

ASSEMBLY COMMITTEE ON WATER, PARKS AND WILDLIFE

**Friday, January 31, 2014
Kings County Government Center, Board of Supervisors Chambers
1400 W. Lacey Boulevard, Hanford, CA**

INFORMATIONAL HEARING SERIES: THE NEED FOR A 2014 WATER BOND: LOCAL PERSPECTIVES

BACKGROUND

The purpose of this hearing series is to explore the need for a general obligation bond in 2014 to help fund water-related projects and programs and to hear local perspectives on the potential public benefits to communities throughout the state from such a water bond. As the Governor's recent declaration of a drought state of emergency demonstrates, urgent investments are needed to better enable Californians to prepare for future water scarcity.

Today's hearing will focus on the Tulare Lake Hydrologic Region. A "hydrologic region" is the most basic planning unit that the California Department of Water Resources (DWR) uses in the California Water Plan. There are ten hydrologic regions in the State and the map for each one matches the contours of a major watershed, which is an area of land where all of the water that falls on it or flows under it drains to a common set of locations. These locations can be visible, such as streams and rivers, or hidden in groundwater basins. However, both types of local water supplies are generally interconnected. The portfolio of water resources in many areas of California can also include raw water that is imported from other watersheds via canals or tunnels as well as local supplies that are created by recycling wastewater or desalinating brackish water or sea water.

The Tulare Lake Region is part of the great Central Valley, which also includes the Sacramento River Hydrologic Region and the San Joaquin Valley Hydrologic Region. The Central Valley is about 400 miles long, 20 to 70 miles wide, and covers more than 20,000 square miles. The Tulare Lake Region forms its southernmost lobe below the San Joaquin River watershed and above the Tehachapi Mountains. The Region relies on surface water, groundwater, and water imported from the federal Central Valley Project (CVP), operated by the U.S. Bureau of Reclamation (Reclamation), and State Water Project (SWP), operated by the California Department of Water Resources (DWR).

Short History of the 2009 Water Bond

In 2009, former Governor Schwarzenegger convened the Legislature in extraordinary session to take up issues related to protecting and restoring the Delta ecosystem and improving water reliability and management, including addressing water conveyance, storage, conservation and groundwater, and considering a general obligation bond. Subsequently, a historic five-bill

package of water legislation was passed and signed, including SB 2 (Cogdill), Chapter 3, Statutes of the 2009-10 Seventh Extraordinary Session (SBX7 2).

SBX7 2 called for a bond to be placed on the November 2010 ballot that, if approved by the voters, would authorize the issuance of \$11.14 billion in general obligation bonds for a wide range of water projects and programs including water conservation and efficiency, groundwater protection and cleanup, integrated regional water management, ecosystem and watershed protection and restoration, water recycling, and water storage (Water Bond).

Delay and Anomaly

However, in 2010 and again in 2012, supporters of the Water Bond recognized that a sluggish economy coupled with the state's need to focus on its dire budget shortfall meant that delaying the bond vote could increase its chances of success. AB 1265 (Caballero) moved the Water Bond to the 2012 general election and deleted a provision allowing for-profit entities to be members of joint powers authorities for bond-funded surface water storage projects. AB 1422 (Perea) moved the Water Bond to the November 4, 2014 statewide general election but otherwise left the text unchanged. While changing the text of an initiative measure requires a 2/3rds vote of each house, changing the date of an election can be done with only a majority vote. As a result, the Water Bond currently on the ballot is still titled the "Safe, Clean, and Reliable Drinking Water Supply Act of 2012."

Efforts to Reduce and Refocus the Bond

Both houses of the Legislature have engaged in substantial efforts to reanalyze and right-size a bond so that voters can be confident that it addresses California's most pressing water infrastructure and program needs and is accountable.

In the Assembly, Speaker John A. Pérez convened a Water Bond Working Group comprised of members with diverse regional and statewide perspectives and chaired by Assemblymember Anthony Rendon. With a historic level of new members in the Assembly and a high degree of interest in the bond, the Working Group members conducted an extensive series of workshops and meetings among themselves and with their Assembly peers covering the background and composition of the current Water Bond, shifts in priorities that have occurred since it was passed in 2009, and the need to reduce its size and increase its accountability.

