

Water Plan Staff Draft Objectives & Related Actions for Water Plan Update 2013

For Discussion during June 13 & 14, 2013 Web-A-Thon

This document was prepared to present and get comments on draft Update 2013 Objectives and Related Actions during the June 13 & 14, 2013 Objectives/Actions Web-A-Thon and July 9 Wrap-up Session. The Objectives and Related Actions (as revised) will be presented in the Chapter 8 Implementation Plan. The California Water Plan Update 2013 will include the strategic plan elements listed and defined in the table below. The draft Vision, Mission statement, and Goals for Update 2013 are listed on page two, followed by 17 draft Objectives and their Related Actions. The draft Objectives and Related Actions presented in this document were prepared by Water Plan staff and subject matter experts based in part on recommendations and strategies compiled from 37 featured State Companion Plans for Update 2013, as well as input from the various Water Plan Topic Caucuses. Some Related Actions are long-term, large-scale and aspirational; while others are immediate or short-term, and more specific.

Definitions for Elements of the Strategic Plan

Element	Purpose
Vision	The vision statement describes the desired future for California water resources and management and serves as a foundation for water and flood planning during the planning horizon.
Mission	The mission statement describes the California Water Plan's unique purpose and its overarching reason for existence. It identifies what it should do and why, and for whom it does it.
Goals	The goals are the desired outcome of the water plan over its planning horizon. The goals are founded on the statewide vision. Meeting the goals requires coordination among State, federal, Tribal, and local governments and agencies.
Guiding Principles	The guiding principles describe the core values and philosophies that dictate how to achieve the vision, mission, and goals. In other words, the guiding principles will describe how to make decisions and do business.
Objectives	Objectives tell what we will do and why we are doing it in order to accomplish one or more goals.
Related Actions	Related actions tell how an objective will be carried out. They describe specific actions in measurable, time-based statements of intent. They emphasize the results of actions at the end of a specific time. Some related actions must be undertaken by State government or communities over which DWR has no authority. In these cases, measure and time must be part of the entities' own strategic plans.
Performance Measures	Performance measures describe what to measure and the method by which to measure in order to determine what work was performed and what results were achieved. Performance measures may be short term, intermediate, or long term and can help with accountability and to compare how well an action has met a desired goal or objective.

Source: California Department of Water Resources 2011.

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Update 2013 Draft Vision, Mission, and Goals

Vision -- California has healthy watersheds and reliable and secure water resources and management systems. Public health, safety, and quality of life in all its rural, suburban, and urban communities are significantly improved as a result of advancements in integrated water management. The water system provides the certainty needed for sustainable economic growth, business vitality, and agricultural productivity. California's unique biological diversity, ecological values, and cultural heritage are protected and have substantially recovered.

Mission -- Updating the California Water Plan provides State, federal, tribal, regional, and local governments and organizations a continuous strategic planning forum to collaboratively:

- Recommend strategic goals, objectives, and near-term and long-term actions that would conserve, manage, develop, and sustain California's watersheds, water resources, and management systems;
- Prepare response plans for floods, droughts, and catastrophic events that would threaten water resources and management systems, the environment, property, and the health, welfare, and livelihood of the people of California; and
- Evaluate current and future watershed and water conditions, challenges, and opportunities.

Goals

1. California has water supplies that are adequate, reliable, secure, affordable, sustainable, and of suitable quality for beneficial uses to protect, preserve, and enhance watersheds, communities, and environmental and agricultural resources.
2. State government supports integrated water resources planning and management through leadership, oversight, and public funding.
3. Regional and interregional partnerships play a pivotal role in California water resources planning, water management for sustainable water use and resources, and increasing regional self-sufficiency.
4. Water resource and land use planners make informed and collaborative decisions and implement integrated actions to increase water supply reliability, use water more efficiently, protect water quality, improve flood protection, promote environmental stewardship, and ensure environmental justice in light of drivers of change and catastrophic events.
5. California is prepared for climate uncertainty by developing adaptation strategies and investing in a diverse set of actions that reduce the risk and consequences posed by climate change, which make the system more resilient to change and increase the sustainability of water and flood management systems and the ecosystems they depend on.
6. Integrated flood management, as a part of integrated water management, increases flood protection, improves preparedness and emergency response, enhances floodplain ecosystems, and promotes sustainable flood management systems.
7. The benefits and consequences of water decisions and access to State government resources are equitable across all communities.

