reliability

restoration

resilience

California Water Action Plan Implementation Report 2014–2018

January 30, 2015

California Natural Resources Agency

cdfa California Department of Food & Agriculture

California Environmental Protection Agency (Cal/EPA)

This report was prepared by the California Natural Resources Agency in coordination with CalEPA and CDFA for the fiscal and appropriate policy committees of each house of the California Legislature.

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Introduction: A Roadmap to Sustainability

The water challenges facing our communities, our watersheds, and our economies compel the State of California to adopt a comprehensive and practical approach to water resources management. The California Water Action Plan (Action Plan) is such an approach. The value in the Action Plan lies in its clear articulation of actions that the Brown Administration is committed to seeing completed, by acting administratively and/or legislatively in effective coordination with our partners. The Action Plan – released by Governor Brown in January 2014 – is a roadmap for the first five years of the state's journey toward sustainable water management.

This report details the origins of the Action Plan, highlights achievements to date, and outlines activities for the next four years. It has been developed in response to specific requirements included in the 2014-2015 Budget:

> *0540 001-0001 – Water Action Plan Implementation Strategy. On or before January 10, 2015, the Secretary of Natural Resources shall submit to the chair of the fiscal committees of each house of the Legislature and the chair of the appropriate policy committees a report describing a strategy to implement the remaining actions described in the Water Action Plan. This report shall include a schedule of activities that the administration proposes for each of the next four budget years, the estimated costs of those activities, and the expected funding source.*

Led by the California Natural Resources Agency (CNRA), the California Environmental Protection Agency (CalEPA), and California Department of Food and Agriculture (CDFA), the effort to develop and implement the Action Plan is collaborative and inclusive, involving a broad array of affected state entities, federal, local and tribal partners, and the public.

The value of the Action Plan cannot be overstated. It is a roadmap towards water sustainability. It is a concise suite of specific actions needed in the short term. Most importantly, it is a commitment to an institutional evolution from business-as-usual to truly integrated resource management. It is a commitment to grow beyond the confines of budget-driven decision-making toward outcome-driven decision-making, whereby California's long-term sustainable water management objectives guide program development that in turn drives budget decisions.

California faces many challenges to its water management systems. Economic growth in California's formative years drove large-scale land-use alterations, unchecked timber operations, and other landscape changes. In turn, growing urban and rural communities and agricultural productivity drove the development of local and system-wide water management projects unaided by our current understanding of ecological process. Ongoing and future changes to the climate will drive rising sea levels, salinity encroachment, altered precipitation patterns, reduced Sierra Nevada snowpack, and other changes to California's hydrology. Every aspect of our water management system will be affected. Additionally, many California communities lack access to clean and affordable water supplies, an unacceptable fact that must be addressed, as all Californians have the right to clean and affordable water supplies.

At the core of the Action Plan are ten actions and associated sub-actions designed to address these challenges and support three overarching goals: reliability, restoration and resilience.

The Action Plan will not supplant existing state and local water planning efforts. Rather, the Action Plan is intended to complement and align those efforts and help agencies across all levels of government better achieve our collective objectives. For instance, the *California Water Plan* (*Water Plan*) – produced by the Department of Water Resources (DWR) since 1957 – has detailed the need and opportunities for improving water management in the state. The focus of the most recent update, released in October 2014, was necessarily broadened to describe new opportunities such as enhanced groundwater management policies and associated financing needs. The *Water Plan* reflects the work of myriad state agencies as expressed in 40 companion state plans, which have long called for improved tools for local groundwater management agencies, enhanced roles for state government, and significant local assistance programs to support local and regional groundwater efforts. The Action Plan incorporated the *Water Plan*'s objectives and 2014 saw the passage of both significant new sustainable groundwater management legislation and new public funding for associated local efforts.

Implementation of the Action Plan is already underway but it will take many years to fully implement. For example, it will take over two decades to achieve sustainable management of many of the state's groundwater basins. In developing the 2014 groundwater legislation, state water leaders introduced a definition for "sustainable groundwater management." This is the standard against which progress can be measured over the next 20 years.

In the same vein, the strategy for implementing the Action Plan must go beyond merely focusing on activities for the next four years. State agencies are working to identify outcomes that can be achieved as implementation proceeds; some are already identified in this report and others will emerge as the work progresses. Delivering on those outcomes will require commitments to:

> These actions are organized around long-term objectives. Some of the actions are new proposals. Some are being planned and should be completed more rapidly, implemented in a better way, or on a larger scale. Success will require the cooperation of many partners; the State's role is to lead, help others, and remove barriers to action.
>
> *-CA Water Action Plan, January 2014*

- **Align and integrate state services** towards achieving the outcomes, with a common vision of what sustainable management of water resources means for California.
- **Assess performance** in achieving the outcomes using mutually agreeable, tangible metrics and delivering assessment reports to the Legislature annually.
- **Provide sufficient, reliable funding** to conduct the work necessary to achieve the outcomes on the path to sustainability.

2014 in Review: Drought Response and a Foundation for Future Work

The extraordinary drought conditions gripping California throughout 2014 brought challenges and hardship to communities across the state. These conditions showed clearly how past local, state, and federal investments in regionally integrated infrastructure have helped buffer many communities from the economic and societal impacts threatened by even short-term droughts. 2014 brought a renewed focus on the importance of reinvesting in our water management systems and watersheds in order to address the current drought challenges and prepare for future uncertainties.

In January 2014, the Governor declared a State of Emergency and directed state agencies to take numerous actions in response to the drought, including stepping up conservation programs to encourage Californians to reduce their water use by 20 percent and enacting measures to protect water supply and water quality. Also in January, the final Action Plan was released, having already informed the Governor's 2014-2015 Budget proposal. The budget proposal included over $600 million for drought relief and Action Plan implementation, from Integrated Regional Water Management (IRWM) funds to immediate food and water assistance for impacted communities.

The Administration then worked with the Legislature to accelerate the appropriation of these funds and related policies (SB 103/SB 104), opening an opportunity for the inclusion of additional drought and Action Plan financing in the final 2014-15 State Budget, which was signed by the Governor in June 2014. Multiple executive orders issued by the Governor during the first half of 2014, such as the April order to redouble state drought actions, helped guide state agency work to address immediate needs.

Much work was accomplished throughout the remainder of 2014 by state agencies with Action Plan responsibilities. Leveraging new funds with baseline budgets and other funding sources, state agencies began aligning their priorities for the remainder of 2014 to the Action Plan's specific directives. New programs were developed (e.g., CDFA's new on-farm water/energy efficiency program). Existing bond programs produced new guidelines and went to proposal solicitation and final grant awards faster than ever before (e.g., DWR's IRWM Program). Communities running out of drinking water received emergency assistance from the State Water Resources Control Board (State Water Board) and the California Department of Public Health (CDPH).

