



Association of California Water Agencies

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October 10, 2016

The Little Hoover Commission
Chairman Pedro Nava
925 L Street, Suite 805
Sacramento, CA 95814

Dear Chairman Nava:

We appreciate the opportunity to submit written comments to the Little Hoover Commission in advance of the October 27, 2016 second hearing of the Special Districts Study:

Origins and evolution of the Association

ACWA is the largest statewide association of water agencies in the country, representing about 430 public water agencies, including special districts, throughout the state that provide 90 percent of the water delivered to communities, farms and businesses. The Association was formed in 1910 by five irrigation districts seeking to address common needs. First known as the Irrigation Districts Association, members voted in 1973 to change the name to the Association of California Water Agencies to reflect the addition of urban water agencies to the original agricultural water districts.

Membership

ACWA represents a broad base of public agencies including: municipal water districts, irrigation districts, county water agencies, community service districts, flood control districts and others. Our members are on the front lines of service delivery for local communities throughout California.

General principles advocating for sound water policy and the interests of our members

ACWA engages on an array of legislative and regulatory issues to promote a more reliable and sustainable water system. ACWA also works hard to assist its members as they implement local resource programs and respond to challenges such as climate change.

ACWA is actively working to advance the following policy goals:

- Comprehensive solutions to improve water supply reliability for all regions of the state
- Implementation of the Sustainable Groundwater Management Act in a way that is consistent with the California Water Action Plan
- Development of 21st century water storage projects that accomplish the co-equal goals of water supply reliability and ecosystem health
- Protection of our headwaters
- Investment in local resource development programs such as water use efficiency, water recycling, groundwater storage and management, and technologies such as desalination

- Preparing for climate change

ACWA's role within the world of water development, use and politics

ACWA is the leading voice for water policy in the state of California, not only because of its diverse membership, but also for the breadth of the issues the Association engages on. Our governance structure, with both policy and regional committees, gives the Association first-hand, on-the-ground practical knowledge of water policy and infrastructure challenges. Using this knowledge, ACWA works hard on the regulatory and legislative levels to advocate for strengthening California's water system and adopting policies to ensure a healthy water delivery system.

For example, ACWA's advocacy work has been critical during the drought. ACWA members are on the frontlines of the drought, providing tools and outreach to help local communities conserve, and planning for reliable water delivery in the present and future. ACWA has played a key role in developing resources to help its member agencies message conservation to their customers and communicating to state leaders the best approach to developing regulations to achieve the most effective, locally-tailored conservation programs.

Overview of emerging and anticipated climate challenges to the operations of water districts

Climate change could profoundly impact California's water supply picture, but local water agencies are actively working to plan for and adapt to expected changes. Warmer temperatures, changing precipitation and runoff patterns, as well as reduced snowpack and rising sea levels will impact everything from groundwater recharge to future water supply estimates to flood protection and stormwater runoff.

Water agencies have been ahead of the climate change curve for several years. Adapting to climate change is only one of several significant challenges that water agencies have faced in the last decade, including preparing for and coping with the historic drought, incorporating expensive regulatory requirements, planning for California's expanding population, updating aging infrastructure, and complying with ever-changing water quality requirements.

Thanks to years of planning and significant investments in local drought-resilient water supplies and improvements in water use efficiency, California's public water agencies are better prepared for multiyear droughts today than any time in our history. After the drought of the early 1990s, local water agencies spent more than \$20 billion investing in strategies such as water recycling, brackish groundwater desalination and local and regional storage projects that have dramatically improved our ability to stretch supplies, withstand droughts and prepare for the new normal associated with climate change. In addition, water agencies have steadily brought demand down through ongoing water efficiency education and outreach, water use audits, rebates for efficient appliances, and incentives to replace thirsty lawns.