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Objective 1 – Strengthen Integrated Regional Water Management Planning

Strengthen Integrated Regional Water Management planning to improve regional self-sufficiency, and maintain and enhance regional water management partnerships.

Related Actions	Performance Measures	Notes/Tracked in PR
1. As State-supported IRWM planning enters its second decade, State government should continue that support well into the future to help ensure continued IRWM planning and implementation throughout California.		<p>The above list of related actions does not represent a complete list of actions for Objective 1. The actions will be further developed, refined, and enhanced through the IRWM Strategic Plan stakeholder engagement process. The Strategic Plan is a featured plan of the CWP.</p> <p>The IRWM Strategic Plan stakeholder process is described in the plan Development Approach (www.water.ca.gov/irwm/stratplan/). The first series of statewide stakeholder workshops were completed in April-May, 2013 to define the vision and goals for the future of IRWM. The next series of workshops will be held in August-September, 2013 to discuss the objectives for the future of IRWM. Stakeholder input received at these workshops will be used to revise the above list.</p>
2. State government should support on-going IRWM planning and implementation efforts through the timely delivery of financial support.		
3. State government should establish a clear vision for the future of IRWM in California.		
4. State government should implement the recommendations from the Strategic Plan for the Future of IRWM in California (IRWM Strategic Plan)		
5. State government should acknowledge that additional assistance is needed for IRWM regions with significant critical water management needs, in particular, where communities lack safe drinking water or sanitation.		
6. State government should help coalesce and consolidate various local and regional water management planning efforts – such as groundwater management plans, urban and agricultural water management plans, alluvial fan water resource management efforts, salt and nutrient management plans, storm water resource management plans – into IRWM plans with the goal of reducing the requirement/need for separate, single-purpose plans, and to improve efficiency and coordination.		

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Objective 2 – Use and Reuse Water More Efficiently

Use water more efficiently with significantly greater water conservation, recycling, and reuse to help meet future water demands and adapt to climate change.

Related Actions	Performance Measures	Notes/Tracked in PR
<p>1. The State should expand the “Save Our Water” campaign to better inform all Californians on the importance and value of water and on ways to use water more efficiently. The expanded campaign should be designed with specific informational goals and objectives and should operate on a continuous basis in wet years as well as dry years. This campaign will assist local water suppliers and the State in achieving the 2020 water use targets</p>	<ul style="list-style-type: none"> • DWR and ACWA prepare expanded “Save Our Water” campaign plan • The “Save Our Water” message is widely seen and heard on both traditional and social media forums • Using advertising industry measures and metrics, the campaign is shown to achieve the established informational and educational goals • Achievement of urban water use reduction targets and agriculture water savings estimates are reported in 2105 plans 	
<p>2. The State should support on annual basis a series of regional and crop specific water management workshops in cooperation with California academic institutions such as the University of California and California State University. The workshops should provide growers the latest information on new irrigation technology and practices.</p>	<ul style="list-style-type: none"> • Water management workshops are held throughout the state • Growers adopt more efficient water management practices or technology 	
<p>3. DWR, with the SWRCB and CDPH, should prepare a comprehensive review and report of regional recycled water conditions to guide expanded statewide use of recycled water and its improved integration into the state’s water portfolio. The overall objective of this effort is to help sustain statewide water supplies by increasing the rate at which new or expanded recycled water projects are being implemented by completing regional assessments and discussing regional integration to address statewide water challenges. The initial effort will consider the findings of the 2003 Recycled Water Task Force. Regional assessments will include quantification of current and proposed recycled water capacities and demands, as well as assessing a 'fit for purpose' concept for urban, agricultural and environmental applications, will enable better use of existing facilities and provide opportunities for greenhouse gas reductions. Evaluating barriers to additional recycled water use and proposing</p>	<ul style="list-style-type: none"> • Establish a stakeholder committee, including SWRCB, CDPH, water suppliers, organizations, and the public. • Prepare a review and status of the 2003 Recycled Water Task Force findings and recommendations. • Prepare regional assessments for each hydrologic region identifying regional strategies, such as institutional issues, costs, water quality, and markets • Identify regional and statewide tools for local water suppliers to guide 	