Pursuant to the Governor's Executive Orders, the State Water Board issued an emergency regulation to ensure that water agencies, their customers and state residents increase water conservation, and the DWR, in partnership with the Association of California Water Agencies, expanded the *Save Our Water* public education campaign to promote statewide water conservation. Throughout the drought, California Department of Fish and Wildlife (CDFW) had been taking management actions to reduce impacts to the state's fish and wildlife. The Action Plan also guided the Administration's engagement in multiple successful legislative efforts, most notably the development of new sustainable groundwater management policies and the negotiation of a $7.5 billion water bond.

A review of state agency actions throughout 2014 shows that more than 100 efforts furthering the Action Plan were either continued or initiated. Figure 1 highlights a representative subset of these efforts.

Figure 1: 2014 Highlights

January

Governor Releases Water Action Plan
Governor releases *California Water Action Plan*, following coordination with state agencies, tribes and public

Governor Takes Action on Drought
Governor issues drought emergency declaration and proposes 2014/15 State budget that includes funding for Action Plan implementation, including drought response ***(Actions 1-5)***

Drought Forum Raises Awareness
CDFA sponsors forum to discuss drought information needs and ways to improve preparedness ***(Action 5)***

Adjusted Operations Save Water
Upon petition by DWR & BOR, State Water Board issues order to allow adjusted operation of the State and Federal Projects to save water for critical needs ***(Actions 5, 9)***

Integrated Projects Receive Grants
DWR awards $153M to 20 regions to support 138 integrated multi-benefit projects ***(Actions 2, 5)***

February

State Closes Rivers to Fishing
The CA Fish & Game Commission takes unprecedented emergency action to close waters to fishing to protect native fish from low water flows in waterways significantly impacted by drought ***(Actions 4, 5)***

State Addresses Fisheries Crisis
CDFW begins coordinating with federal agencies and commercial fishing industry, leading to State-led trucking of 30M fish to the SF Bay ***(Actions 4, 5, 9)***

March

Emergency Legislation Helps Drought-Stricken Communities
Governor and Legislature collaborate on accelerated drought relief and Action Plan implementation package (SB 103/104; over $687M). State agencies quickly responded by working with the American Red Cross and community organizations to deliver water to those in need ***(Actions 1, 2, 5, 7)***

Low Interest Loans for Water Recycling
State Water Board makes available $800M in low-interest loan funds to increase water recycling and provide alternative drought-proof supply for communities (***Actions 1, 2, 5, 7)***

April

Governor Orders Redoubling of Drought Efforts
Governor issues Executive Order to redouble state response to drought. Aims to increase water management flexibility for state/local water managers and regulatory entities and provide conservation incentives ***(Actions 1, 5)***

State Publishes Groundwater Shortages Report
DWR publishes report identifying groundwater basins in the state with potential groundwater shortages and gaps in groundwater monitoring ***(Actions 5, 6, 7)***

May

Save Our Water Month
Governor proclaims May to be *Save Our Water Month* and State Intensifies public campaign with TV/radio ads and planned State Fair Exhibits ***(Actions 1, 5)***

Work Begins to Prioritize Delta Levee Investments
DSC releases concept paper and establishes inter-agency funding agreements to prioritize State investments in Delta levees, consistent with the Delta Plan ***(Actions 3, 8)***

State Coordinates Voluntary Actions in Key Watersheds
State Water Board adopts emergency fish flow regulations to maintain minimum flows in 3 Sacramento River tributaries, and coordinates with CDFW to develop voluntary cooperative agreements with landowners to achieve minimum flows ***(Action 4)***

Emergency Funding for Drinking Water Systems
State Water Board issues the first grants to aid communities with drinking water systems impacted by drought. By summer's end, over $13 M was granted ***(Actions 2, 5, 7)***

June

Final State Budget Funds Action Plan and Drought Relief
Final 2014/15 State Budget provides an additional $100M+ in funding priorities for the Action Plan and helps lay solid fiscal foundation for implementing near-term actions, including money for water supply assessments, local technical assistance, water rights enforcement, and fish habitat restoration ***(Actions 1, 2, 4, 5)***

Delta Communities Receive Flood Emergency Response Funds
DWR awards $5M in grants to flood control agencies in the Delta to prepare for flood emergencies ***(Action 8)***

State Prioritizes Groundwater Basins
DWR releases statewide ranking of 515 groundwater basins in the state collectively producing greater than 90% of California's annual groundwater; 127 basins ranked high and medium priority (orange/yellow on map) ***(Action 6)***

State Eases Path to Recycled Water Use
State Water Board adopted a new General Order allowing the regional boards to streamline the permitting of recycled water uses, including agricultural and landscape irrigation, dust control, and some industrial processes ***(Actions 2, 9)***

July

State Consolidates Water Quality Programs

Effective July 1, Drinking Water Program is relocated from CDPH to State Water Board; consolidating major water quality programs within the Board allows State to better manage/protect water resources and ensure safe drinking water for Californians ***(Actions 2, 7, 9)***

State Adopts Emergency Conservation Regulation

State Water Board approves emergency regulation to ensure urban water agencies and their customers increase water conservation or face possible fines/other enforcement ***(Actions 1, 5)***

New Grant Program will Restore Wetlands and Reduce Carbon

CDFW releases grant solicitation for wetland restoration projects to be awarded in 2015; projects will sequester greenhouse gas/carbon, restore critical wildlife habitats, and aid water supply objectives ***(Action 4)***

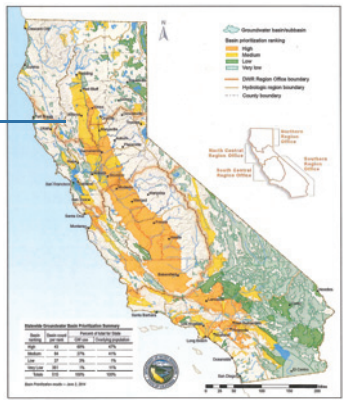
August

Grants Promote Water Desalination

DWR awards a total of $8.7M in grants to eight water desalinization projects throughout the state focusing on construction, research, feasibility and/or demonstration ***(Actions 1, 2, 5)***

Legislature Approves New Water Bond

The Legislature and the Governor negotiate and approve AB 1471 (Rendon), a $7.5 billion water bond slated for the November Ballot ***(Actions 1-8)***



September

Water Year 2014 ends as California's 4th driest

Landmark Groundwater Legislation Passes

The Legislature passes, and the Governor signs, historic groundwater policy reform that paves the way for sustainable groundwater management across the state. Emphasis is on local control, coordinated basin management, and limited but effective state involvement ***(Action 6)***

Families without Drinking Water Get Relief

Governor issues order making funding available through the California Disaster Assistance Act to provide water for drinking and sanitation to households currently without running water ***(Actions 5, 7)***

October

State Publishes California Water Plan Update

DWR, on behalf of the State, publishes the 2013 update of the *California Water Plan* (Bulletin 160), continuing the legacy that began with the 1957 Bulletin 3- California Water Plan. This update includes vital information on the State's water conditions, including groundwater and flooding ***(All actions)***