The 2013 Assembly Water Bond Working Group process included:

- 5 public hearings (3 in the Assembly; 2 in the Senate)
- 6 legislator briefings on water policy and funding
- Establishment of *Principles* that set priorities and emphasized accountability to the voters
- 3 rounds of public comments, and

- Publishing the *Water Bond Framework* & posting summaries of public comments on the Water, Parks & Wildlife Committee website at <http://awpw.assembly.ca.gov/waterbond>

Those efforts resulted in a public hearing in July of 2013 to present and receive comment on a set of Water Bond "principles" and another public hearing in August of 2013 to present and receive comment on a more specific "framework" for a revised water bond language. The Framework was then incorporated into AB 1331 (Rendon) and in October 2013 Assemblymember Rendon, Chair of the Water, Parks & Wildlife Committee, began this series of Water Bond Informational Hearings to gain local perspectives from different areas of the State on the need for a water bond in 2014 and the best way to make such a bond effective and accountable.

AB 1331, the *Clean and Safe Drinking Water Act of 2014*, repeals the existing bond and places a \$6.5 billion bond on the November 4, 2014 ballot that is better tailored to current water management challenges.¹ Specifically, the \$6.5 Billion Assembly Water Bond proposal includes:

- \$1 Billion for maintaining and improving Drinking Water Quality
- \$1.5 Billion for protecting Rivers & Watersheds
- \$1.5 Billion to fund integrated regional water management that will improve water delivery and help regions reduce the impact of climate change on water supply.
- \$1 Billion to protecting The California Delta that is critical to the state water supply system and a key ecological resource.
- \$1.5 Billion for Water Storage projects that will also reduce the impact of climate change on clean, reliable and affordable water supply.²