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<p>solutions, including indirect and direct potable reuse issues, will support continued expansion of recycled water use.</p>	<p>implementation of recycled water programs.</p> <ul style="list-style-type: none"> • Identify improved practices for implementing 'fit for use' measures into recycled water planning. • Prepare final report (2015) 	
<p>4. The State should establish a water use efficiency and alternative supply research program to speed the development, testing and implementation of promising new technology and approaches to water management. The program should conduct studies in all sectors of water use including agriculture, municipal and industrial and in the alternative supply areas of recycling, greywater, storm water capture and desalination. The level of sponsored research should match that of the State's energy use efficiency research programs.</p>	<ul style="list-style-type: none"> • Research program established • Quantity and quality of research similar to energy use efficiency programs • Research results in improved California water management. 	
<p>5. DWR should develop urban water supplier efficiency metrics. The efficiency metrics should be developed so that if additional water use reductions are required beyond 2020, the metrics could be used to assign water use targets. The metrics should account for the climate, landscape area and the level of commercial, industrial and institutional water use in a supplier's service area.</p>	<ul style="list-style-type: none"> • DWR develops metrics that accurately identifies efficient water suppliers. • Developed metrics are supported by WUE stakeholders and general public 	
<p>6. DWR, in cooperation with urban water use community, should conduct a study to identify the barriers, costs and technical assistance required to establish standard urban water use classifications for water use reporting. The standard classifications would allow for water supplier data to be more accurately aggregated at the regional and statewide levels and permit a more detailed and accurate reporting of California water use.</p>	<ul style="list-style-type: none"> • DWR conducts the classification study, barriers, costs and potential solutions for implementation are identified. • Standard classifications implemented. 	
<p>7. Agricultural and urban water suppliers should report water supply system losses in their water management plans. Agricultural suppliers should measure and report canal seepage and district outflows. Urban water suppliers should calculate and report distribution system losses.</p>	<ul style="list-style-type: none"> • Urban and agricultural water suppliers report distribution system water loss in their 2015 water management plans. 	
<p>8. All levels of government should establish policies and provide incentives to promote better urban runoff management and reuse. Urban and, where feasible, rural communities should invest in facilities to capture, store, treat and use urban storm water runoff, such as percolation to usable aquifers, underground storage beneath parks, small surface basins, in drains, or the creation of catch basins or sumps downhill of development. Depending on the source and application captured storm water may be suitable for use without additional treatment, or it may be blended to augment local supplies.</p>	<ul style="list-style-type: none"> • Implementation of low impact development increases significantly across the state 	

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Objective 3 – Expand Conjunctive Management of Multiple Supplies

Advance and expand conjunctive management of multiple water supply sources with existing and new surface and groundwater storage to prepare for future droughts, floods, and climate change.

Related Actions	Performance Measures	Notes/Tracked in PR
<p>1. Promote public education about California groundwater. By July 1, 2016, DWR and SWRCB will work with other State, tribal, local, and regional agencies and organizations to develop a groundwater education program and materials for use in the schools and public outreach. Key educational concepts should include:</p> <ul style="list-style-type: none"> a. Groundwater supply variability b. Interconnection of surface water and groundwater c. Groundwater recharge benefits and challenges d. Importance of protecting groundwater quality and recharge areas e. Seasonal versus long-term changes in groundwater quantity f. Importance of developing a groundwater budget. 		<p>Please be aware that none of these proposed actions are currently funded and that completion of these proposed actions are 100% dependent upon implementation of funding, either through the CWP finance recommendations or through alternative processes.</p>
<p>2. Improve collaboration and coordination among State, federal, tribal, local, and regional agencies and organizations to ensure data integration, coordinate program implementation, and minimize duplication of efforts. By January 1, 2017, and on an ongoing basis, DWR and the SWRCB will coordinate with State, federal, tribal, local, and regional agencies and organizations to conduct the following activities.</p> <ul style="list-style-type: none"> a. Provide State incentives to local water management agencies to coordinate with Tribes and other agencies involved in activities that may affect long-term sustainability of water supply and water quality. b. Outline and implement process to improve coordination and cooperation among State, federal, tribal, and local agencies to improve the process for timely regulatory approval, alignment of rules or guidelines, and environmental permitting for the development, implementation, and operation of conjunctive management, recharge, and water banking facilities. c. Expedite environmental permitting for implementation of conjunctive 		