Grants Aid California Farmers

CDFA awards $3.6M in Greenhouse Gas Reduction funds for 93 projects to implement on-farm irrigation systems that use less water and energy and reduce greenhouse gas ***(Actions 1, 5)***

Expedited Grants Increase Regional Self Reliance

DWR announces $221M in grants to regions (incl. disadvantaged communities) to implement over 100 near-term drought relief projects, leveraging more than $3 local per $1 state funds. Shortest grant process in history of IRWM program ***(Actions 2, 5)***

November

Voters Approve Water Bond (Proposition 1)

An unprecedented 64% of California voters approve a $7.5 billion water bond, designed to help implement the Action Plan's broad range of actions

Agency Coordination Promotes Efficiency on Delta Solutions

Delta Stewardship Council (DSC) convenes the second Delta Plan Interagency Coordinating Committee meeting, focusing on advancing Delta science, cross-agency collaboration, and Action Plan implementation ***(Actions 3, 4)***

State Publishes Report on Drought Impacts to Groundwater

DWR publishes report identifying areas where drought has significantly impacted groundwater resources ***(Actions 5, 6, 7)***

December

Grant Program Encourages Water-Energy Efficiency

DWR receives 96 applications requesting $142M in Greenhouse Gas Reduction Funds for the 2014 Water-Energy Grant Program, well in excess of the $19M available. Awards will be made in 2015 ***(Actions 1, 2, 5)***

State Continues Collaboration with Tribes

California Tribes and state resource agencies finish a year of monthly consultation and coordination meetings about drought response, conservation programs, and impacts on cultural resources ***(Actions 2, 5)***

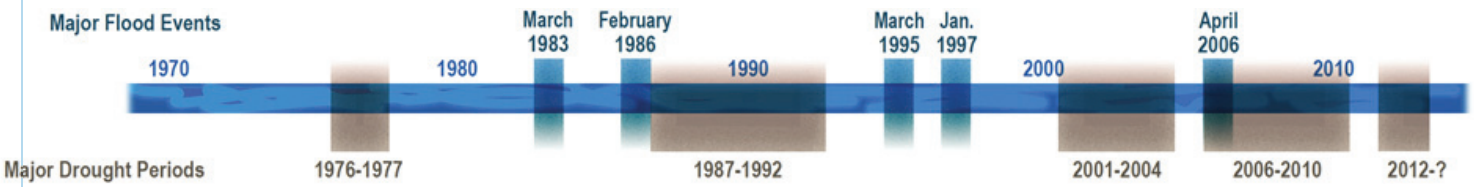
Looking Ahead: The Next Four Years and Beyond

California's unpredictable hydrology is indicative of the many challenges that the state's water system faces: At any given time, California is either in the midst of a drought, a flood event, or merely in transition between the two extremes. This highly variable hydrology requires immediate response capabilities (e.g., emergency drought relief assistance and flood emergency response) while simultaneously demanding continual planning and investments for drought preparedness and flood risk reduction.

As discussed in the previous section, many actions were taken in 2014 in response to drought. Legislative and administrative funding decisions, for example, were focused on relieving impacts to our most vulnerable communities and our most threatened ecosystems. Direct administrative actions – either through Executive Order or other means – were also largely drought-related. Despite welcomed storms in December 2014, there is little doubt that 2015 will see the continued emphasis on drought. Years 2 through 5 of Action Plan implementation offer an unprecedented opportunity to pivot from our historic pattern of damage control towards sustained and strategic planning and response to California's water management needs. This shift from reactive to strategic is needed to move to sustainable management of our water resources. As recognized in the *California Water Plan Update 2013*, making that leap will require agency alignment towards common outcomes, a commitment to plan and manage in an integrated fashion, and stable, reliable funding.

> "As the California Water Action Plan lays out, water recycling, expanded storage, and serious groundwater management must all be part of the mix. So too must be investments in safe drinking water, particularly in disadvantaged communities. We also need watershed restoration and further progress on the Bay Delta Conservation Plan. It is a tall order. But it is what we must do to get through this drought and prepare for the next."
>
> *-Governor Brown's State of the State Speech, January 2014*

This section of the report presents a brief summary of key Action Plan activities underway or planned for the next four years and beyond, spanning the ten central Action Plan actions. This list of near-term efforts is not exhaustive; instead, it is a representative suite of activities that state agencies are currently engaged in and plan to pursue as funding is made available. Figure 2 presents a schedule of key activities that collectively lay the foundation for achieving the three foundational goals laid out in the Action Plan: reliability, restoration and resilience. The estimated schedule is for informational purposes and is subject to change based on legislative action, such as passage of the 2015-16 State Budget and appropriation of Proposition 1 funds.



Action 1 - Make Conservation A California Way of Life

Governor Brown has called upon all Californians and state agencies to reduce water use substantially. It is widely acknowledged that permanent increases in water use efficiency across all sectors will be necessary to meet the needs of a growing population, address the effects of climate change, and increase economic productivity. Strategic investments of public funds into conservation and efficiency programs will help spur California-bred technological innovation in the water sector.

DWR, CDFA, and the State Water Board will lead implementation of the conservation-related actions in the Action Plan. DWR and CDFA will develop or expand technical and financial assistance programs for the state's urban and agricultural communities using $100 million provided by Proposition 1 and additional funding from AB 32 Cap and Trade revenues. These funds will leverage local public and private dollars to meet or exceed state conservation mandates, improve local water supply reliability, and provide the added benefit of helping achieve California's greenhouse gas reduction objectives through associated reductions in water and energy use. Additional funds may be needed to support water conservation actions, including ongoing public education campaigns such as California's successful *Save Our Water* program. Additionally, the State Water Board will consider whether the statewide emergency conservation requirements of 2014 should be revised or made permanent and will use other tools to assist and incentivize conservation.

Action 2 - Increase Regional Self-reliance and Integrated Water Management across All Levels of Government

Integrated water management is central to California's long-term strategy towards sustainability. As stated in the Action Plan, the approach calls for balance in addressing the objectives of improving public safety, fostering environmental stewardship, and supporting economic stability. The state's IRWM Program is an example of an initiative that continues to successfully incentivize regional integration of water planning efforts and the development of multi-benefit projects. Proposition 1 provides over $500 million in additional IRWM grant funding to DWR to continue to build capacity and self-reliance in the state's regions. DWR will begin awarding this funding in phases following delivery of the final round of Proposition 84 funding. DWR and the State Water Board also will conduct other activities to further the goal of increasing regional self reliance. For example, in 2015, DWR will publish the *Strategic Plan for the Future of IRWM in California*, which, based on extensive stakeholder outreach, will provide strategic recommendations to guide the next generation of IRWM program efforts.

