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Subcommittee on Water and Power

Oversight Hearing Regarding the
Colorado River Basin Water Supply and Demand Study
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Thank you for this opportunity to testify before the Subcommittee regarding the Colorado River Basin Water Supply and Demand Study. I am Tanya Trujillo, Executive Director of the Colorado River Board of California. I appreciate the interest of the Subcommittee regarding this important topic.

Background Regarding the Colorado River Basin Water Supply and Demand Study

The Colorado River Basin Water Supply and Demand Study (Basin Study) is the latest collaboration between the Department of the Interior's Bureau of Reclamation and the seven Colorado River Basin States of Arizona, California, Colorado, New Mexico, Nevada, Utah and Wyoming. Although this testimony will focus on the perspective of the Lower Division States of Arizona, California and Nevada, the Basin Study is a good example of coordination among all of the Basin States, interested water agencies, and others to collectively address the water supply challenges that the Basin may face in the future.

The Colorado River Board of California was establish in 1937 to protect the interests and rights of the State of California, its agencies, and citizens, in the water and power resources of the Colorado River System. The Colorado River Board of California's member agencies are Palo Verde Irrigation District, Imperial Irrigation District, Coachella Valley Water District, the Metropolitan Water District of Southern California, the Department of Water and Power of the City of Los Angeles, and the San Diego County Water Authority. The Colorado River Board also includes two members of the public and the Directors of the California Water Resources and Fish and Wildlife Departments. California has a normal, annual allocation from the Colorado River of 4.4 million acre-feet of water. Water from the Colorado River is used to irrigate over 700,000 acres of some of the most productive farmland in the country, particularly during the winter. The Colorado River is also a very important component of the water supply for the municipalities in Southern California, which provide water service to around 20 million people.

The Colorado River provides similar benefits within Nevada, providing approximately 90% of the municipal water supply for member agencies of the Southern Nevada Water Authority (SNWA) which include the Cities of Las Vegas, North Las Vegas, and Henderson, as well as Clark County. SNWA has two intakes in Lake Mead at elevations

1,050 and 1,000 feet above sea level; therefore, the future levels of Lake Mead are critical to a continued supply of water for southern Nevada.

The Colorado River is also a vital resource for the State of Arizona. About 39% of Arizona's total water demand is met with Colorado River water. Colorado River water is used to meet municipal, agricultural, industrial and tribal water demands. It is stored underground to provide protection against future droughts and shortages and to conjunctively manage groundwater levels in central Arizona.

The communities that rely on Colorado River water in the Lower Division States are committed to ensuring that they utilize effective water management strategies and continue their ongoing planning efforts to protect and preserve Colorado River resources for many years.

The Colorado River Basin States and the Department of the Interior have worked collaboratively for many years to overcome challenges relating to water allocation and to balance the many interests that exist within the Colorado River Basin. The Basin Study is another example of this successful partnership. The Basin States contributed one-half of the funding to conduct the study and provided extensive background information and technical input during the study. Over a three-year period, the Basin States, individual water agencies, other interested parties and the Bureau of Reclamation worked hand-in-hand to produce the most comprehensive analysis of the Colorado River Basin's prospective water supply and demands to date. This collaborative effort compiled input from interested parties throughout the Basin including environmental organizations, Native American tribes and communities, hydroelectric power and recreational interests, and other federal agencies. The collaboration continues and the ongoing efforts will assist the Colorado River Basin managers in effectively addressing the challenges that lie ahead.

The Story of the Basin Study

The Basin Study is the most recent projection of the potential imbalances between water supply and demands in the Colorado River Basin and adjacent areas of the Basin States that receive Colorado River water. The Basin Study incorporates projections based on an evaluation of the potential effects of climate change on runoff within the Basin that may result in even more uncertainty regarding the potential future conditions the Basin may face. By analyzing four different supply scenarios and six different demand scenarios, the Basin Study projects that without continued proactive water management efforts in place, an overall average imbalance between available water supply and potential demands of 3.2 million acre-feet by 2060, although the range of potential imbalances varied between 0 and almost 8 million acre-feet.