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<p>management, recharge, and water banking facilities when facility operations increase ecosystem services, and includes predefined benefits/mitigation for wildlife and wildlife habitat.</p> <p>d. Establish a process led by the SWRCB to identify measures whereby agencies proposing to use peak surface water flow for groundwater recharge are not subject to potential protest of their existing water right, in order to stipulate groundwater recharge as a reasonable beneficial use of their surface water right.</p>		
<p>3. Increase availability and sharing of groundwater information. In coordinate with State, federal, tribal, local, and regional agencies and organizations to conduct the following activities.</p> <p>a. By January 1, 2016, Governor’s Office of Planning and Research (OPR) develops a coordination plan to disseminate groundwater information.</p> <p>b. By January 1, 2016, the State of California will consider changes to Section 13752 of the California Water Code to improve public access to Well Completion Reports, while addressing key infrastructure security and private ownership concerns.</p> <p>c. By January 1, 2018, State agencies will work collaboratively with water agencies and driller organizations to 1) develop an on-line Well Completion Report submittal system, 2) digitize and make publically available existing Well Completion Reports groundwater to allow improved analysis of groundwater data, and to 3) build upon efforts begun in 2012 to update well drilling, construction, and abandonment standards.</p> <p>d. By December 31, 2018, DWR will implement the DWR web-based Water Planning and Information Exchange (Water PIE) system that will provide on-line access to groundwater supply and demand information, groundwater level and quality data, groundwater recharge and conjunctive management activities, groundwater management planning, land subsidence information, and groundwater basin studies.</p>		
<p>4. Strengthen and expand the CASGEM Program for its long-term sustainability.</p>		

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<ul style="list-style-type: none"> a. By January 31, 2015, and renewable in each five-year cycle ending in 8 and 3, the State of California commits long-term, dedicated funding to the CASGEM Program to implement monitoring, assessment, and maintenance of baseline groundwater levels, and expand the program to include the fractured rock hydrogeology in areas deemed important. b. By January 31, 2015, and renewable in each five-year cycle ending in 8 and 3, the State continues funding for local groundwater monitoring and management activities, and feasibility studies that increase the coordinated use of groundwater and surface water by giving priority to projects that include filling regional and Statewide data gaps and conjunctive management conducted in accordance with an IRWM plan. Thus encourage or require and provide incentives to local water management agencies to implement groundwater monitoring programs to provide additional data and information needed to adequately characterize a groundwater basin, subbasin, aquifer or aquifers under the jurisdiction of the agency. c. By December 31, 2018, expand and fund CASGEM by including and implementing recommendations (3) and (4) below as integral components of the Program, and thus use CASGEM as the vehicle to update Bulletin 118 in the future. 		
<p>5. Under the CASGEM Program, improve understanding of California groundwater basins by conducting groundwater basin assessments of CASGEM high priority basins in conjunction with the California Water Plan (CWP) five-year production cycle. By December 31, 2018, DWR will coordinate with State, federal, tribal, local, and regional agencies to utilize the CASGEM Basin Prioritization information to conduct the following groundwater basin assessment activities.</p> <ul style="list-style-type: none"> a. Develop the initial and reoccurring schedule and scope for groundwater basin assessments that will allow data and information sharing under the CWP five-year production cycle. b. Compile and evaluate new and existing groundwater supply and demand information, groundwater level and quality data, groundwater 		