The State Water Board will develop uniform criteria/regulations for the indirect potable use of recycled water via surface water augmentation, and will work with its expert panel to evaluate the feasibility of uniform water recycling criteria for direct potable reuse. Further, the State Water Board and DWR will utilize Proposition 1 funding to make grants available for innovative water recycling, water desalination, advanced treatment technology and stormwater projects. Finally, recognizing the vital connection between water and land use, the Governor's Office of Planning and Research (OPR) will engage local land use authorities, tribes, and water agencies to recommend strategies (e.g., General Plan amendments) to promote greater consistency between local land use planning and IRWM plans and decisions.

Action 3 - Achieve the Co-Equal Goals for The Delta

The 2009 Delta Reform Act solidified the state's commitment to reliable Delta water supply and to restored Delta ecosystems, formally acknowledging that the two objectives are inextricably linked. These co-equal goals also recognize the importance of Delta communities and local economies. The Delta Stewardship Council (DSC), CDFW, DWR, and the State Water Board all have a role to play in advancing the co-equal goals and will conduct various activities to address this action in the Action Plan. DSC will continue to implement the *Delta Plan* and will evaluate and update it in the next few years. In 2015, DWR and its federal partners will recirculate the *Bay Delta Conservation Plan* (*BDCP*) (revised to address public comments), finalize the Environmental Impact Report (EIR)/Environmental Impact Statement (EIS), and publish the Record of Decision/ Notice of Decision. When approved, the BDCP will be incorporated into the updated *Delta Plan* by DSC.

Other planned activities include enhancing the DSC's programs to support inter-agency Delta science investigations, bolstering Delta science programs to better implement federally-mandated biological opinions, and developing coordinated Delta restoration grant programs by CDFW, DWR, and the Delta Conservancy using Proposition 1 funding. Throughout FY 2015-16 and beyond, the Administration also will pursue strategies to improve water quality for the Delta's fisheries, agricultural economy, and drinking water resources. The State Water Board will update its Water Quality Control Plan for the Delta, which will establish new regulatory requirements that balance the competing uses of water.

Action 4 - Protect and Restore Important Ecosystems

Historic impacts to California's native fisheries and watersheds have been profound. These impacts continue to manifest today, exemplified by ongoing and in some cases growing conflicts between water management goals and ecosystem vitality. To address these challenges, starting in FY 2015-16, a suite of actions will be taken by CDFW, State Water Board, DWR, and the Wildlife Conservation Board to: enhance instream flows within five priority watersheds (using General and Special Funds); implement a statewide habitat restoration grant program (Proposition 1); develop a new $200 million instream flow restoration program (Proposition 1); continue to restore San Joaquin River flows and habitat (Proposition 84); and improve habitat in the Salton Sea (Proposition 1). Additionally, coordination with federal agencies will help address Central Valley wetland and wildlife refuge water supply needs. State conservancies from San Diego to Lake Tahoe to the coast will develop new Proposition 1 grant programs to assist with the restoration of watersheds critical to California's water supply systems.

Aerial view of waterways & sloughs meandering through the Delta in California.
(Photo: Paul Hames/DWR)

Action 5 - Manage and Prepare for Dry Periods

The current drought has revealed just how vulnerable our communities, farms, and watersheds are to extended dry periods. All of the conservation, recycling, stormwater capture, desalination, and ecosystem restoration activities described in the Action Plan are intended to help prepare our communities to weather future droughts and deal with the effects of climate change. In late 2014, state agencies began advance planning to prepare for a probable fourth year of drought and on January 15, 2015, released a *Drought Operation Contingency Plan*. A prominent feature of this plan is to invest in monitoring and other technology improvements to better track and manage fish and environmental factors in real-time. Such improvements can translate into improved operational flexibility for water supply (see Action 9).

As drought conditions persist through the 2015 winter months, DWR and other state agencies will continue to address the mandates of the 2014 Drought Legislation (SB 103/104). DWR, the US Bureau of Reclamation (USBR) and the State Water Board will continue efforts to streamline water transfers and make water delivery decisions through a transparent process in compliance with state and federal regulations. As funding allows, DWR, the State Water Board and the California Office of Emergency Services (CalOES) will continue providing technical assistance and directing resources to drought-stricken local agencies and communities across the state. While many of the allocations in Proposition 1 are intended to provide drought relief, funds are not provided for state agency actions to prepare for and respond to drought. Therefore, such services by DWR and others will require other resources.

Action 6 - Expand Water Storage Capacity and Improve Groundwater Management

The Action Plan calls for financial support for water storage projects, improved and sustainable groundwater management, cleanup of the state's contaminated groundwater reservoirs, and improved conjunctive management of surface and groundwater storage strategies. Primarily, these activities will be carried out by the California Water Commission (CWC), DWR and the State Water Board.

Storage. Expanded storage capacity and improved use of existing storage capacity (both above and below ground) are needed to address current and future water supply needs. Proposition 1 provides $2.7 billion to the CWC to incentivize a wide spectrum of multi-benefit surface and groundwater storage and system reoperation projects with broad local and statewide public benefits, including sustained ecosystem flows and water quality improvements. To meet this requirement, the CWC, in coordination with DWR, CDFW, and the State Water Board, will develop and implement a competitive grant program. As specified by Proposition 1, storage grants will be restricted to the public benefit portion of projects (50 percent of which must be for ecosystem restoration), and grantees will contribute at least 50 percent of a project's cost. Grant awards are expected to begin in 2017.

Sustainable Groundwater Management. The Sustainable Groundwater Management Act of 2014 recognizes that the most effective way to manage groundwater is at the local level, sustainable groundwater management can only be achieved in the context of a balanced regional water budget, and groundwater use and land use decisions are inextricably linked. This landmark legislation calls for DWR and the State Water Board, in coordination with regional groundwater management entities, local land use authorities, and other stakeholders, to work toward the following outcomes:

- improved understanding of the state's groundwater basins and their issues and challenges;

- formation of effective regional governance for groundwater basin management;
- development of guidance and tools to promote effective management of groundwater basins;
- development and implementation of sustainable groundwater management best management practices and plans; and
- implementation of actions by the State Water Board as needed to achieve regional sustainable groundwater management in accordance with the 2014 legislation.

Proposition 1 provides $100 million for DWR to provide grants to assist local entities to prepare groundwater plans and projects that implement the plans.

Groundwater Contamination. As directed by the Action Plan and made possible by $800 million in Proposition 1 funding, the State Water Board will take action to prevent the spread of groundwater contamination and accelerate clean up by providing grant funds for remediation. Effective remediation will improve water storage capacity in previously contaminated groundwater basins.

Action 7 - Provide Safe Water for All Communities

As called for by law and recognized in the Action Plan, all Californians have a right to safe, clean, affordable, and accessible water adequate for human consumption and sanitary purposes. Safe water is necessary for public health and community prosperity. The activities in the Action Plan are intended to improve the organization of the State's water quality programs and create new tools to help ensure that every Californian has access to safe water. As a first step, the Action Plan calls for incorporation of the drinking water program with other surface and groundwater quality programs into one single agency to achieve broader efficiencies and synergies that will best position the state to respond to existing and future challenges. In response, the Administration worked with the Legislature to move the Drinking Water Program from CDPH to the State Water Board effective July 2014.