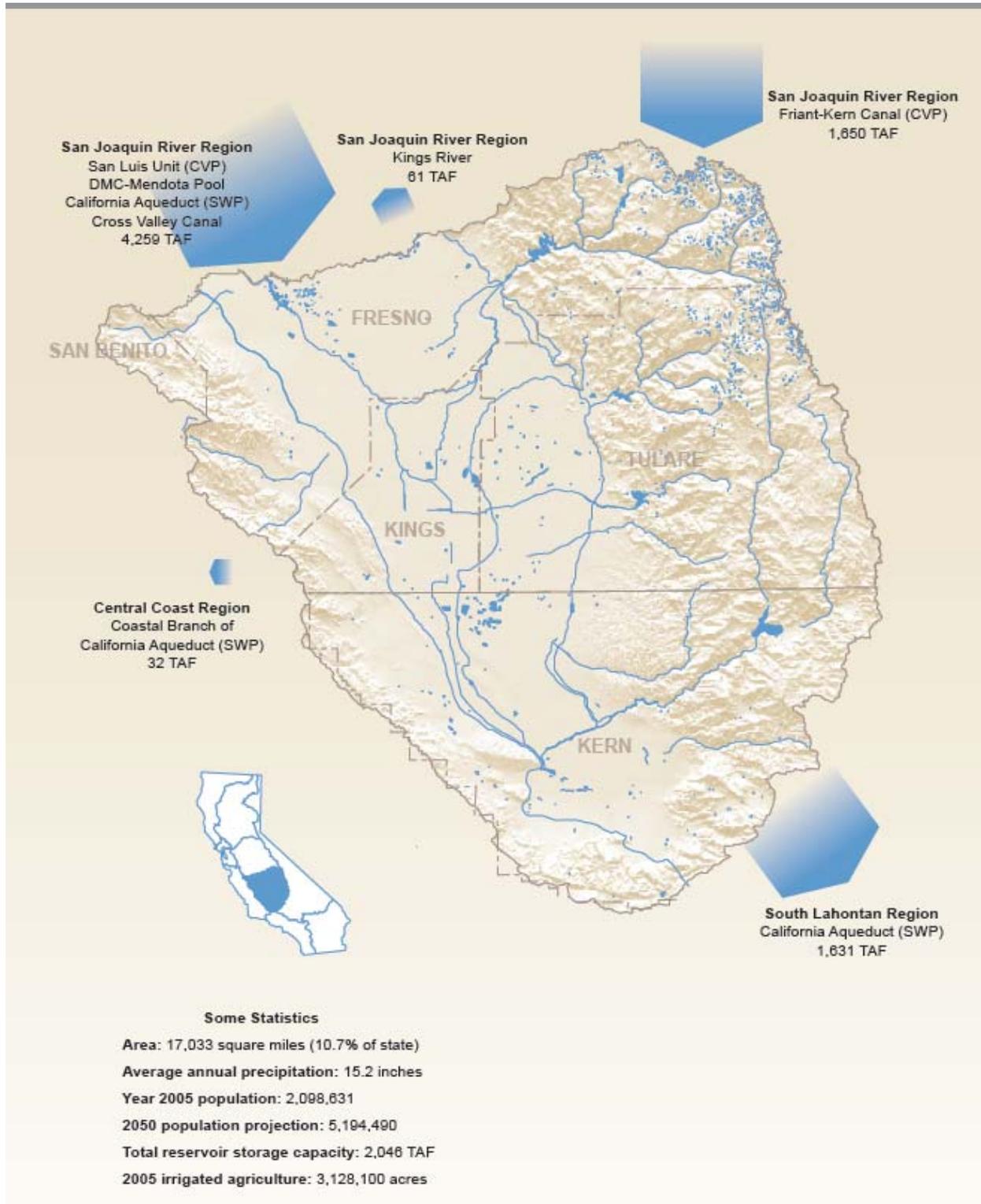
Meanwhile, the Senate has also actively sought to educate members of the Legislature and the public on a need to refocus and reduce the Water Bond by holding a series of four informational hearings during 2013.³ When session recommenced in January, the Senate had two bond measures, SB 40 (Pavley) and SB 42 (Wolk) that were still in their house of origin. But on January 9, 2014 a third measure was introduced, SB 848 (Wolk). SB 848 is not subject to the same Legislative deadlines that SB 40 and SB 42 were and appears to now be the primary Senate Water Bond vehicle. SB 848 contains virtually the same language as SB 42 and like AB 1331 awaits hearing in SNRW. SB 848, the *Safe Drinking Water, Water Quality, and Flood Protection Act of 2014*, would repeal the existing bond and place an entirely new \$6.475 billion measure on the November 2014 ballot.

¹ Specific bills, including AB 1331 and SB 848 may be reviewed and tracked through the California Legislative Information web site maintained by the Office of Legislative Counsel at: <http://leginfo.legislature.ca.gov/>.

² Information on the Assembly water bond process, including links to comment letters on the Assembly Working Group Framework, can be found at: <http://awpw.assembly.ca.gov/waterbond> .

³ Information on the Senate Water Bond Oversight Hearings can be found at: <http://sntr.senate.ca.gov/informationaloversighthearings> .

Tulare Lake Region



Courtesy of the California Water Plan (2009)

The Tulare Lake Region, as defined by the California Water Plan, is bounded on the north by the San Joaquin River watershed, on the south by the Tehachapi Mountains, on the west by the Temblor Range, on the east by the Sierra Nevada crest. The Tulare Lake Region is part of the San Joaquin Valley which, according to the U.S. Geological Survey (USGS) receives, on average, less than 5 inches of rainfall in the southernmost portion and up to 15 inches in the north. Although an arid to semi-arid climate, the Region includes all or part of California's top three agricultural counties – Tulare, Kern, and Fresno – as well as Kings County which is in the top 10. Leading commodities in the Region include, but are not limited to, almonds, cattle, corn, cotton, grapes, milk, oranges, pistachios, poultry, and tomatoes.