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<p>recharge and conjunctive management activities, surface water/groundwater interaction, groundwater management planning, land subsidence information, and existing groundwater basin studies, in accordance with the scope identified in (a).</p> <p>c. Develop detailed groundwater basin assessment reports by Hydrologic Region and groundwater basin. The report will characterize sustainability of groundwater resources in terms of historical and existing trends, and future scenario projections, and will identify recommended incentives to establish basin-wide water budgets and adaptive management practices which will promote sustainable groundwater quantity, quality, and the maintenance of groundwater ecosystem services.</p> <p>d. Develop a summary report to California Legislature identifying the <i>State of California Groundwater</i>, that will highlight key findings and recommendations associated with detailed groundwater basin assessment by Hydrologic Region..</p>		
<p>6. Conduct an assessment of all SB 1938 groundwater management plans and develop guidelines to promote best practices in groundwater management. In coordination with State, federal, tribal, local, and regional agencies, DWR will conduct the following activities.</p> <p>a. By January 1, 2015, the Legislature amends the appropriate code(s) to authorize DWR to evaluate and assess groundwater management and planning, and to develop groundwater management and implementation guidelines.</p> <p>b. By January 1, 2016, DWR conducts outreach to local and regional agencies to supplement and verify Groundwater Management Plans (GWMP) inventory and information initiated by DWR as part of Water Plan Update 2013.</p> <p>c. By January 1, 2017, DWR works with regional and local agencies to a) assess their GWMP implementation and practices, in accordance with existing California Water Code requirements to a) identify technical, legal, institutional, physical, and fiscal constraints associated with</p>		

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<p>existing groundwater management programs, b) identify opportunities associated with groundwater management and planning activities, and c) gain an understanding of how agencies are implementing actions to use and protect groundwater.</p> <p>d. By January 1, 2018, DWR works with regional and local agencies to develop groundwater management and planning and program implementation guidelines. The guidelines will provide a clear roadmap for GWMP development and implementation by identifying and clarifying components, processes, and standards and by establishing provisions for periodic review, report, update, and amend as necessary to facilitate effective and sustainable groundwater management. The guidelines will also emphasize groundwater management in coordination with or as part of an IRWM plan.</p> <p>e. By December 31, 2018, DWR will develop a GWMP Advisory Committee and begin coordination with regional and local agencies and tribal communities that have not developed basin-wide GWMPs, to develop such plans with assistance and guidance from the GWMP Advisory Committee. The GWMP Advisory Committee will help guide the development, educational outreach, and implementation of the GWMPs. Advanced tools development should be pursued as part of this activity to help quantify benefits and assess robustness of alternative management strategies</p>		
<p>7. Develop analytical tools to assess conjunctive management and groundwater management strategies. By December 31, 2018, DWR and the SWRCB, in collaboration with State, federal, tribal, local, and regional agencies will conduct the following activities.</p> <p>a. Develop a conjunctive management tool that will help identify conjunctive management opportunities (projects) and evaluate implementation constraints associated with the 1) availability of water for recharge, 2) available means to convey water from source to destination, 3) water quality issues, 4) environmental issues, 5)</p>		

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<p>jurisdictional issues, 6) costs and benefits, and 7) the potential interference between a proposed project and existing projects.</p> <p>b. The State will encourage or requires local and regional agencies to develop or adopt analytical tools to support integrated groundwater/surface water modeling and scenario analysis for assessing alternative groundwater management strategies as part of their IRWM planning activities.</p>		
<p>8. Increase Statewide groundwater recharge and storage by two (2) million acre-feet (current average annual Statewide groundwater use is about 16 maf). In coordination with State, federal, tribal, local, and regional agencies, the following activities will occur.</p> <p>a. By January 1, 2016, the Legislature revises the Water Code to 1) include disincentives to critically overdraft groundwater basins and 2) include incentives for increasing recharge.</p> <p>b. By January 1, 2017, DWR compiles, assesses, and provides status update on Statewide aquifer recharge area delineation and mapping required by AB 359 and to identify priority recharge areas.</p> <p>c. By January 1, 2017, State agencies work with federal, Tribal, local, and regional agencies to 1) develop guidelines clarifying interagency alignment and improved interagency coordination to facilitate local groundwater recharge and storage projects, 2) develop guidelines for coordinating and aligning land use planning with groundwater recharge area protection, and 3) catalogue best science and technologies applied to groundwater recharge and storage.</p> <p>d. By January 1, 2018, DWR and SWRCB will compile available data, identify missing data needed to evaluate natural groundwater recharge, discharge, related ecosystems, and groundwater recharge and storage projects, and develop a plan to fill identified data gaps to support evaluation of groundwater recharge and storage.</p> <p>e. By January 1, 2018, and on an ongoing basis, the State of California encourages local and regional agencies - when technically, legally, and</p>		

