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**Testimony Before the Subcommittee on Water, Power and Oceans
Committee on Natural Resources
United States House of Representatives**

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Water Supply Uncertainty in California”**

Chairman Fleming, Ranking Member Huffman, and Members of the Subcommittee, thank you for the opportunity to appear before you today.

Introduction

My name is Jeff Sutton, and I am the General Manager of the Tehama-Colusa Canal Authority (TCCA), a Joint Powers Authority comprised of seventeen (17) Water Districts, all of whom are Central Valley Project (CVP) Water Service Contractors.

The 150,000 acre service area that the TCCA serves spans four counties (Tehama, Glenn, Colusa, and Yolo Counties) along the West side of the Sacramento Valley, providing irrigation water to a diverse agricultural landscape and over 1,000 family farms that produce a variety of crops, including almonds, pistachios, walnuts, olives, grapes, prunes, rice, tomatoes, sunflowers, melons, vine seeds, alfalfa, and irrigated pasture. The water provided to these lands results in an annual regional economic benefit of over \$1 billion.

The TCCA diverts water from the Sacramento River through the recently constructed Red Bluff Fish Passage Improvement Project, a quarter mile long, positive barrier, flat plate fish screen (one of the largest of its kind in the world), and new pumping plant, that provided for the retirement of the operation of the Red Bluff Diversion Dam, and the elimination of the fishery impacts associated therewith. This Project, implemented in partnership with the United States Bureau of Reclamation (USBR) created the capacity for reliable diversions of irrigation within the TCCA service area while also providing for unimpeded fish passage to prime spawning habitat on the upper Sacramento River for several threatened and endangered species (Winter and Spring Run Chinook Salmon, Steelhead, and Green Sturgeon). Included in the project is a 20+ acre mitigation site that includes extensive riparian habitat and a shallow side channel off the main stem of the Sacramento River designed specifically to benefit juvenile salmonid rearing habitat. The Red Bluff Fish Passage Project was recognized with the Association of California Water Agencies Clair Hill award for water project of the year, and the large water project of the year award from the district and western regional divisions of the American Society of Civil Engineers.

The California Drought

From 2012-2015, California suffered greatly as a result of severe drought conditions. This prolonged dry period pushed the California water supply system to the breaking point at a time when it was already vulnerable due to a variety of factors including: continued population growth coupled with a lack of corresponding investment in new water infrastructure; and, most impactful, an increasingly burdensome regulatory environment that has continued to erode the supply side of the equation, reducing the flexibility, reliability, and operational viability of both the Central Valley Project and the State Water Project. As a result, severe and lasting impacts have been felt in all sectors during this drought crisis -- urban, environmental, and agricultural.

In 2014 and 2015, for the first time in the history of the TCCA service area, all 17 water districts and 150,000 acres of prime farmland received an allocation of zero percent pursuant to their CVP water contracts. This resulted in extensive fallowing of farms (estimated at approximately

70,000 acres). In order to survive, TCCA growers resorted to the only alternative available to them. Paying others to fallow their fields, at great near-term expense in order to avoid the long-term economic catastrophe that would occur with the loss of permanent orchard crops.

These impacts have reverberated throughout our communities, and are not merely being felt by the farmers who have had to forego the planting of their fields. This crisis has also caused secondary impacts to agricultural based inputs (such as fuel companies, tractor companies, parts stores, fertilizer and seed companies, dryers, mills, and the local labor force), and tertiary impacts to other local businesses (stores, restaurants, auto dealers, etc.), as well as greatly affected local municipal services.

This historic lack of water supply has been felt throughout the CVP service area, with the Friant Water Authority and San Luis Delta Mendota Water Authority water districts also receiving a zero percent allocation in 2014 and 2015. That represents well over 2 million acres, of some of the most productive farmland in the world, receiving not a drop of surface water from the CVP. In these rural counties, these farms are the factories that fuel our economy. Without the water necessary to fuel this engine, it all comes to a screeching halt.