These investments in drought preparedness are a key reason that California's economy has remained relatively unscathed through five years of drought. They are also a key reason that last year's state-

mandated conservation targets have been replaced with locally determined measures based on a “stress test” approach in which many urban water suppliers have certified they are drought-prepared in the event of three more dry years. Water agencies are following a similar model with respect to climate change adaptation. Since the impacts of climate change are likely to vary throughout the state, local agencies are in the best position to determine the combination of planning and investment they need to remain drought-resilient and prepare their facilities and operations for changes on the horizon.

To the naked eye, the effects of climate change may not have been apparent a decade ago when Assembly Bill 32, the California Global Warming Solutions Act, was first signed into law. But its effects are being felt today, primarily in observable changes to rain and snowfall patterns in the Sierra Nevada. The Sierra snowpack, often referred to California’s largest natural reservoir, already shows signs of significant reduction as more winter precipitation falls as rain rather than snow. Models also predict more intense rainfall events, presenting flood protection challenges and impacting the ability of existing surface water reservoirs and groundwater basins to capture and hold water supplies to meet needs with the same effectiveness as they did under past hydrological patterns.

Actions being taken by water districts to assess their climate change vulnerability and adapt

Since the drought of the early 1990s, ACWA’s member agencies have made tremendous strides in diversifying their water supply portfolios to reduce demands for imported water and prepare for multiyear droughts. As a statewide organization, ACWA has taken a strong policy position in support of local resources development including water recycling – indirect and direct potable reuse – conservation, desalination, groundwater recharge, above-ground storage, and targeted water transfers. All of these strategies will need to be utilized into the future and water suppliers are building that future now. For instance, Nevada Irrigation District, serving Nevada, Placer, and Yuba counties, is diversifying its water supply through its Centennial Reservoir Project. This project will allow NID to develop lower elevation storage that can capture rain and snow runoff that it cannot currently capture, providing a local, reliable and safe water supply augmentation. The majority of NID’s water goes to agricultural uses, mostly small farms and ranches. Farmers and ranchers need this additional water storage to continue to sustainably produce local food. This project will use the most advanced science and technology available, including new approaches to wildlife and habitat protection.

Urban water suppliers are required to prepare and submit comprehensive urban water management plans to the Department of Water Resources (DWR) every five years. These plans support long-term resource planning to meet current and future water demands, and must include assessments of the anticipated effects of climate change on water supply reliability. Many water agencies have taken decisive actions to formally assess their local climate change vulnerabilities and implement projects to reduce greenhouse gas emissions, address the water energy nexus, and invest in more resilient water management infrastructure. Since about 2000, water agencies, state and local governments, and water stakeholders have collaborated to prepare and implement integrated regional water management (IRWM) planning programs to identify solutions and maintain water reliability in the face of climate change. Statewide, hundreds of millions of dollars of Proposition 50 and Proposition 84 General

Obligation water bond funds have been leveraged with local funds for IRWMP projects that have contributed to climate change adaptation and bolstered water supply reliability.

ACWA also is working to ensure that climate change is appropriately addressed when the most recent General Obligation Water Bond Proposition 1 funds are allocated. Approved overwhelmingly by California voters in November 2014, Proposition 1 authorized \$7.5 billion in bond funding for investments in water projects and programs including water conservation, recycling, groundwater clean-up, and water storage. Prop. 1 leverages additional local and regional funds to provide a total investment of approximately \$25 billion to address California's water needs. The state agencies tasked with administering the competitive grant and loan programs are developing and finalizing guidelines for soliciting and evaluating project proposals, including consideration of climate change analyses. ACWA is diligently reviewing and submitting comments on many of these guidelines as they are being developed.

As water agency climate assessments are conducted, some indicate the need for immediate actions, even if threats may not become critical for several years. Through frequent evaluations and long-term planning, ACWA member agencies already have invested in a variety of projects to conserve water, reduce dependence on imported suppliers, increase recycled water supply, and provide protection from a rising ocean and inland flooding. For example, to promote water conservation, the Metropolitan Water District of Southern California has invested more than \$450 million over the last two fiscal years at the local level in response to the five-year historic drought. Metropolitan's program included rebates for outdoor turf removal and installation of indoor water-efficient appliances. This conservation program is one of many tools to fight future shortages.