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<p>environmentally feasible – to manage the use of available aquifer space for managed recharge and develop multi-benefit projects that generate source water for groundwater storage by capturing water not used by other water users or the environment.</p> <p>f. By December 31, 2018, the State of California encourages and funds local and regional agencies, and tribal communities to 1) identify and evaluate local and regional opportunities to reduce runoff and increase recharge on residential, school, park, and other unpaved areas, 2) coordinate groundwater recharge and multi-benefit flood control projects to enhance recharge using storm flows, and 3) conduct pilot studies (one regional and one inter-regional) to identify additional opportunities and needs for advancing recharge opportunities.</p>		
<p>9. DWR will complete the evaluation and documentation for the System Reoperation Study by 2015. DWR in collaboration with willing participants is evaluating the potential options for reoperation of the State’s existing water supply and flood control systems to achieve the objectives of improved water supply reliability, flood hazard reduction, and ecosystem protection and enhancement. The reoperation options will focus on integrating flood protection and water supply systems, reoperating the existing water system in conjunction with effective groundwater management, and improving existing water conveyance systems.</p>	<p>Progress on completing the evaluation and documentation for the System Reoperation Study by 2015.</p>	
<p>10. DWR and the U.S. Bureau of Reclamation should:</p> <ol style="list-style-type: none"> a. Complete the North-of-the-Delta Offstream Storage, Shasta Lake Water Resources, and Upper San Joaquin River Basin Storage investigations by the end of 2015 b. Complete the investigation of the further enlargement of the Los Vaqueros Reservoir by the end of 2016 c. Complete the San Luis Reservoir expansion Appraisal-Level Study by the end of 2013 <p>In addition, for these projects:</p> <ol style="list-style-type: none"> a. Evaluate the potential additional benefits of integrating operations of new storage with proposed Delta conveyance improvements, and recommend the critical projects that need to be implemented to expand the State’s 	<p>Progress on completing: (1) the North-of-the-Delta Offstream Storage, Shasta Lake Water Resources, and Upper San Joaquin River Basin Storage investigations by the end of 2015, (2) the investigation of the further enlargement of the Los Vaqueros Reservoir by the end of 2016, (3) the San Luis Reservoir expansion Appraisal-Level Study by the end of 2013.</p>	

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surface storage. b. Identify the beneficiaries and cost share partners for the non-public benefits by 2015 c. Request funding from the water bond for the public benefits portion through the California Water Commission by 2016, if a State water bond passes in 2014		
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Objective 4 – Protect Surface Water and Groundwater Quality

Protect and restore surface water and groundwater quality to safeguard public and environmental health and secure California's water supplies for beneficial uses.

Related Actions	Performance Measures	Notes/Tracked in PR
1. Implement strategies to fully protect the past, present, and probable future beneficial uses for all 2006-listed [CWA section 303(d)] water bodies by 2030. <ul style="list-style-type: none"> ○ Implement a statewide strategy to efficiently prepare, adopt, and implement total maximum daily loads (TMDLs), which result in water bodies meeting water quality standards, and adopt and begin implementation of TMDLs for all 2006-listed water bodies by 2019. ○ Manage urban runoff volume to reduce pollutant loadings, reduce wet weather beach postings and closures by 75 percent by 2020, eliminate dry weather beach closures and postings by 2012 and, where applicable, explore opportunities for using management techniques to promote sustainable water supplies. ○ Take appropriate enforcement actions and innovative approaches as needed to protect and restore the beneficial uses of all surface waters. 		Related Actions 1-6 are from the 2009 Water Plan.
2. Improve and protect groundwater quality in high priority use basins by 2030. <ul style="list-style-type: none"> ○ Implement an integrated groundwater protection approach by 2012 to improve and protect groundwater in high-use basins that <ul style="list-style-type: none"> ● evaluates and regulates activities that impact or have the potential to impact beneficial uses, ● recognizes the effects of groundwater and surface water interactions on groundwater quality and quantity, and ● encourages and facilitates local management of groundwater resources. ○ Identify strategies to ensure that communities that rely on 		

