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Oversight Hearing on Collaboration on the Colorado River:
Lessons Learned to Meet Future Challenges

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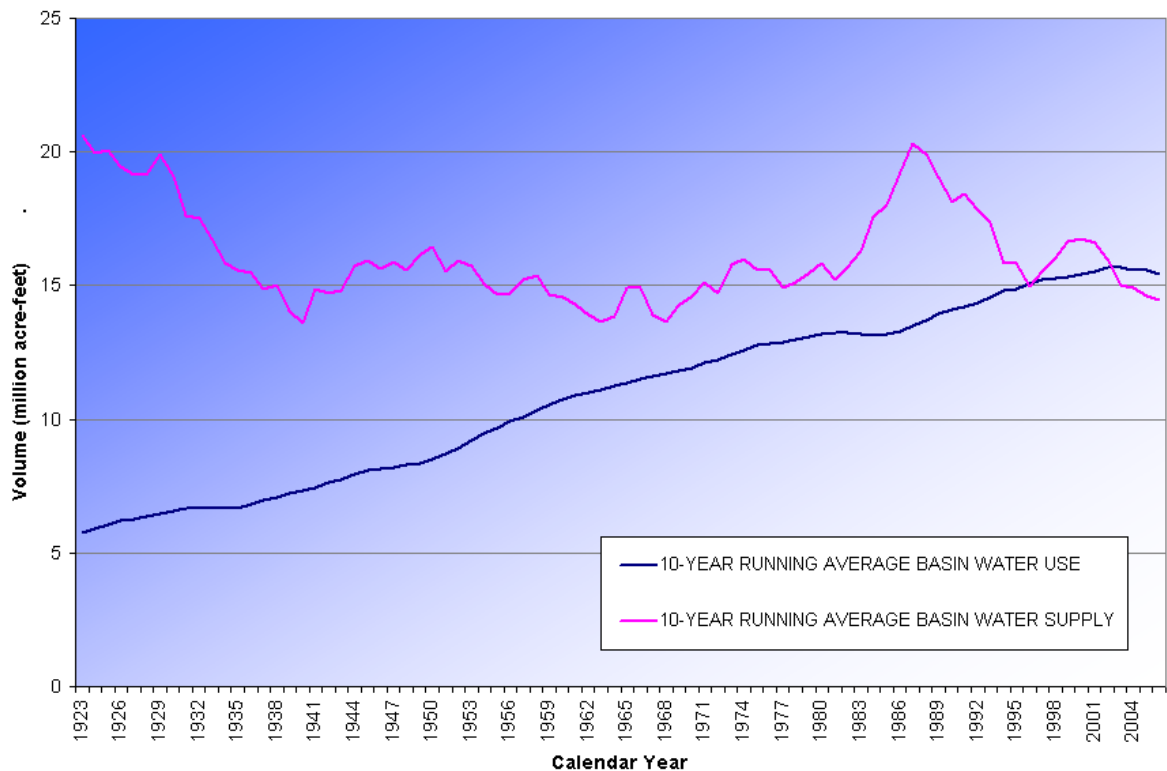
Chairman Napolitano, Ranking Member McClintock, and other members of the panel, thank you for providing oversight this morning on collaboration on the Colorado River, where the Bureau of Reclamation plays a pivotal role in managing resources.

Who We Are

Environmental Defense Fund is a leading national nonprofit organization representing more than 700,000 members. Since 1967, we have linked science, economics and law to create innovative, equitable and cost-effective solutions to society's most urgent environmental problems. EDF is dedicated to protecting the environmental rights of all people, including future generations. Among these rights are access to clean air and water, healthy and nourishing food, and flourishing ecosystems. Guided by science, EDF evaluates environmental problems and works to create and advocate solutions that win lasting political, economic and social support because they are nonpartisan, cost-efficient and fair. For more than two decades, EDF has advocated solutions in the Colorado River basin that ensure adequate water supply for people and the environment.

Challenges for the Colorado River Basin

The Colorado River, for eons, has been a lifeline for an arid land, the major watershed in the driest region of the United States. Over the past century, aided by federal subsidies, we have built a thriving society in the American West that depends on the Colorado's water. Our predecessors faced monumental challenges in taming the Colorado's floods, harnessing its power, and delivering its waters to the farms and cities they built, and the region's communities and economies are testament to their successes. Today we face a different monumental challenge: how do we grow now that we have so completely developed this river that our use of water now exceeds the supply? This graph, developed by the Bureau of Reclamation,



plainly illustrates our predicament, as the blue line depicting our increasing use of water over the twentieth century has indisputably crossed the pink line, which depicts the river’s supply of water. This is nowhere more evident than the Colorado River Delta, where the United States and Mexico meet across the Colorado’s dry channel, and is increasingly evident in the declining volume of water remaining in storage at Lakes Powell and Mead.