While the extremely dry period of hydrology currently being experienced in California has greatly contributed to the dire situation, regulatory actions, based on questionable science that have failed to provided the stated intentions of improving the fishery and environmental conditions, have frustrated efforts to effectively manage our water resources in an effective and efficient manner.

During similar California dry periods in 1977, and the drought experienced from the late 80s through the early 90s, while challenging, did not present the same desperation and impacts that are being felt today. During those experiences, reduced allocations occurred, but we were able to receive deliveries of 25%-60% of the water to CVP agricultural water service contractors. Water storage projects were built to serve as our savings accounts during times of drought, a dynamic that had served us well. However reduced flexibility, lack of investment, and the repurposing of

these resources for environmental purposes threaten the continued viability of our water supply system.

What has changed? First, legislative mandates and regulatory actions have resulted in lost water supply yield and reduced operational flexibility for our existing facilities. Second, permitting hurdles and a lack of coordination have prevented new projects from being realized.

Specifically, actions taken pursuant to the Central Valley Project Improvement Act, the USFWS and NMFS Endangered Species Act biological opinions related to the operations of the CVP, the Clean Water Act, and the Trinity Record of Decision have collectively impacted the deliveries of the CVP and the State Water Project (two of the largest water supply projects in the United States) by millions of acre feet.

When combined, an absence of coordination coupled with regulatory hurdles have prevented any significant investment in new statewide water storage in California since the 70's, during which time the population of the state has more than doubled. In short, while the demand for water has increased, our tools to manage and supply this vital resource have eroded. This is a recipe for disaster, and has resulted in impacts to California communities, agriculture, and the environment.

2016, A Hope for Relief

During the winter of 2016 significant rains in Northern California relieved drought conditions at CVP and SWP facilities. For example, Shasta, Oroville, and Folsom reservoirs, all of which had been reduced to historic lows in the previous drought years, filled to over 100% of their historical capacity. The Sacramento, Yuba, and Feather River systems, as well as many of their tributaries, ran high throughout much of the winter and well into the spring, resulting in surplus conditions in the Bay Delta. Shasta's recovery, in particular, was a welcomed relief to the CVP, climbing from a low point of 1.3 million acre feet (AF) (which was at 1.0 million AF in 2014) to peaking at over 4.2 million AF (with a capacity of 4.5 million AF). A significant improvement compared to the previous years, where the high water marks were 2.4 million AF and 2.7 million AF.

Further, the winter of 2016 provided a significantly increased and welcomed snow pack from previous years, as well as served to greatly benefit the regional aquifers that had been greatly exercised throughout the previous dry years. While the rumored “Godzilla El Nino” did not show up in full force, failing to provide complete recovery for all of California from the previous four dry years, it did significantly and substantially improve hydrologic conditions throughout the state, foretelling of an anticipated reprieve from the draconian water reductions and mandated conservation measures that befell California water agencies the previous two years.

On April 1st of 2016, the good news became official for TCCA water users and others, an allocation announcement from USBR of 100% for TCCA water users and other north of the Delta agricultural water service contractors, the Sacramento River Settlement Contractors, the San Joaquin Exchange Contractors, and for CVP M & I water users.

Friant water users did not see the same increases due to less recovery on the East side of the San Joaquin Valley, but did see significantly increased water allocations and it appeared would not have to fear a call on their water as a result of the inability to pump sufficient water to meet the contract terms for the Exchange Contractors, who have senior water rights on the San Joaquin River.

Due to regulatory conditions that greatly reduced USBR’s ability to pump from the Delta throughout the winter and spring, despite the incredibly significant flows being experienced, the SLDMWA contractors continued to experience severe cutbacks, but did receive an allocation of 5%, with hope that circumstances could improve as the water year went on. This was a slight improvement over the previous two years that were zero percent. Unfortunately, hundreds of thousands of acre feet of water were lost to the project as a result of the Biological Opinions that prevented water from being pumped and stored to provide some desperately needed relief to the farms and refuges on the west side of the San Joaquin Valley. This lost opportunity places further burden on the upstream reservoirs later in the year due to the inability to operate the CVP as planned. The Delta facilities allow for pumping to capitalize on the winter and spring flows below Shasta, and that accrue to the Delta, to be stored in San Luis Reservoir. This lost

opportunity, due to regulatory constraints, continues to impair the ability to operate the CVP as designed, causing significant impacts throughout an integrated system.

