhance our remaining riparian ecosystems. Additionally, the State needs to plan/provide resources for more detailed inventory and assessment of river ecosystem conditions and actual water needs.

Coordination between land use, growth, and water supply. Until recently no developer had to consider where the water for his development would come from, and consumers had no information about it. This has changed slightly since 2008, but we still have a long way to go to integrate water supply planning and land use. While many Coloradoans oppose the "buy and dry" option because it would eliminate productive farmland, that is likely to be our future source of water if we don't plan ahead. Water providers claim that they cannot be responsible for land use planning, but some of that is happening even now. Why not integrate water and land use, rather than depending on the helter-skelter, water-wasteful system we have now?

Other points we would like to have considered:

Minimum stream flows are not adequate. While they are a good idea, minimum stream flows are not adequate as a sole protection for environmental needs and values – they are too little, and too recent. Streams need spring floods to flush out sediment as well as adequate flows the rest of the year to support riparian and river bottom ecosystems.

Minimize construction of new dams and reservoirs. These store water on the surface where a large percentage is lost to evaporation. "Smarter" storage should be encouraged: underground, in aquifers, or in deep gravel pits where evaporation can be minimized. The State Water Plan should be flexible enough to deal with changes caused by the warming of our planet due to fossil fuel consumption and the ensuing increase in evaporation and transpiration rates. Storage in itself does not equal new water supplies.

Rivers and streams need to be viewed as continuous systems, not isolated reaches. Diversions and pollution upstream can have severe impacts on downstream ecosystems. The State should be protecting the upper reaches of our mountain streams, for example,

even when they are intermittent, so as to ensure water quality and quantity for downstream users and resources.

Ground and surface water should be viewed as interrelated systems. Recent controversy over the use of ground water in the South Platte alluvium should have taught us a lesson: often ground water and surface water resources are closely related. Water planning needs to take this into account and acknowledge that ground water depletions can affect the quantity and quality of surface water in some areas.

Transbasin diversions should be a last option. The Colorado River is overappropriated and, due to climate change, it is unlikely that additional water will be available from that river basin. The Front Range should not count on augmenting our water supplies via diversions across the Continental Divide. In addition, mitigation for water removal from a basin cannot be satisfactorily accomplished, especially in light of degradation that has already occurred. Rather, we should focus on conservation and efficient use of our native water on the Front Range.

Audubon's mission, to advocate for the environment by connecting people with nature through education, conservation and research, fully supports Governor Hickenlooper's Executive Order of May 13., 2013 which states "...the Colorado Water Plan must incorporate... a strong environment that includes healthy watersheds, rivers and streams and wildlife". Our Nature Center located at Chatfield State Park and on the South Platte Watershed makes us acutely aware and engaged on water issues and the impact to wildlife and recreational uses. We are encouraged by the extensive work already completed by the Interbasin Committee and look forward to providing further input.

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