TESTIMONY OF

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ENERGY AND NATURAL RESOURCES COMMITTEE
UNITED STATES SENATE

FULL COMMITTEE HEARING TO EXAMINE
THE 2018 WESTERN WATER SUPPLY OUTLOOK AND BILLS RELATED TO WATER INFRASTRUCTURE AND DROUGHT RESILIENCY

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Chairman Murkowski, Ranking Member Cantwell, and members of the Committee, for the record my name is Derek Sandison and I serve as Director of the Washington State Department of Agriculture. However, prior to serving in my current role, I was the Director of the State of Washington's Office of Columbia River. In that capacity, I was responsible for managing water supply development in the eastern half of our state including the projects that I will discuss in my testimony.

Unlike the western part of our state where clouds and rain are iconic, much of the state east of the Cascade Mountain crest has a semi-arid climate. In some areas, total annual water equivalent precipitation in inches is in single digits. Thus, mountain snowpack and flows in the Columbia-Snake River system provide the bulk of the water needed to support agriculture, our communities, and aquatic life. Water is vital to our economy and our quality of life.

Washington's agricultural industry is the second largest contributor to our state's economy and represents a significant component of our agricultural industry nationally. Our 36,500 farms produce over 300 different crops and commodities. We lead the nation or are second in the nation in the production of numerous crops including apples, pears, cherries, raspberries, wine grapes, and potatoes. The farm gate value of our agricultural products is about $10.7 million per year and we export $6.8 billion of food and agricultural products, primarily to Pacific Rim countries.

Washington State has 7.3 million acres of active cropland, 96% percent of which is in eastern Washington. A little over 2 million acres of eastern Washington cropland require irrigation, including 675,000 acres in the Bureau of Reclamation's Columbia Basin Project and roughly 500,000 acres in our Yakima Valley.

In the past few decades, two persistent water supply issues have adversely affected agricultural production in eastern Washington: declining aquifers, most notably in a portion of the Columbia Basin referred to as the Odessa Subarea, and frequent drought, particularly in snowpack dependent agricultural areas such as the Yakima Valley. In 2006, the Washington State Legislature passed landmark legislation to address water supply issues known as the Columbia River Water Supply Management Act, or alternatively as the Columbia River Water Supply

Development Act. That act directed the Washington State Department of Ecology to "aggressively pursue" development of new water supplies for both instream and out-of-stream uses and provided a specific formula for new water developed with the $200 million in state funding made available to support the act, one-third for instream use and two-thirds for out-of-stream use. Regarding the latter, the Department of Ecology was directed to focus on the following needs:

- Finding alternative water supplies for irrigators to address declining aquifers in the Odessa Subarea;
- Develop water supplies to allow processing of pending water right applications;
- Create a new uninterruptible supply of water for the holders of interruptible water rights on the Columbia River mainstem: and
- Develop water for meeting future municipal, domestic, industrial, and irrigation water needs within the Columbia River basin.

Between 2006 and present, the Office of Columbia River (OCR), the entity created within the Department of Ecology to implement the Columbia River legislation, has created nearly 400,000 acre-feet of additional water supply for instream and out-of-stream uses through 20 different projects with an average cost of about $500 per acre-foot. A number of factors contributed to the success of the water supply development efforts including coordinated project permitting processes and strong stakeholder involvement. Although not a provision of the legislation, OCR created and consulted frequently with a Columbia River Policy Advisory Group (PAG) made up of federal agencies, state agencies, Tribes, irrigation districts, conservation groups and county commissioners. The PAG helped OCR shape water development policies, prioritize projects, achieve geographic equity, and ensure balance between instream and out-of-stream water supply efforts and between tributary and mainstem investments.

As previously noted, finding alternative water supplies for irrigators to address declining aquifers in the Odessa Subarea was an area of focus identified by the state legislature. OCR recognized the seriousness of the groundwater depletion problem in the Odessa Subarea and immediately embarked on four-interrelated projects to provide for replacement of the declining groundwater sources in order to prevent collapse of a major portion of the regional agricultural economy. The Odessa Ground Water Replacement Program was made possible by the strong, positive relationship between the Bureau of Reclamation (Reclamation) and OCR. The program focused efforts on portions of the Odessa Subarea that lie within the boundaries of the Bureau of Reclamation's Columbia Basin Project, the area with the greatest concentration of wells pumping under permanent state groundwater rights and the only portion of the Odessa Subarea where there was a reasonable likelihood of securing replacement water (i.e., federal Columbia Basin Project water). Reclamation and OCR were co-lead agencies for the National Environmental Policy Act (NEPA) and State Environmental Policy Act documents that were prepared for the project and jointly provided design and oversight services.