Regional Issues

The economic development of the Tulare Lake Region is closely linked to the surface water and groundwater resources. According to the California Water Plan, agricultural production has been a regional mainstay since the late 1800s and includes a wide variety of crops grown on about 3 million irrigated acres. However, in the last few decades other economic sectors, particularly the service sector, have been growing. As shown by the diagram on the preceding page, the Tulare Lake Region relies on imported water for much of its supplies, including water from both the CVP and SWP, although it is also heavily dependent on groundwater.

Groundwater Supply

DWR's seminal report *California's Groundwater* (also known as Bulletin 118, last updated in 2003) recognized 19 alluvial groundwater basins and subbasins in the Tulare Lake Region underlying approximately 8,400 square miles or 50 percent of the area. According to the most recent draft of the California Water Plan (Bulletin 160), pumping from the alluvial aquifers in the region accounts for about 38 percent of California's total average annual groundwater extraction. The most heavily used groundwater basins in the region include six of the seven subbasins within the southern San Joaquin Valley groundwater basin – Kings, Westside, Kaweah, Tulare Lake, Tule, and Kern County. According to the USGS, the Tulare Basin is the deepest part of the Central Valley aquifer and, together with the San Joaquin Valley, is the area where the most drastic decreases in groundwater levels have taken place. It also takes the longest amount of time to recharge, which means for surface water to percolate down and replenish it.

As previously noted, Governor Brown declared a drought state of emergency in California on January 17, 2014. The Governor's declaration comes on the heels of three dry years in a row and is the second time in five years that a California Governor has declared a drought state of emergency. In December 2009, following the state's last prolonged drought, data from the National Aeronautics and Space Administration (NASA)/German Aerospace Center Gravity Recovery and Climate Experiment (Grace) satellites revealed that between 2003 and 2009 the aquifers for the Central Valley and its major mountain water source, the Sierra Nevada, had lost almost 26 million acre-feet of water⁴ – which is nearly enough water combined to fill Lake Mead, America's largest reservoir. The findings reflected the effects of California's extended

⁴ An acre-foot is a standard measurement of water volume. It is enough water to cover an acre of land a foot deep or about 325,900 gallons.

drought and the resulting increased rates of groundwater being pumped for human uses, such as irrigation.

Overdraft in California today is estimated to occur in parts of the Central Valley, especially the Tulare Lake Basin, but also in some coastal and southern California basins with limited surface water supplies and intensive agriculture. While some overdraft reverses temporarily during wet periods, DWR estimates that California is overdrafting its groundwater at a rate of 1.5 million acre-feet per year. However, NASA estimates groundwater overdraft in California may be close to 4.4 million acre-feet per year statewide.

Groundwater Management

There are three basic methods available for managing groundwater resources in California: management by local agencies under authority granted in the California Water Code or other applicable State statutes; local government groundwater ordinances or joint powers agreements; and, court adjudications.

AB 3030 (Costa), the California Groundwater Management Act, was passed by the Legislature in 1992.⁵ It was a significant addition to the groundwater management authorities granted under the Water Code in that it greatly increased the number of local agencies authorized to develop a groundwater management plan (GMP) and set forth a common framework for management by local agencies throughout California. Though adoption of a GMP is encouraged under AB 3030 and not required, subsequent bond initiatives and statutes have made an adopted GMP an eligibility criterion for receiving groundwater project and program funds. Since its passage, 149 agencies have adopted GMPs in accordance with AB 3030. Other agencies have begun the process. As mentioned above, in some basins, groundwater is managed under other statutory or judicial authority.

The California Groundwater Management Act, as amended, provides a systematic procedure to develop a GMP and requires the inclusion of certain minimum components. These include basin management objectives and monitoring and management of groundwater levels, inelastic surface subsidence, and changes in surface flow and surface quality that directly affect groundwater levels or quality or are caused by groundwater pumping. The Act also requires a description of how recharge areas identified in the plan substantially contribute to the replenishment of the groundwater basin. In addition, suggested optional components that might be relevant for a particular groundwater basin are listed.