Also in Southern California, San Diego County Water Authority is working to enhance the region's water supply reliability to help meet regional needs for climate adaptation and reduce dependence on imported water supplies that may be impacted by climate change conditions. The SDCWA San Vicente Reservoir raise project completed in 2014 has helped create 100,000 acre-feet of new local capacity to store water during wet years so it will be available during future dry cycles. The Carlsbad Desalination Project, completed in 2015, also adds up to 56,000 acre-feet a year of new, local, drought-resilient supplies to help the region rely less on imported water.

Padre Dam Municipal Water District is one of several California water agencies developing advanced water purification systems to convert wastewater to a reusable potable water supply. Intended to increase the district's drought resiliency and reduce its dependence on imported water, the project will capture treated effluent, purify it to meet public health standards as drinking water, and return it to the local groundwater basin or reservoir. The blended water will be retrieved and treated a final time, then distributed as drinking water. The project is in a pilot phase, with a demonstration plant producing 100,000 gallons of purified water per day. Purification includes free chlorine disinfection, membrane filtration, reverse osmosis and advanced oxidation. Phases I and II are planned to produce 2.2 – 3.5 million gallons daily by 2020, up to 10.5 million gallons daily by 2025. The final cost of drinking water is projected to be competitive with imported water by 2020.

In the face of climate change, balancing demand on the electrical grid is a crucial strategy to avoid excessive peak loads that require burning fossil fuels to boost the supply. The Irvine Ranch Water District, in partnership with Advanced Microgrid Solutions, is implementing a networked system of large Tesla batteries enabling the district to store energy during off-peak hours and use it to supplement its supply during times of peak demand. The 7 MW / 34 MWh network will operate in 11 of the district's facilities, from water treatment plants to high-energy pumping stations, and will allow the district to comply with Demand Response Events – requests from Southern California Edison to reduce demand during excessive peak usage periods – without interrupting water treatment operations. In addition to reducing peak demand, the battery network is expected to reduce the district's carbon footprint and save more than \$500,000 per year.

The Sonoma County Water Agency is another water district utilizing innovation to adapt to climate change. SCWA is working with consulting firm CH2M to prepare a comprehensive climate vulnerability assessment and adaptation plan to create a road map for the water agency to follow as it prepares its facilities and operations for climate change. Over the past several years, SCWA has been actively participating in several climate science efforts in collaboration with various research agencies, including the United States Geologic Survey, Scripps Institute of Oceanography Center for Western Weather and Water Extremes, and the National Oceanic and Atmospheric Administration (NOAA). These efforts have resulted in improved understanding of regional climate threats. Identified risks include increasing temperature, variable precipitation, droughts, flooding, wildfires, and sea-level rise. The plan will address the agency's water supply, flood control and sanitation enterprises. It also will position the agency to be eligible for federal grants related to climate change adaptation. A draft plan is scheduled to be completed in fall 2017.

Overview of the role of infrastructure financing to achieve our level of response to climate change

ACWA's member agencies use a diverse mix of funding to pay for all of these different types of infrastructure, water supply diversification, and water conservation projects. Water agencies utilize their share of the 1 percent ad valorem property tax, ratepayer dollars, dedicated reserve funds, federal monies, state and federal grants, state General Fund, state General Obligation Bonds, and revenue bonds to varying degrees depending upon the type, size, and cost of the project and the district's overall infrastructure plan.

Water agencies engaging in climate change planning must think carefully and thoughtfully about the right combination of funding to achieve a stable and reliable financing portfolio. Smaller projects often use a combination of general fund dollars, state grants, and local ratepayer funds, for example. Bigger projects more likely utilize larger dollar amount General Obligation Bond funds, and designated or obligated reserve funds put aside specifically for new capital construction, including many climate change adaptation projects. Just as a family household puts away money in a savings account to purchase a new automatic dishwasher when the old one breaks, a water agency will set aside funds in a designated reserve fund for a specific project – for instance, a water storage project, which could cost hundreds of millions of dollars. The funding is responsibly and separately saved for future use.