The Basin Study's analysis was not a new concept for the Basin States or the Bureau of Reclamation. Prior studies and analyses also concluded that without development of effective water management strategies to address growing demands for water, an imbalance between available water supply and projected demands could exist. For

decades, communities that rely on Colorado River water have made significant investments to conserve water, reuse water, develop supplemental water resources and construct infrastructure designed to efficiently utilize water. The Basin Study reinforces the continued need to implement programs and policies to address the water management challenges associated with the many competing needs for the river's waters.

Consistent with the ongoing practices and strategies for wise management of the Colorado River's resources, the Basin Study identified a broad range of options and strategies to address projected imbalances between supply and demands. The suggestions were gathered from hundreds of perspectives, including the general public. The Basin Study categorized the proposed options and strategies according to whether they were aimed at reducing demands, increasing supplies, or modifying existing operations. All of the recommended options and strategies will require additional review and analysis before any of them can be implemented. None of the recommended options, on their own, would be sufficient to address the projected imbalances, but by grouping options and ideas together and analyzing the effects of combined efforts, a future scenario that maintains the balance between potential future supplies and demands is possible.

The technical team that conducted the Basin Study should be complimented for their competent and professional approach to completing the Basin Study's Technical Reports. The technical work will continue to be essential as the Basin's water managers, agencies, businesses and individuals that rely on the Colorado River, progress forward. The Basin Study is an excellent example of a successful collaborative effort between the Federal Government and the Basin States that builds upon prior successful cooperation and hopefully will lead to successful continued coordination for decades to come. In this regard, the Colorado River Basin can be a model for other complex river systems.

Continued Efforts to Address the Projected Imbalance Between Supply and Demands

For more than 20 years, the Colorado River Basin States have been working with the Department of the Interior on ways to better manage the water supplies within the Colorado River Basin. The completion of the Basin Study in December 2012 was another step in the right direction. Since December, the Basin States and Interior have been collaborating with other interested participants to map out the next stages of cooperation. The Basin Study identifies several areas of potential future actions and the Basin States and the Bureau of Reclamation are working to implement each of the Basin Study's recommendations. To evaluate some of these future actions, three workgroups have been formed. The Municipal and Industrial Conservation and Reuse workgroup will evaluate existing programs to refine the estimate of potential water saved through conservation and reuse programs. The Agricultural Conservation and Transfers Workgroup will refine the estimated potential savings from agricultural conservation and transfers. The Healthy Flows workgroup will evaluate potential model improvements for simulating river flows and evaluate certain river reaches.

In conjunction with the release of the Basin Study, the Basin States released a statement confirming their ongoing commitments to future actions. Acknowledging the highly

variable nature of the Colorado River system and recognizing that no single solution will be sufficient to meet the future potential water demand and supply imbalances, the Basin States identified a series of local, regional and basin-wide projects that are underway or can be implemented to help meet future demands for water within the Basin. The Basin States confirmed the need to adhere to the "Law of the River", which has served the Basin well for over 90 years and has evolved to meet ever present challenges.

The Basin States recognize that successful ongoing water conservation and reuse efforts have been adopted by many municipal agencies in each State to reduce growing needs for water. In many areas, the per capita use of water is lower now than in the past despite higher populations. Municipalities within the Basin will continue to implement water conservation and reuse opportunities, and are working closely with the other members of the Basin Study's Municipal and Industrial Conservation and Reuse Workgroup to refine the Basin Study's assumptions.

Similarly, the Basin Study's Agricultural Conservation and Transfers Workgroup will document the existing conservation and transfers of Colorado River water throughout the Basin. Within California, significant amounts of water will continue to be transferred from agricultural to municipal uses pursuant to existing agreements between specific water users. These types of voluntary agreements are designed to provide mutual benefits to the participating agencies and are important tools available to help manage finite supplies of water.