The Colorado River is already fully tapped, and yet water demand across the region will increase as our population continues to grow. The push for domestic energy development may well add to these demands, as nearly all methods of extracting fossil fuels require water. To further complicate matters, climate change is expected to decrease the Colorado’s water supply. While there is uncertainty about how much this decrease might be (Reclamation’s literature review found projections for the decrease ranging from 6-45% by mid-century), it is painfully clear from this graph that any decrease will result in a shortage to existing water uses.

Our challenge then, is how do we grow in a region where our water supply is already fully used? How do we do this when the basin is governed by a complex and detailed legal and institutional framework that was built when the population was less than 10% of what it is today, and water was plentiful compared to demand? Our challenge is now to evolve this framework to meet 21st century needs and to recognize and effectively

involve the broader range of stakeholders in that dialogue. Here are some examples of how these challenges play out:

- Developing new pipelines to take additional water from the Colorado might, in some cases, be legal and allowed under the compact, but the water these pipelines remove from the river will come at the expense of an existing use somewhere else. In some cases new water developments themselves may be at risk for insufficient water availability to supply them. Can the region tolerate these shortages economically and politically?
- Voluntary water transfers from agriculture to urban use will occur with increased frequency. Do we have adequate laws and institutions to protect those who hold water rights, the communities that have grown up around them, and the environmental values associated with them?
- Water conservation in all sectors will grow in importance, but in many cases water agencies hang on to inefficient uses of water because those uses are easier to give up in dry periods. Many water suppliers lack incentive to maximize conservation, yet conservation is the low hanging fruit, much less costly and much more politically feasible than building new infrastructure. Are our water management institutions capable of making efficiency gains at rates we have seen elsewhere around the globe?
- Augmenting the basin's water supply, through desalination units and imports from other basins, is often held up as the region's salvation, most recently in a 2007 seven-state report. But are there other basins willing to give us the water? To what extent can desalination units provide a cost-effective supply, and how can we minimize the added energy burden and environmental impact?
- Finally, the environmental resources at stake are significant, including more than 150 species of plants and animals that already are at risk due to the impacts of dams, competition from non-native species, urbanization, and development of the river corridor. This includes 30 endemic species of fish that are found nowhere other than the Colorado River basin. Dams and water use have wrought dramatic changes on the riverside forests in the lower basin and Mexico, which are a critical link in the Pacific flyway, the route used by a considerable percentage of the migrating birds in North America. As we change how and where we use water from the Colorado, what can we do to ensure that we don't lose the wildlife, habitat, economic benefits and quality of life that depend on a healthy and vibrant river system?

Solutions suggested by the lessons EDF has learned from collaboration in the Colorado River Basin

The only way to meet these complex challenges with durable solutions resulting in water supply reliability is to ensure that the decision processes in the Colorado River basin have broad stakeholder representation.

Let me tell you a story: In 2004, I met Sid Wilson, then General Manager of the Central Arizona Water Conservation District, on a sandy beach in the Grand Canyon. Controversy over the Yuma Desalting Plant was at its height, Sid and others were

demanding operation of the Plant to protect Arizona's water supply, and EDF had just published an op-ed in the Arizona Republic warning that operation of the Plant would result in catastrophic environmental damage at the largest remaining wetland in the Colorado River Delta, the Ciénega de Santa Clara. Maybe it was that we were wearing shorts and drinking beer, or maybe it was the magic of the river itself, but we ended up in a friendly conversation that, a few months later, resulted in Sid convening a formal workgroup that included CAP managers, the Arizona Department of Water Resources, Reclamation, and several environmental group representatives. Over a year of meetings, we found sufficient common ground to issue a report with consensus recommendations that addressed both Arizona's shortage risk from the bypass flow, and the ecological significance of the Ciénega.

Last year, as Reclamation and several municipal water agencies began to plan in earnest for pilot operation of the Yuma Desalting Plant, the same concern for the Ciénega was raised, this time not just by environmental interests, but also by the Mexican federal government. Because water users and environmental organizations had worked together on this issue, it took no longer than a few months to craft a solution that will allow the Plant to be tested and at the same time ensure protection of habitat at the Ciénega, a shared commitment between United States, Mexico, and non-governmental organizations to replace the wetland's water supply. Because we had taken the time to develop a deep understanding of the full range of issues and perspectives, the parties were able to come to a mutually agreeable solution reasonably quickly.

Environmental groups also found a way to contribute to the 2007 Interim Guidelines for Lower Basin Shortages and Operation of Lake Powell and Lake Mead. Thanks in large measure to the efforts of Reclamation staff, we had the opportunity to develop a policy alternative, 'Conservation Before Shortage.' Reclamation gave us technical support and ultimately analyzed this alternative in their Environmental Impact Statement. The final adopted policy included one key provision of our proposal, the potential for Mexico to bank water in Lake Mead. This provision helped foster the current binational discussions on the Colorado River, and opens the door to solutions to restore the Colorado River delta.