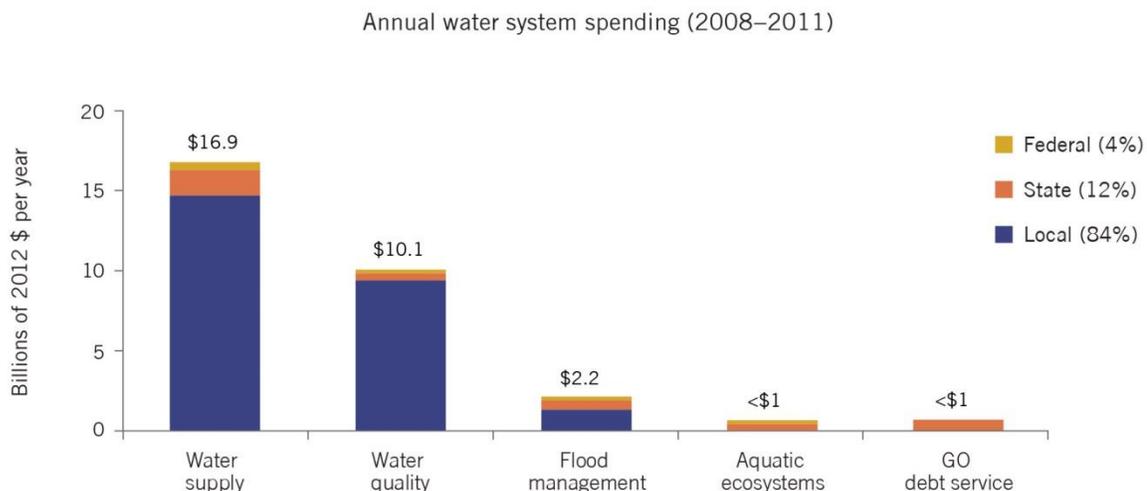
It's instructive to note that water agencies maintain three types of reserves:

- Restricted Funds – These are funds that water agencies are mandated to hold in reserve to satisfy terms of bond covenants, pension plan obligations, and service deposits.
- Obligated Funds – These are funds that agencies have set aside to meet the contractual financial commitments they've entered into for future services and purchases. These include services such as engineering or construction contracts on long-term projects or replacement costs for waterlines in developments for which the agency has entered into service agreements.
- Designated Funds – These are funds that are held in reserve for new capital construction or refurbishment of aging pipes and infrastructure, or for handling emergency repairs or water quality emergencies. These funds are particularly critical to stabilizing customer rates because they help shield customers from sudden, unexpected cost increases.

Most of the money held in reserves by water agencies is legally encumbered to pay bonds, loans, and other commitments. It is set aside "in reserve" to pay ongoing bills, new facilities, repairs, and for emergencies. If water agencies are unable to accumulate reasonable reserves, or if their reserves become depleted, needed repairs won't happen, or will be delayed, new facilities with new technologies won't be built, and there will not be money set aside to cover unexpected emergencies or spikes in operating costs like increases in energy bills. Inadequate reserves leads to lower bond ratings and therefore higher bond costs for water agencies and their customers. Climate change projects are treated the same as any other type of infrastructure project from the water agency's planning perspective.

Water agency customers have indicated that they want their local financial resources, including reserve funds, used to pay for their services locally. In fact, the majority of funding for water in California is derived from the water districts themselves. The Public Policy Institute of California (PPIC) noted in their white paper from last year entitled, *"Successful Water Management Requires Adequate, Reliable Funding"* that "Local revenue, from water and sewer bills to taxes, provides the lion's share at 84 percent. The state (through the general fund and general obligation bonds) contributes 12 percent and the federal government 4 percent" Our member agencies collectively would not have been able to attain, and then maintain, the 84 percent level noted above without methodical planning accompanying appropriate levels of reserve funds.