In the Tulare Lake Region, the Lower Kings Basin Groundwater Management Plan (Lower Kings Basin Plan) is one example of a GMP. The Lower Kings Basin GMP was developed by the Kings River Conservation District (KRCD) through a consensus-based stakeholder process using a Basin Advisory Panel. The stated goal of the GMP, as adopted by the Basin Advisory Panel, is to document the local approach to "stopping overdraft, sustaining the local economy, and ensuring a sustainable groundwater system through development of specific projects and facilities to capture unallocated floodwater for groundwater storage and conjunctive use,

⁵Water Code §§ 10750 and sequence

whenever and wherever such water is available consistent with existing agreements, rights, and entitlements."

The historic five-bill package of water legislation adopted during the Seventh Extraordinary Session on water in 2009 that included the Water Bond also included SBX7 6 (Steinberg). SBX7 6 recognized that the statewide collection and evaluation of seasonal and long-term trends in groundwater elevations in California's groundwater basins is an important fundamental step toward improving management of California's groundwater resources. To achieve that goal, SBX7 6 incentivizes local monitoring entities to collect groundwater elevation data or mandates that it must be done by DWR. In accordance with SBX7 6, DWR developed the California Statewide Groundwater Elevation Monitoring (CASGEM) program. DWR states that the "intent of the CASGEM program is to establish a permanent, locally-managed program of regular and systematic monitoring in all of California's alluvial groundwater basins." DWR adds that the CASGEM program will rely and build on the many, established local long-term groundwater monitoring and management programs" and that its "role is to coordinate the CASGEM program, to work cooperatively with local entities, and to maintain the collected elevation data in a readily and widely available public database."

As part of one of the reporting elements within the Lower Kings Basin GMP, KRCD performs extensive groundwater monitoring and publishes annual groundwater reports detailing that year's water table conditions, improvements and results. In addition, KRCD is also the monitoring agency for the Kings and Tulare Lake Hydrologic subbasins under CASGEM.

Chapters 7 and 9 of AB 1331, *Climate Change Preparedness for Regional Water Security* (\$1.5 billion) and *Water Storage for Climate Change* (\$1.5 billion), respectively, include among their eligible projects and programs those that advance aquifer cleanup, groundwater recharge, groundwater storage, and conjunctive use of surface and groundwater facilities.

Groundwater Contamination

Nitrogen in groundwater can occur as dissolved nitrate, nitrite, or ammonia. Nitrate pollution can pose serious health risks to pregnant women and infants if consumed at concentrations above the Maximum Contaminant Level (MCL) of 45 milligrams per liter set by the California Department of Public Health. Nitrate contaminated groundwater is a particularly significant problem in the Tulare Lake Basin and Salinas Valley areas, where about 2.6 million people, including many of the poorest communities in California, rely on groundwater for their drinking water. Many other areas of the State, however, also have nitrate contaminated groundwater making it the most frequently detected anthropogenic chemical above an MCL in drinking water sources.

On February 20, 2013 the State Water Board submitted a report to the Legislature entitled *Recommendations Addressing Nitrate in Groundwater*. The report was required by SB 1 (Perata) from the Second Extraordinary Session of 2008 (SBX2 1). SBX2 1 directed the State Water Board to develop pilot projects focusing on nitrate in groundwater in the Tulare Lake Basin and Salinas Valley and to submit a report to the Legislature on the scope and findings of the pilot projects, including recommendations, within two years of receiving funding. The

purpose of the pilot projects was to improve understanding of the causes of groundwater contamination, identify potential remediation solutions and funding sources to recover state costs to clean up or treat groundwater, and ensure the provision of safe drinking water to all communities.

One of the State Water Board's first steps in the development of the pilot projects was to contract with the University of California, Davis (UC Davis) in 2010 to conduct an independent study. Some of the findings of the UC Davis Nitrate Report were:

- Nitrate problems will likely worsen for decades. For more than half a century, nitrate from fertilizer and animal waste has infiltrated into Tulare Lake Basin and Salinas Valley aquifers. Most nitrate detected in drinking water wells today was originally applied to the surface decades ago.
- Agricultural fertilizers and animal wastes applied to cropland are by far the largest regional sources of nitrate in groundwater. Other sources can be locally important.
- Nitrate loading reductions are possible, some at modest cost. Large reductions of nitrate loads to groundwater can have substantial economic cost.