EDF is participating in this dialogue between the United States and Mexico to explore binational actions that might improve Colorado River management in the broader context, looking at shortage sharing and supply management, binational water conservation projects, the potential for augmentation projects to supply urban water needs in both countries, and solutions to create environmental flows for the lately-dewatered delta of the Colorado River. In this complex playing field, sometimes referred to as 'three-dimensional chess' we have agricultural water users, urban water suppliers, federal and state interests and environmental stakeholders, all from both the United States and Mexico, spending the time to learn more about all the issues on both sides of the border, and working towards a solution. This process holds great promise, and could lead to a deal that includes broader sharing of water shortages, water conservation projects, new desalination units to supply cities on Mexico's Pacific Coast where water is extremely scarce, water exchanges between the two countries, and dedicated environmental water

for the Colorado River delta. The broad scope of these discussions holds the key to their success, for these issues in isolation have proven impossible to solve. Broad stakeholder representation in this case is the key to finding a set of solutions to a number of problems that will work for both countries.

The history of the Colorado River is unfortunately littered with deals that were cut without consideration of all stakeholders, at times including tribes, municipalities, and the environment. I'd like to think that in these recent examples of the Yuma Desalting Plant, the interim guidelines, and the binational discussions there is evidence that we can turn the corner.

How can the Federal Government help?

1. Acknowledge the challenges in the Colorado River Basin. There are numerous reasons why one stakeholder or another might want to ignore the fact that water use in the basin already exceeds supply. The states and water users operate in a framework where they must compete, be it for protection from shortages or for access to new water supplies. The federal government has an obligation to facilitate dialogue among these parochial positions to address the larger problem in the overall public interest, a secure water future for all. In the Lower Basin, the Secretary's designation as Water Master makes this an obvious role. In the Upper Basin, the federal government has not facilitated interstate discussion to the same degree. In this age when water demands clearly exceed the supply, it is essential to look at the Colorado as one basin. It is time for the federal government to play a more assertive role facilitating a dialogue among all stakeholders addressing the big picture. The Basin Study is a good first step in this direction, but Reclamation needs to assert sound science, consistent metrics, and data transparency to ensure the exercise is both worthwhile and that the results help foster a durable consensus among a broad range of interests.

2. Use expertise gained in the Lower Basin shortage negotiations to help the Upper Basin states. At present, without well-articulated agreements for how a "call" on the 1922 Compact would be administered among states of the Upper Basin, there appears to be a race among the states to develop the next big use of water, because for water users who don't get their straw into the system first, their risk of curtailment increases. This 'race to develop' increases risk for many water users in the basin. It would be better to slow down on new developments and first work out interstate agreements on what happens in the event of a call on the Compact. Reclamation played a key role in pushing Lower Basin states into discussions about sharing shortages. Reclamation must find a way to facilitate this discussion in the Upper Basin, using both the bully pulpit and the offer of technical support to get states to the table.

3. Ensure broad stakeholder representation and continue support for the dialogues that are underway. The Colorado River Basin Study process holds great promise, but how ecological sustainability will be addressed remains unclear. The existing process lacks representation from environmental stakeholders as well as adequate funding to consider environmental flow needs. The federal government should do more to ensure that

environmental concerns are addressed at the highest levels of the Basin Study. Environmental groups have been offered participation at the study's technical level, but without representation at the decision levels of the Basin Study, it seems unlikely that the conclusions and recommendations will address sustainability. In addition, the decision-support tool that Reclamation and stakeholders use to model Colorado River operations does not have the capacity to address/model environmental flow needs. It would be tremendously helpful for Reclamation to identify a new source of funding to support development of this technical capability. Without it, the Basin Study will not be able to adequately assess the River's ability to sustain the diverse fauna and flora that depend on it.

The federal government role in supporting the binational dialogue with Mexico stands out as an example of productive, facilitative leadership that is working to move a diverse array of stakeholders towards new solutions for Colorado River management that address the needs of human communities and environmental water needs in both countries. The support from the International Boundary and Water Commission and Reclamation for including environmental stakeholders in the discussions has allowed us to make progress towards solutions for restoring the delta of the Colorado River that work for all stakeholders. The recent federal offer of support for water conservation and habitat development pilot projects has already succeeded in demonstrating progress. EDF is grateful for the leadership of the federal government in this process.

4. Continue and expand incentives for water conservation. Interior and Reclamation should be applauded for WaterSmart program, which is designed to encourage conservation. Water use in every sector, and throughout the basin, can be made more efficient. There is extensive evidence that a gallon of water conserved is far less expensive than a gallon of water taken from the river in a new pipeline, or a gallon of water produced in a desalination plant. Water conservation also saves energy. This new initiative holds great promise, and EDF looks forward to the growth of federal water conservation incentives.

Thank you for the opportunity to speak to this panel.