LOCAL AGENCIES RAISE MOST OF THE MONEY SPENT ON THE WATER SECTOR



SOURCE: E. Hanak et al., *Paying for Water in California* (PPIC, 2014), Table 1.

Reserves, in particular, are a key funding component for water agencies. The ability to maintain reasonable reserves is a critical factor in providing reliable service, mitigating rate increases, and to support an agency's overall financial strength. Reserve levels directly affect an agency's bond rating, and ultimately its ability to access debt markets at favorable interest rates, ensuring the ability to finance and construct the infrastructure necessary to renew existing systems and expand service levels to meet future needs.

Fitch Ratings, one of the big three credit rating agencies designated by the U.S. Securities and Exchange Commission, expressed their opinion that "Highly rated utilities set goals for appropriate financial margins and reserve funding (such as rate stabilization, repair and rehabilitation, and operating reserves) in their *Water and Sewer Revenue Bond Rating Guidelines*, August 2008.

Barriers and challenges for obtaining support to make long-term investments now for uncertain climate threats later

The passage of Proposition 130 in 1990 ushered in a new era of challenges for political support for long-term investments in projects and infrastructure. Prior to state legislative term limits, long-term legislators and their staff were subject matter experts who didn't require convincing that investments needed to be made in infrastructure projects that would come online years in the future. Now, it is more challenging to get legislators to look far into the future when term limits keep them in Sacramento for just six years in the Assembly or eight years in the Senate. (Some members may stay as long as 12 years if they serve in both houses.) These shorter Capitol careers pose challenges in getting elected officials and staff to look out at 40-year timeline horizons. It could take decades to get a large water storage

reservoir built. Some legislators find it easier and more attractive to solve short-term problems with tangible solutions that someone can point to, than tackle longer term projects that won't come online for decades. As the largest association of statewide water agencies in California, ACWA frequently educates newly elected legislators and their personal staffs, along with new policy committee staff, about the long-term needs and realities of water resource planning, including climate change adaptation. That includes not only briefings and meetings, but when possible on-the-ground tours of facilities and operations so that policy makers in Sacramento have a much better understanding of what we need and what it takes to maintain reliable water delivery in California.

How members engage and educate customers in these policy discussions

Many of ACWA's members are taking a proactive role in educating their customers about the impacts of climate change. For example, the Sonoma County Water Agency, in addition to developing its extensive climate assessment plan, also has been working on the regional level within a partnership to develop a climate change online "dashboard." The dashboard integrates locally specific climate change impacts and projections based on data gleaned from various scientific agencies, environmental non-profits and agricultural groups, then displays it on an interactive website. The dashboard allows the public to look at their area and see the specific impacts of climate change now and in the projected future increasing the opportunity to engage water district customers on this issue.

Community outreach and education is a key focus of water agencies in our state. Water agencies strive for inclusive dialog, and work with various stakeholder groups to partner to get the message out to the larger community about relevant water issues such as conservation and climate change,

For example, Sacramento Suburban Water District, in the Sacramento Valley of Northern California, works diligently to promote customer awareness of district activities and programs. As part of that effort, the district schedules Community Outreach Days several times a year at various locations in SSWD's service area. These events provide their customers an opportunity to ask questions and meet with district staff out in their service territory. Conservation materials and educational displays are an integral part of this outreach effort into the community.

In Southern California, San Diego County Water Authority's Citizens' Water Academy is in its third year of operation. The academy is focused on educating future leaders on where their water comes from, how it gets there, and the future challenges of ensuring continued supply. The academy is composed of two weekday classroom sessions and one weekend classroom session as well as facilities tours. There is no tuition, fee, or charge to apply to or attend the academy.

Many other water agencies throughout the state also are creatively reaching out to the communities they serve, informing and educating customers in order to build community support and understanding for the mission of water agencies in California.