Many of the water providers within the Lower Division States already have been very proactive in meeting existing water supply needs through wise management of the Colorado River's resources, and also have developed additional sources of water, recognizing that developing a balanced portfolio of water supply is a sound water management practice. California's municipal water providers serve close to 20 million of the more than 30 million people who receive at least part of their water supply from the Colorado River. California's municipal conservation efforts include conservation, water recycling and reuse and development of local groundwater resources to supplement water supplies. The Metropolitan Water District of Southern California's 2013 Annual Progress Report to the California State Legislature documents the agency's achievements in conservation, recycling and groundwater recharge. In Nevada, between 2002 and 2012, the Southern Nevada Water Authority's consumption of Colorado River water decreased by approximately 29 billion gallons, despite the addition of 400,000 residents. SNWA has implemented a broad range of education and incentive programs to encourage ongoing water conservation. Arizona has also developed programs to encourage efficient agricultural, industrial and residential water uses and has an extensive groundwater management system in place to try to balance the surface and groundwater uses in Active Management Areas that include the largest population centers of the state.

Water delivery contractors within the Lower Division States, such as the Southern Nevada Water Authority, the Metropolitan Water District of Southern California, and the Central Arizona Water Conservation District are allowed to bank portions of their conserved water supplies and have jointly funded projects to help increase the water

resources within the Basin. These States have developed proactive water management agreements regarding how to allocate surplus water when it is available under certain conditions and how to address shortage conditions if the water supply levels deteriorate. On a basin-wide level, all seven Basin States have agreed to coordinated operating guidelines that the Bureau of Reclamation uses to manage releases of water from Lake Powell to the Lower Basin. These types of agreements have set the stage for the continued cooperation that exists today.

The Basin States have also been working to develop basin-wide programs to support weather modification and vegetation management options, and have committed to evaluate additional water supply augmentation options such as large-scale desalination and importation projects that will require extensive planning and research prior to being considered for implementation. The Basin Study's "next steps" outline describes the ongoing commitments of the Basin States to lead efforts to explore additional water banking, water supply augmentation and watershed management options to address short-term and long-term needs for water.

The Basin States will also continue their efforts to assist in implementation of the International Boundary and Water Commission's Minute No. 319 to the 1944 Treaty for the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande between the United States and Mexico. Executed in November 2012, Minute No. 319 extends some of the water management flexibilities developed within the United States, such as water banking, to the context of the United States' Colorado River water delivery obligations to Mexico. Collaboration with federal, state, and local representatives in Mexico resulted in the development of this mutually beneficial agreement. Continuing to build off the success of Minute No. 319 would result in additional basin-wide benefits.

The collective management efforts among the Basin States, water agencies and the Federal Government have kept the water levels higher in Lake Mead than they otherwise would have been, despite having endured over 10 years of drought. In light of the looming possibility of continued drought and the Basin Study's recent projections of potential supply and demand imbalances, it is more important than ever that we continue to roll up our sleeves and work together to find creative, implementable solutions.

The Role of Congress

The SECURE Water Act, Subtitle F of P.L. 111-11, provided general authority for the Basin Study and provides continued authority for the federal agencies to work with State and local entities to plan for the future and develop water sustainability strategies. Ongoing Congressional support for funding for the Bureau of Reclamation's Water SMART and Title XVI Water Reclamation and Reuse programs would help continue the beneficial cooperation that currently exists within the Basin. The Water SMART programs are cost-shared by the non-federal participants and provide assistance to local water management entities that are attempting to conserve water and maximize water use efficiency. Investments in existing water supply infrastructure to ensure that the operation of existing facilities can be as efficient and secure as possible and continued

funding for water efficiency and conservation programs that are matched by or enhance the ongoing efforts at the state and local levels are helpful tools that should continue.

Conclusion

The Colorado River Basin States recognize that we are part of a complex community that relies on a vitally important shared natural resource and involves diverse areas of responsibility. The impacts of continued drought are being felt by all of the varied users of water within the Basin States. The Basin States plan to continue our successful collaborations, including the recent successes with Mexico, to develop tools and strategies to enable us to address ongoing challenges and meet the evolving demands on the Colorado River. The Basin Study's technical foundation will help support that process.

Thank you for the opportunity to provide testimony on this important topic.