In 2015, the State Water Board's new Division of Drinking Water will complete the development of a Safe Drinking Water Plan for California which includes: an assessment of the overall quality of the state's drinking water, identification of specific water quality problems, analysis of the known and potential health risks that may be associated with drinking water contamination in California, and specific recommendations to improve drinking water quality. Additionally, the Administration will work with local governments, communities and water agencies to help develop innovative strategies for addressing governance, technical assistance, capital improvements, and ongoing operations and maintenance costs necessary to bring public water systems in small disadvantaged communities into compliance with state and federal regulations.

In addition to the activities specified in the Action Plan, the State Water Board will continue to provide grant and loan funding, including funding from Proposition 1 and Drinking Water State Revolving Fund, to assist public water systems in providing safe drinking water to Californians.

The activities in the Action Plan are intended to help ensure that every Californian has access to safe water. *(Photo: John Chacon/DWR)*

Action 8 - Increase Flood Protection

California is in the midst of an historic drought, yet we must continue maintaining and strengthening flood management infrastructure that protects more than seven million people and $580 billion in assets in the state. Aging levee infrastructure, sea level rise due to climate change, the threat of seismic damage, and a growing state population are some of the pressures on the State-owned flood management system in the Central Valley and locally-managed flood systems around the state.

The 2013 report by DWR and the U.S. Army Corps of Engineers entitled *California's Flood Future: Recommendations for Managing the State's Flood Risk* estimates current statewide flood protection capital improvement needs to be on the order of $50 billion. Specifically for the state-owned State Plan of Flood Control in the Central Valley, the *2012 Central Valley Flood Protection Plan* estimates the funding gap at $14 to 17 billion. As discussed by state and federal experts in a January 2015 hearing hosted by the State Assembly's Water, Parks and Wildlife Committee, the lack of stable and sufficient funding for flood management exacerbates the state's risk. Proposition 1E funds authorized in 2006 in the wake of lessons learned from Hurricane Katrina are limited, and Proposition 1 funds ($395M) are mostly directed to the Delta. In addition, general obligation bonds have helped the situation, but are not sustainable for the long term.

The range of stressors and opportunities for the state's flood management system – including lack of sustainable funding - is recognized in Action 8 of the Action Plan, with a number of subactions identified to move the state towards greater resiliency. The agencies primarily responsible for implementing the activities are DWR, DSC (Delta-related activities), and the Central Valley Flood Protection Board (activities impacting the State Plan of Flood Control). The DSC, in coordination with DWR, the CVFPB, and others, will complete the *Delta Levee Investment Strategy* in 2016 to strategically guide the state's Delta flood risk reduction investments.

Over the next two years, DWR will continue to direct the remaining $1.2 billion in Proposition 1E funds towards programs and projects that address the highest-priority flood risks, including emergency response, maintenance of the State Plan of Flood Control facilities, grant funding for urban flood risk reduction projects, and completion of the *2017 Central Valley Flood Protection Plan*. In coordination with others, CNRA will begin a process to explore options for improving the permitting process that can impede implementation of flood protection actions, including operation and maintenance of flood management infrastructure such as levees.

Some of the remaining Proposition 1E funds will be prioritized to address a remarkable opportunity to better align State flood protection and habitat restoration efforts, consistent with the conservation strategies being developed as part of the *2017 CVFPP* update. For example, efforts are underway in the Yolo Bypass to demonstrate that this alignment can result in synergistic benefits to our flood management system and floodplain ecosystems. Various state agencies (CNRA, DWR, CDFW, the State Water Board, DSC, Delta Conservancy and CVFPB) have begun coordinating with federal agencies (e.g., USACE, USBR, National Oceanic and Atmospheric Administration (NOAA) Fisheries) and affected local agencies to identify ways to achieve common flood protection and habitat restoration outcomes by aligning planning and finance efforts across all levels of government.

Action 9 - Increase Operational and Regulatory Efficiency

Efficiently operating the State Water Project and Central Valley Project, while complying with the requirements of state and federal endangered species acts and operating consistent with the conditions of water rights, contracts and other entitlements, is a delicate balancing act. Current coordination efforts, while longstanding and intended to cover a broad range of conditions, do not reflect the entire Delta watershed, nor do they effectively integrate all of the activities that other agencies and organizations are undertaking to improve the ecosystem.

Recognizing this, Action 9 in the Action Plan calls for increased coordination among agencies to improve operational and regulatory efficiency, including improved coordination of State Bay Delta actions. The primary mechanism for ensuring this cooperation is the Delta Plan Implementation Interagency Committee, convened by the DSC in spring 2014. The committee is comprised of 17 high-level state and federal agency representatives, who met twice in 2014 to hear reports on work affecting the Delta, including implementation of the Action Plan and the Delta Science Program. Moving forward, the committee's oversight and guidance will help ensure that integrated, collaborative and transparent science informs policy and management decisions.

The unprecedented drought conditions in 2014 served to kick-start local, voluntary efforts to provide critical flows in a few key watersheds. These flows, encouraged by a regulatory back-stop, provided the sole means of survival for fish species holding over in what otherwise may have been dry riverbeds and serve as an example of how voluntary approaches can achieve regulatory efficiencies. In addition, extraordinary cooperation facilitated agricultural transfers, interties between community water systems, and other measures to bring drinking water to a number of communities. CDFW brought forward dozens of voluntary drought agreements with landowners and other users to achieve these results. Such efforts are expected to continue in 2015.

Action 10 - Identify Sustainable and Integrated Financing Opportunities

A common finding of the Action Plan, *California Water Plan Update 2013*, and of the report *Paying for Water in California* by the Public Policy Institute of California (PPIC) is the need for sustainable financing to fill essential funding gaps. General obligation bonds approved by the voters over the past decade have been effective in launching and continuing essential state services and programs, but this financing method is not sustainable. Proposition 1 provides some of the resources needed to implement the Action Plan, but stable, reliable funding is needed for the longer term, in order to move towards more sustainable management of our state's water resources.

Action 10 calls for the state to develop a water financing strategy, address barriers such as Proposition 218, and identify areas where user/polluter fees may be appropriate to help fill the funding gaps. The *Water Plan* statewide planning process, overseen by DWR in coordination with 28 state agencies, will provide an effective forum for discussion and deliberation about financing opportunities and will guide the development of the sustainable financing strategy. This work will build on the strategic finance planning framework completed for *Water Plan Update 2013* by a multi-stakeholder finance caucus.