As a result of the project and through reoperation of Reclamation's Lake Roosevelt and Banks Lake reservoirs, OCR was able to issue 189,000 acre feet of additional water rights to Reclamation and created another 30,000 acre-feet of conserved water to replace declining ground water on almost 90,000 acres of farm land. In addition, much of Reclamation's East Low Canal has been widened to accommodate delivery of the water to area farms. Collectively, about $172

million have been spent on the Ground Water Replacement Project of which $98 million has been provided by OCR, $58 million provided by Reclamation, and $16 million through local bonds. Full completion of the project will require approximately another 10 years. Additional federal investments are being sought to support completion.

While the Odessa project focused on agricultural water supplies, water development in the Yakima River Basin is subsumed within a larger set of water and aquatic resource objectives. The Yakima River basin is an approximately 6,000 square mile drainage basin in south central Washington. It supports a population of about 360,000 people and is home to the Yakama Nation. Yakima River basin agriculture contributes over $3 billion annually to the economy of the state of Washington. In addition, historically, the basin was the second largest producer of salmon and steelhead runs in the entire Columbia River system.

Since 1905, when the state granted rights for all unappropriated surface water in the basin to Reclamation, river operations have been managed by Reclamation. Reclamation operates five existing reservoirs with a total capacity of about 1,000,000 acre-feet, which is about one-third of the annual runoff in the basin. The basin is heavily dependent on east-slope Cascade Range snowpack to supply water to the semi-arid lower basin during the summer months.

The surface water resources of the basin are overappropriated, and a state court adjudication of those water rights has been ongoing since 1977. The state closed the basin to additional ground water rights in the 1990s. Frequent droughts over the past several decades have demonstrated the vulnerability of the basin's water supplies. During droughts in 2001 and 2005, the irrigation districts served by Reclamation, referred to as the "proratable" irrigation districts, received only about 40 percent of their water supply.

Instream flows and aquatic resources of the basin have also suffered. Runs of salmon and steelhead that once numbered at least 800,000 fish declined to about 8,000 fish by the 1980's. Sockeye, Coho, and summer Chinook salmon have all been extirpated; although efforts are underway, led by the Yakama Nation, to reintroduce new stocks of those species. The basin's steelhead and bull trout are Endangered Species Act listed threatened species.

Water supply shortages coupled with severe reductions or elimination of major salmon and steelhead runs made the need for drastic improvements to water resources and aquatic resources of the Yakima River basin imperative. Thus, since 2009, OCR and Reclamation have been collaborating with the Yakama Nation and basin stakeholders to formulate and implement a comprehensive strategy to address critical resource needs. The collaboration is focused on expanding the work of the 1979 federal Yakima River Basin Water Enhancement Project (YRBWEP) and the 1994 Congressional Amendments that created YRBWEP Phase 2. The comprehensive strategy took shape in mid-2011 when consensus was reached on the Yakima River Basin Integrated Water Resource Management Plan (Integrated Plan). The Integrated Plan is being proposed as Phase 3 of YRBWEP and was the subject of recent legislation that originated in this committee. To date, the State of Washington has invested well over $200 million in the implementation of the Integrated Plan.

The Integrated Plan proposes major ecological restoration of the Yakima River basin. Fish passage facilities are being constructed at in-basin reservoirs to provide salmon and steelhead

access to upper basin spawning and rearing areas that have been blocked for a nearly a century. Substantial mainstem and tributary habitat enhancements are occurring.

The Integrated Plan also includes substantial improvements in water supply. Barriers to sales and transfers of water between willing buyers and willing sellers are being removed. Municipal and agricultural conservation efforts are being enhanced. In addition, studies are underway to better understand the potential role of aquifer storage in providing passive recharge to the mainstem of the Yakima River in targeted locations.

However, the objectives of the Integrated Plan cannot be met without significant improvements in surface water storage. Ultimately, development of an additional 450,000 acre-feet of water storage capacity, in the form of modified and new surface storage facilities, will be needed to provide:

- Drought relief to existing irrigators in the basin,
- Water supply security for our municipalities and resources to meet their future needs, and
- Adequate water for fish outmigration and pulse flows in all years.

Conservation is often suggested as a substitute for water storage; however, there are severe limitations to the role of conservation as a source of out-of-stream water supply. Additionally, the amount of conservation savings that could be captured through conservation is greatly reduced under drought conditions, because, simply put, you can't conserve water that doesn't exist.

In closing, I want to emphasize that the success we have achieved in water resource development in Washington would not have been possible without the state being willing to invest in projects, without our strong partnership with Reclamation, and without the active collaboration between Tribes, agencies, irrigation entities, local governments, conservation groups, and other stakeholders.

Thank you for the opportunity to testify. That concludes my remarks.