The State Water Board/UC Davis reports raise many issues, including the need to adequately fund projects and programs to address the needs of communities with nitrate-contaminated groundwater, many of which are economically disadvantaged or severely economically disadvantaged.⁶

Chapter 5 of AB 1331, *Clean and Safe Drinking Water*, contains \$1 billion dollars to help address the challenges facing communities without access to safe drinking water including those that are disadvantaged and severely disadvantaged.

Potential for Storage

A major surface storage facility has been considered in the Tulare Lake Region at Temperance Flat since at least 1930 when Hyde Forbes, an engineering geologist, issued a geological report on three potential dam sites on the San Joaquin River for the Department of Public Works. Those sites included the present location of Friant Dam; Fort Miller just downstream of the confluence of Fine Gold Creek with the San Joaquin River; and, Temperance Flat, a small bowl-shaped basin on the San Joaquin River above the present location of Millerton Lake (approximately 13 miles upstream of Friant Dam). Interestingly, the Temperance Flat location was considered superior to the Friant Dam location but lost out because it would have required additional canal construction.

Between 1987-1992, California's water "wars" came to a head when a six-year drought slowed water deliveries, water quality deteriorated and two fish species unique to the Delta – the Delta smelt and winter-run Chinook salmon – were pushed to the brink of extinction. Two years after

⁶ The full State Water Board Report, which includes the UC Davis Report as an appendix, can be found at: http://www.waterboards.ca.gov/water_issues/programs/nitrate_project/index.shtml

the drought ended, the State and Federal governments signed an agreement to coordinate activities in the Delta and initiate the CALFED Bay-Delta Program, a long-term planning process to improve the Delta and increase the reliability of California's water supply. The CALFED Record of Decision (CALFED ROD), issued in 2000, anticipated, among other actions, operational changes for the CVP and SWP, investments in water use efficiency and integrated water management, ecosystem restoration, and additional investigation of five potential surface storage locations statewide.

The Upper San Joaquin River Basin Storage Investigation was one of the five. It focused on a Millerton Lake Enlargement or equivalent action. That Investigation proposed to expand water storage capacity; improve water supply reliability and flexibility for agricultural, urban, and environmental uses; and, enhance San Joaquin River water temperature and flow conditions to support anadromous fish restoration efforts.

As mentioned previously, AB 1331 Chapter 9 provides \$1.5 billion to fund the public benefits of water storage projects. Temperance Flat could receive consideration as AB 1331 includes among its eligibility criteria those surface storage projects identified in the CALFED ROD, with the exception of a raise of Shasta Dam.

Governor's Water Action Plan

On Monday, January 27, 2014 the California Natural Resources Agency, the California Department of Food and Agriculture, and the California Environmental Protection Agency, jointly released a final draft of the California Water Action Plan (Action Plan).

The Action Plan identifies multiple water-related challenges that the State currently faces including drought, flood, declining groundwater basins, poor water quality, and loss of fish and wildlife habitat. The Action Plan states that it is "based on three broad objectives: more reliable water supplies, the restoration of important species and habitat, and a more resilient, sustainably managed water resources system (water supply, water quality, flood protection, and environment) that can better withstand inevitable and unforeseen pressures in the coming decades."

The Action Plan sets out an ambitious set of strategies to be implemented in the next five years including, but not limited to:

- Making conservation a way of life;
- Investing in integrated water management and increasing regional self-reliance;
- Protecting and restoring important ecosystems, including in the Delta;
- Managing and preparing for dry periods;
- Expanding water storage capacity; and,
- Providing safe drinking water

All of these essential actions would be critically advanced by the funding provided in AB 1331 – the *Clean and Safe Drinking Water Act of 2014*.