Other Work to Support Action Plan Implementation

Accomplishing the array of discrete actions articulated in the Action Plan requires a significant new investment of public resources, as well as state agency alignment and oversight, and a concerted focus on outcomes. In addition, continued support by the Legislature and the public is required for the many water-related efforts not explicitly referenced in the Action Plan (e.g. the measurement, analysis, integration, and sharing of essential water management data). Additional resources are needed (to replace funding provided in the past by general obligation bonds) for DWR to prepare the five-year updates to the *California Water Plan* as required by the California Water Code and depended on by water managers across the state. While not described explicitly in the Action Plan, these types of state services are foundational to its success.

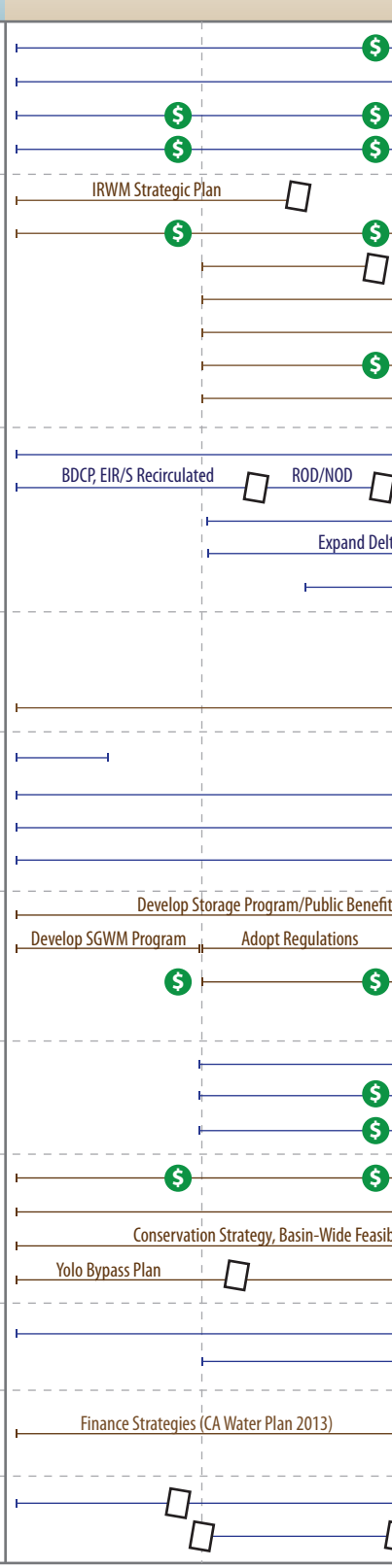
Yolo Bypass *(Photo: DWR)*

Figure 2: Schedule of Activities and Agency Roles

B.Y. 2014/15 | B.Y. 2

Year 1 2014 | Year 2 2015

Actions	Agency	Activity
1. Make conservation a California way of life	DWR	Prop 50/Prop 1 Urban and Agriculture Local Assistance
	DWR, DSC	"Save Our Water" Campaign, Delta Science Seminars
	DWR	AB32 Urban Water-Energy Grants
	CDFA	Agriculture Water-Energy Grants
2. Increase regional self-reliance and integrated water management across all levels of government	DWR	IRWM Enhancement Recommendations
	DWR	Prop 84/Prop 1 IRWM Local/DAC Assistance
	OPR	Land Use/Water Management Recommendations
	Water Board	Recycled Water Regulations
	Water Board	Prop 1 Stormwater Local Assistance
	Water Board	Prop 1 Water Recycling Technologies
	DWR	Prop 1 Desalination Grants
3. Achieve the co-equal goals for the Delta	DSC	Delta Plan
	DWR	Bay-Delta Conservation Plan
	CDFW, DC, DWR	Prop 1 Delta Watershed Restoration Projects
	DSC	Delta Science Plan
	Water Board	Bay-Delta Water Quality Control Plan Update
4. Protect and restore important ecosystems	CDFW, DWR, others	Prop 1 Ecosystem/Watershed Restoration Projects
	WCB, CDFW	Prop 1 Enhance Stream flows/Update flow objectives
	DWR, CDFW	San Joaquin River Restoration
5. Manage and prepare for dry periods	Leg.	Emergency Drought Legislation (SB 103/104)
	DWR	Critical Water Shortage Preparedness/Info Mgmt
	DWR, CalOES, Water Board, others	Assist Communities In Need
	DWR, USBR	SWP/CVP Operation/Water Transfer Management
6. Expand water storage capacity and improve groundwater management	CWC, Water Board, CDFW, DWR	Prop 1 Storage Program
	DWR, Water Board	Sustainable Groundwater Management
	DWR, Water Board	Regional Sustainable GW Grants
	Water Board	Prop 1 Groundwater Contamination Clean-up Grants
7. Provide safe water for all communities	Water Board	Safe Drinking Water Plan for California
	Water Board	Prop 1 Wastewater Treatment Projects
	Water Board	Prop 1 Drinking Water/Small Community Grant Program
8. Increase flood protection	DWR	Flood System Improvements (Urban, Rural, Systemwide)
	DSC/DWR	Delta Levee Investment Strategy
	DWR, CVFPB	CVFPP 2017
	CNRA, DWR, CDFW, others	Integrated Yolo Bypass Project
9. Increase operational and regulatory efficiency	DSC, 17 agencies	Bay Delta Activities Coordination
	DWR, DSC, CDFW, others	State/Federal System Ops Improvements
10. Identify sustainable and integrated financing opportunities	DWR, others	Sustainable Finance Plan
Other Work to Support Action Plan Implementation	DWR	Statewide Water Planning/CA Water Plan Updates
	CNRA, CalEPA, CDFA	Action Plan Impl. Mgmt/Reporting