Overview of potential regional solutions to continue supply diversification efforts

Water agencies historically have worked cooperatively to manage water supplies and to anticipate climate change. Many water agencies within the same region also have worked collaboratively to manage groundwater basins that share an existing supply.

The North Valley Regional Recycled Water Program, launched by the Del Puerto Water District, is another example of a regional project that will build local supply. The project, when completed, will add up to 59,000 acre-feet a year of new local supply for agricultural water users of DPWD. The project is a collaborative partnership among the Central Valley cities of Modesto, Turlock and Ceres, DPWD and Stanislaus County. It also received some federal and state funding. At build-out, NVRRWP will provide treated recycled water that is conveyed by the cities of Turlock and Modesto to the Delta-Mendota Canal. The water will then be conveyed directly to DPWD for irrigation use. Through an agreement with the U.S. Bureau of Reclamation, the project also will provide supplemental water to some wildlife refuges located south of the Delta. Some local growers have already agreed to purchase the recycled water.

Soquel Creek Water District sits on the California coast in Santa Cruz. This coastal water district serving Capitola and unincorporated Santa Cruz County relies solely on groundwater for its supply. Seawater intrusion exacerbated by climate change threatens the agency's groundwater basin. Less frequent precipitation also has decreased recharge of the basin. By some estimates, groundwater recharge will decrease by 25 percent due to a rainy season that is shortened to two months (Jan-Feb). Soquel Creek is figuring climate change impacts into a groundwater model being developed for the regional Santa Cruz Mid-County Groundwater Basin. The model will have simulations that will evaluate different climate change scenarios to assess the impacts on groundwater, stream flows, and seawater intrusion. Results will refine the size of an advanced water purification project for groundwater replenishment that the agency is developing — estimated to cost between \$50 to \$70 million.

In compliance with the Sustainable Groundwater Management Act (SGMA) of 2014, water agencies across the state are in the process of forming regional partnerships to sustainably manage local groundwater supplies. Passed as a three-bill package, SGMA requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local groundwater basins and adopt locally-based groundwater sustainability plans (GSPs). This landmark legislation provides a framework for water agencies, special districts, cities, and other local authorities to coordinate management of shared groundwater supplies, with a limited role for state intervention only if necessary to protect the shared resource. Many local agencies are on track to form GSAs by the June 30, 2017 deadline; agencies then have until January 31, 2020 and January 31, 2022 to produce GSPs for critically overdrafted basins and high- and medium-priority basins, respectively. Implementation of GSPs will help ensure that California maintains a reliable supply of groundwater as part of a diverse water supply portfolio. The act also promotes regional cooperation by bringing stakeholders together to plan for the sustainability of their groundwater.

Clearly, this testimony reveals that water agencies throughout California are utilizing all the tools in the tool box to meet the present and future water needs of the state. This multi-pronged approach is in sync

with Gov. Jerry Brown's California Water Action Plan, which lays out a comprehensive, statewide plan for California's water future. Through water-use efficiency, targeted storage projects, improved regional self-reliance and other long- and short-term efforts, California will be poised to meet its water challenges – including climate change – now and in the future. We look forward to participating in the second public hearing of the Special Districts Study to highlight the efforts underway and planned for the future by California water agencies to adapt to climate change. On a personal note, we have enjoyed meeting with and getting to know the capable staff who work at the Little Hoover Commission including Executive Director Carole D'Elia, Deputy Executive Director Jim Wasserman, and Research Analyst Matthew Gagnon. We appreciated the collaboration and the chance to convey the work that our member agencies have completed, and plan to complete, to adapt to climate change now and into California's future.

Sincerely,

A handwritten signature in black ink that reads "Wendy Ridderbusch" with a horizontal line extending to the right.

Wendy Ridderbusch
Director of State Legislative Relations
Association of California Water Agencies

Cc: Little Hoover Commission Executive Director Carole D'Elia
Little Hoover Commission Deputy Executive Director Jim Wasserman
Little Hoover Commission Research Analyst Matthew Gagnon