FWS and NMFS Proposals

Shortly thereafter, the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) proposed actions mandating mutually exclusive prescriptions that I believe posed a significant threat to the 2016 water operations plan of the CVP and its contractors.

The USFWS called for increased summer outflow that would require the release from upstream reservoirs of up to 300,000 AF of water for the stated purpose of improving smelt habitat. To my knowledge, summer outflow had never been considered as an action to benefit smelt and it is not a requirement pursuant to either of the last two intensive efforts to produce an ESA Biological Opinion for Delta smelt conducted by the USFWS. Further, the proposal failed to provide substantial scientific justification to merit what appeared to be little more than a high-risk gamble lacking an identifiable reward. The proposal also lacked adequate mechanisms to measure the outcomes of summer outflows giving rise to concerns that those proposing them might do so again in subsequent years regardless of the fact the potential benefits to the smelt could be non-existent while the negative impacts to those relying on the water being re-distributed would be certain. Additionally, the summer outflows were proposed well after the opportunity to acquire the needed quantities of water to achieve them had passed. There was no identification of funds to implement the action and it was implemented with complete disregard and lack of analysis to the impacts such an action would place on water users, refuges, other fish and wildlife and needs. Further, it ignored the impacts associated with repurposing this federal funding that had been dedicated to other important environmental purposes.

Simultaneously, NMFS called for planned releases out of Shasta Reservoir to be reduced down to 8,000 cfs (significantly less than the temperature plan had called, up to 2,500 cfs less during peak demand periods in July) throughout the entire summer under claims that this was required to provide sufficient cold water throughout the season for endangered winter run Chinook

salmon. NMFS claims mortality in 2014 and 2015 of 95% and 97% of winter run juveniles due to coldwater concerns. This claim is not wholly accurate due to their admitted lack of any monitoring during high flows on the upper Sacramento River at the Red Bluff facilities during high winter flows, the time these fish are most likely to migrate downstream. Further, NMFS proposed this ultra-conservative approach, despite assurances from USBR modeling that they could meet the requested temperature thresholds (that were greater than even called for in the NMFS BO).

As such, we had one agency calling for increased releases from upstream reservoirs for one species, while another called for severely reduced releases for another species. This, despite the fact that these actions are not included in any peer reviewed regulatory requirement that has been through the prescribed federal process or other analysis in regard to the potential impacts on the environment, the economy, or the health and welfare of the state of California.

The Impacts

The impacts of the NMFS proposed action have already occurred to some degree, despite ultimately an agreement obtained by USBR's valiant efforts to ensure a more balanced interagency process. Throughout the months of May and June, reduced releases caused havoc on Sacramento River operations, resulting in some senior water contractors being shorted water supply, harm to irrigation pumping facilities due to low river elevations, water users having to alternatively pump groundwater wells at increased cost and from overly exercised aquifers due to the recent drought. Further, this has caused reduced ability to pump from the Delta to meet water allocations already announced south of the Delta, potentially resulting in shortages, after farmers had already taken out loans and expended significant funds to plant crops in reliance on receipt of water that was promised.