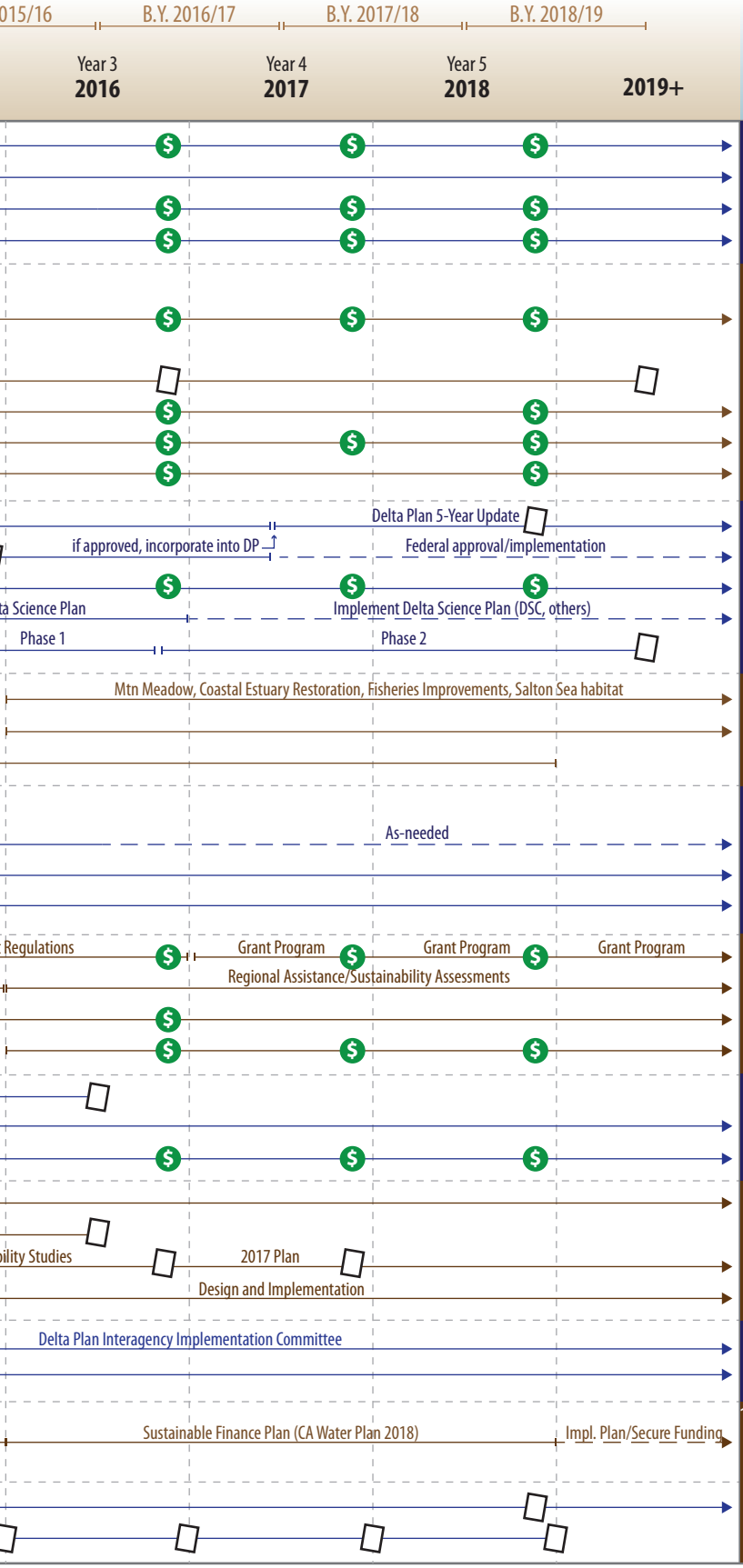


Agency Acronyms

DWR– California Department of Water Resources
DSC– Delta Stewardship Council
CDFA– California Department of Food and Agriculture
OPR– Governor's Office of Planning and Research
Water Board– State Water Resources Control Board
WCB– California Wildlife Conservation Board
CDFW– California Department of Fish and Wildlife
DC– Delta Conservancy
CalOES– California Office of Emergency Services
CWC– California Water Commission
CNRA– California Natural Resources Agency
CVFPB– Central Valley Flood Protection Board
CalEPA– California Environmental Protection Agency

$ grant awards

deliverables



Implementation Notes/Water Action Plan Subactions Addressed

1 These urban and agricultural conservation and water use efficiency activities contribute to all Action Plan subactions for Action 1 and further support Actions 2 and 5.

2 These activities to build and maintain regional capacity and self-reliance contribute to all Action Plan subactions for Action 2 and further support Actions 1, 5 and 6.

3 These habitat restoration, planning, and regulatory activities contribute to various, but not all, subactions of Action 3. Additional complementary work will be identified in the future to fully address the Action, including expanded near- and long-term restoration efforts.

4 The activities listed here constitute a partial list of activities that are underway or planned by several primary agencies to address the 12 subactions for Action 4. Additional work is focused on the Tahoe and Klamath Basins, waterfowl/wetlands and integration of regulatory/voluntary efforts.

5 These drought preparedness, response and water transfer activities, which continue the work began in 2014 as directed by the Governor and Legislature, fully address the Action Plan subaction for Action 5 and further support Actions 1, 2, 6, 7 and 9.

6 These activities are designed to expand surface and groundwater storage in the state, clean up contaminated groundwater and implement the 2014 Groundwater Legislation to achieve sustainable regional water balances. Collectively, the activities contribute to all Action Plan subactions for Action 6 and further support Actions 1, 2, 5 and 7.

7 These ongoing and planned activities of the State Water Board contribute to all the subactions of Action 7 and further support Actions 2 and 5.

8 These activities, including ongoing work on several essential plans (CVFPP 2017 and Delta Levee Investment Strategy), contribute to many, but not all, of the subactions of Action 8. Additional details will be identified in the future to fully address the Action, following necessary agency coordination, for example, related to streamlined regulatory permitting and Delta Levee Assessment District.

9 These activities address the two subactions for Action 9, calling for improved coordination and technologies to achieve enhanced State/federal water management system operations.

10 Passage of Prop 1 was a good first step toward providing funding for implementation of various actions in the Action Plan, however, reliance on general obligation bonds is not sustainable. Building on financing strategy recommendations completed in 2013, state agencies will use the CA Water Plan Update 2018 process as the framework for identifying sustainable long term financing for water management in California.

Note: This is an estimated schedule for informational purposes with selected major/representative ongoing and planned activities shown. It is subject to change based on 2015 Budget Act, Prop 1 appropriations and other Legislative directives.

Financing and Accountability

The Action Plan's Action 10 clearly states that multiple financing strategies must be integrated into this effort. In short, the actions and sub-actions listed in the Action Plan vary tremendously and our collective financing strategies will have to be equally diverse. State General Obligation bonds, federal grants/loans, local revenue bonds, ratepayer dollars, local initiatives, user/beneficiary fees, private investment, state General Funds, and other funding sources must all be considered.

Achieving the Action Plan's goals of reliability, restoration, and resiliency requires the commitment of resources to the maintenance of our existing infrastructure as well as to new infrastructure and watershed projects. As recognized in the *California Water Plan Update 2013*, hundreds of billions of dollars will be necessary to achieve truly sustainable water management in California over the next 50 years. Historically, local water agencies (water supply, wastewater, flood control, etc.) have provided the vast majority of investments towards water system development, upgrades, and operations. The state must therefore invest its relatively modest water management funding contribution wisely, directing dollars where they can address critical community needs, leverage additional funding sources, and spur innovative and transformative water management technologies and practices.

Strategies for expenditure of state funds in order to maximize public benefits include the following:

- Invest in communities facing critical drinking water supply and drinking water quality challenges, with an emphasis on economically disadvantaged communities unable to fund these projects with local revenues.
- Create opportunities to leverage local, federal, and private cost-sharing to maximize project outcomes.
- Incentivize the transformation of localized single-purpose water management projects into regionally-significant projects that provide multiple public benefits, such as ecosystem restoration, flood risk management, and water supply and water quality improvements.
- Restore native ecosystems to reduce unnecessary conflicts between water management decisions and our native fish and wildlife.

Over the past fifteen years, the majority of state funding for water management infrastructure and related watershed restoration has come from General Obligation bonds approved by the voters. Continuing in this vein, Proposition 1 will play a critical role in the implementation of the Action Plan by providing the majority of state financing, in the following broad categories:

Flood Management	$395 million
Incentives for regional water management	$810 million
Community drinking water and wastewater infrastructure	$520 million
Water recycling and desalination	$725 million
Groundwater sustainability and clean-up	$900 million
Watershed protection and restoration	$1,495 million
Surface and groundwater storage	$2,700 million
Total	**$7,545 million**

General Obligation bond funds cannot fill all funding gaps, however. The PPIC has identified the funding gap at $2 to 3 billion annually and has called for bold action in the form of constitutional reforms to improve local funding and legislative action that goes beyond bonds (*Paying for Water in California*, 2014). *Water Plan Update 2013* acknowledges that state government should develop a more reliable, predictable, and diverse mix of finance mechanisms and revenue sources to continue to invest in innovation and infrastructure with broad public benefits. The Action Plan includes a commitment (Action 10) to explore all possible avenues towards securing sustainable financing.

Estimated Costs to Implement the Action Plan

Table 1 outlines the estimated costs to implement the Action Plan over the next four years, as well as anticipated funding sources. The estimated costs shown do not include the local and federal cost-share, but notes are included where cost sharing opportunities exist. Also not included are the mostly water user-funded projects anticipated as part of the ongoing *Bay Delta Conservation Plan* process. The FY 2015-16 proposed State Budget includes $1.8 billion in initial funding for Action Plan efforts, some of which is supported by remaining Proposition 84 funds for IRWM projects, Proposition 1E for flood protection projects, and Proposition 1 for various regional supply strategies, drinking water, water conservation, and watershed management investments.

It is expected that agencies at all levels of government – state, federal, and local – will participate in implementation of the Action Plan. The State will lead most efforts, and to leverage its funding will seek cost-sharing opportunities with other agencies. Local agencies must play a substantial role in regional actions. Federal agencies will invest in actions related to operation and maintenance of federally-owned facilities, including participation in operational efficiency of the Central Valley Project and in federal flood protection actions. Ecosystem projects associated with flood management actions will be funded by appropriate contributions from the state, local agencies, and entities benefiting from the ecosystem restoration work.

> **Over the next decade, California needs $200 billion to maintain current levels of service and system conditions. California needs up to $500 billion in future investment over the next few decades to reduce flood risk, provide reliable and clean water supplies, and restore and enhance ecosystems.**
>
> *-California Water Plan Update 2013*

Accountability

Demonstrating progress against outcomes and measurable objectives is foundational to any successful investment of public funds. This report is a first step towards that accountability, and the Administration will prepare annual progress reports for the remaining four years of Action Plan implementation.

TABLE 1. ESTIMATED COSTS FOR IMPLEMENTING YEARS 2-4 OF THE CALIFORNIA WATER ACTION PLAN ($ MILLIONS)

California Water Action Plan **Actions**	Estimated Costs Year 2 (FY 15-16) GF*	Prop 1*	Other Funds**	Total***	Estimated Costs Year 3-5 (FYs 16-17 thru 18-19)	Funding Sources (FYs 16-19)
Action 1: Make conservation a California way of life	$0.7	$23.2	$20.0	$43.9	$140-150	**State:** Prop 1, Other (Prop 50; FY 15-16 only, and funding sources to be determined); **Local:** ranges from 25-50% cost-share for grants, depending on source; some waivers allowed
Action 2: Increase regional self-reliance and integrated water management across all levels of government	$15.9	$170.4	$2.5	$188.8	$1,080-1,100	**State:** Prop 1, Other (Prop 84; FY 15-16 only and State Water Board fees, and funding sources to be determined); **Local:** ranges from 25-50% cost-share for grants, depending on source; some waivers allowed
Action 3: Achieve the co-equal goals for the Delta	$2.9	$0.0	$90.5	$93.4	$290-300	**State:** Prop 1, Other (Prop 1E, and funding sources to be determined); **Local:** State Water Contractors, Reclamation Districts (anticipated) **Federal:** USACE
Action 4: Protect and restore important ecosystems	$3.5	$178	$58.4	$239.9	$790-800	**State:** GF, Prop 1, Other (Prop 1E, State Water Board fees, and funding sources to be determined); **Local:** Encouraged but not required **Federal:** Potential participation
Action 5: Manage and prepare for dry periods	$20	$0.0	$0.0	$20	$7-8	**State:** GF
Action 6: Expand water storage capacity and improve groundwater management	$6.3	$25.2	$23.3	$54.8	$1,400-1,500	**State:** GF, Prop 1, Other (State Water Board fees, and funding sources to be determined); **Local:** no less than 50% cost-share for grants; some waivers allowed **Federal:** Potential participation depends on project
Action 7: Provide safe water for all communities	$0.0	$0.0	$Undetermined	$Undetermined	$Undetermined	**State:** Undetermined
Action 8: Increase flood protection	$0.0	$0.0	$1,095.8	$1,095.8	$900-1,000	**State:** Prop 1, Other (Prop 1E, and funding sources to be determined); **Local:** up to 50% cost share for grants **Federal:** 25-75% for urban projects (USACE)
Action 9: Increase operational and regulatory efficiency	$15.5	$0.0	$0.0	$15.5	$18-20	**State:** GF **Federal:** Potential participation will depend on project
Action 10: Identify sustainable and integrated financing opportunities	$0.0	$0.0	$0.0	$0.0	$9-10	**State:** To be determined
Total	**$64.7**	**$396.8**	**$1,290.5**	**$1,752**	**$4,600-4,900**	

* General Fund and Proposition 1 costs shown here are consistent with the Governor's 2015-16 proposed State Budget released on January 9, 2015.

** Examples of "other funds" include: General Obligation Bonds (Prop 50, 84, 86, 1E, 204, and 13)-primarily to cover ongoing State program delivery costs for grants awarded in previous years.

*** The FY 15-16 total cost shown here is higher than the proposed 15-16 state budget for Resources and Environmental Protection (see pp 29-32 in January 13 LAO budget overview) because this table also accounts for other funds such as State Water Board revenue fees, Cap and Trade revenues, etc.

Note: Table 1 presents estimated state costs for budget years 15-16 through 18-19 only, and the level of accuracy is higher for 15-16 and less so for out years. Additional funding – including significant funding from Proposition 1 – is planned for continuing the Action Plan-related work beyond Budget Year 18-19. The estimated costs for Action 7 are shown as "undetermined" because the State Water Board's fee program is under development. Planned expenditures for Action 7 do not include Proposition 1 funds provided to the State Water Board for wastewater treatment and drinking water infrastructure improvements. Finally, the Years 3-5 estimated costs include both projected costs reflected in the 2015-16 proposed State Budget as well as additional agencies' estimated costs.

CALIFORNIA natural resources AGENCY

cdfa CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY (CAL/EPA)

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