Had the prescribed operation that NMFS pursued been implemented, it would have led to an array of consequences, including the following:

1. TCCA water users and other North of the Delta water service contractors would likely have been substantially or completely deprived of the 100% allocation they were allocated, well after all their crops had been planted. This would have occurred after the time that they could have pursued water transfers, leaving them with little or no alternatives except to try to pump groundwater, where available, to enable their crops to survive. It is likely that most or all of the \$1 billion of regional annual economic benefit that results from this farming activity would have been substantially lost. Most or all of the annual crops would have been destroyed, including the accompanying habitat benefits provided thereby, that provides significant waterfowl and wildlife habitat, including habitat for the endangered giant garter snake. Worse yet, tens of thousands of permanent crops would likely have been devastated as well. Permanent loss of these investments would have long lasting and deeply felt economic impact to the regional economy. Agricultural businesses and lending institutions would likewise be hard hit.
2. Settlement Contractors with senior water rights likewise would not have been able to divert all of the water that they are contractually entitled to, well after they had already planted and incurred substantial cost. This would have resulted in further significant losses in the Sacramento Valley as described above, and great loss of significant quantities of the primary habitat for a variety of species, including waterfowl and giant garter snake.
3. It is likely that this action would have led to the inability to meet the contractual obligation to the Exchange Contractors as well, resulting in them making a call on the water allocated to the Friant Water Users in Millerton Reservoir. This would cause significant impacts to both of these constituencies.
4. The actions to date still may, and certainly would have if fully implemented, deprived the contractors served by the SLDMWA of the slim 5% water allocation they received and planned for this year.
5. This action would have resulted in severe reductions to the refuge water supply to the detriment of the fish and wildlife, in particular the benefits to the waterfowl dependent on the Pacific Flyway.

6. The actions taken already have increased pressure on Folsom Reservoir, requiring increased releases to make up for the reductions from Shasta. The proposed action, if fully implemented, likely would have placed the American River urban area in another year of panic, as bad, or worse than experienced the past two years.

In summary, the action proposed by NMFS would have had a domino effect throughout the entire CVP, resulting in severe impacts to communities, farms, and other fish and wildlife needs.

Conclusion

The CVP is suffering from a thousand cuts due to inconsistent and unbalanced regulatory requirements. Despite many of the reservoirs being filled in 2016, CVP operations are running on the ragged edge, failing to fulfill the needs of its contractors or the authorized purposes of the Project.

Despite billions of dollars of investment and millions of acre-feet being repurposed to benefit the fishery needs, as prescribed by the fishery agencies, we continue to see a continued decline in fish populations. CVPIA required 800,000 AF of water to be utilized for fishery purposes. The water users have funded the ecosystem restoration fund to provide billions in resources directed by these agencies to assist in fishery recovery. Every major upstream diversion has been fitted with a state of the art fish screen. A temperature control device was added to Shasta Reservoir to benefit salmon. The Biological Opinions have continued to mandate further actions, reducing pumping and adding habitat restoration that have resulted in the rededication of more water to the environment and away from water users. Conditions for fish, according to the actions prescribed by the agencies, have never been better. Despite all of these efforts, the populations continue to decline. A more coordinated, science driven and outcome based approach is needed.

Single species management is not working, as evidenced by the current conflict between the above described smelt and salmon actions. For every action, there is a reaction. We need to pursue a coordinated, holistic, and more all encompassing approach to our problems in order to be successful. Working towards the development of a single NMFS and USFWS Biological Opinion for smelt and salmon would be a good place to start.

California water users are committed to working toward fishery solutions, but not at the expense of their livelihoods and this nation's food supply. The Sacramento River Settlement Contractors have undertaken several actions in an effort improve fishery conditions, actions undertaken at their own volition and at their own expense. South of Delta SWP and CVP contractors have invested hundreds of millions of dollars trying to pursue viable solutions to identify workable solutions to the Delta problems. TCCA is currently partnering to assist on a project to increase food availability to Delta smelt, an action that the NMFS proposal would have prohibited. The Fish Passage Improvement Project at Red Bluff championed by the TCCA is further evidence of our commitment to solving problems.

A more robust process is needed to ensure that proposed regulatory actions are informed by sound science and directed at achieving measureable outcomes. In addition, greater priority should be given to ensure the interagency coordination needed to quantify how potential actions will impact all CVP water users and the environment.

If we do not find a way to work together in a more coordinated fashion that takes into account and respects all water needs, including the needs of our communities, agriculture and the environment, I fear we are headed for a future where both the Delta smelt and agriculture are extinct in California.