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<p>contaminated groundwater will have a reliable drinking water supply, which may include remediation of polluted or contaminated groundwater, surface water replacement, and groundwater treatment.</p> <ul style="list-style-type: none"> ○ Maintain high quality groundwater basins through application of the antidegradation directives of the State Water Board via waste discharge requirements (WDRs) and the remediation of polluted or contaminated groundwater. ○ Prepare consistent salt/nutrient management plans for every groundwater basin/subbasin in California by 2016. These salt/nutrient management plans should be prepared as outlined in the State Water Board's Water Quality Control Policy for Recycled Water adopted May 14, 2009, the purpose of which is to increase the use of recycled water from municipal wastewater sources that meets the definition in Water Code section 13050(n), in a manner that implements state and federal water quality laws. 		
<p>3. Increase sustainable local water supplies available for meeting existing and future beneficial uses by 1,725,000 acre-feet per year (725,000 acre-feet per year through water recycling and 1 million acre-feet per year through water conservation), in excess of 2002 levels, by 2015, and ensure adequate flows for fish and wildlife habitat.</p> <ul style="list-style-type: none"> ○ Promote implementation of best management practices, and improve compliance with requirements, for water conservation consistent with the Strategic Workplan for Activities in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and other relevant State and regional efforts. ○ Increase the public acceptance and promote the use of recycled water and the reuse of storm water and gray water as locally available, sustainable water supplies consistent with the Climate Change Draft Scoping Plan developed pursuant to the California Global Warming Solutions Act of 2006 (AB 32) and other relevant State and regional efforts. ○ Ensure that adequate stream flows are available for the protection of fish and wildlife habitat while meeting the need for diversions of water 		

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<p>for other uses. (See Objective 5)</p>		
<p>4. Comprehensively address water quality protection and restoration, and the relationship between water supply and water quality, and describe the connections between water quality, water quantity, and climate change, throughout California’s water planning processes.</p> <ul style="list-style-type: none"> ○ Prepare, as a part of the California Water Plan, a comprehensive California Water Quality Plan to help guide the State’s water management activities, including protection and restoration of water quality through the integration of statewide policies and plans, regional water quality control plans (Basin Plans), and the potential effects of climate change on water quality and supply. ○ Basin Plans are consistently organized to provide a clear structure that readily conveys key elements (e.g., beneficial uses, potential impacts of climate change, water quality objectives, goals for watersheds, plans for achieving those goals, and monitoring to inform and adjust the plans) and that fully integrates other water quality control plans such as the California Ocean Plan. ○ Adopt Basin Plan amendments by collaborating in third-party initiated processes that incorporate Water Board requirements and stakeholder interests. An example is the Santa Ana Regional Water Board’s Basin Plan amendment initiated with funding assistance from stakeholders as required in the State Water Board’s Recycled Water Policy. 		
<p>5. State government should lead an effort with local agencies and governments to remediate the causes and effects of pollution and contamination on surface water and groundwater quality. An evaluation should be completed by 2015 to inventory, evaluate, and examine the effect of contaminants on public health, ecosystem health, long-term sustainability of water resources and treatment costs, and should identify cost-effective ways and propose management strategies to improve water quality.</p> <ul style="list-style-type: none"> ○ State government should work with State and federal agencies, Tribes, local Integrated Regional Water Management partnerships, and other third parties to assess, prioritize, fund, and remediate private, State, federal, and Tribal lands with abandoned mines or other mining toxin problems. 		
<p>6. To safeguard water quality for all beneficial uses, State government will adopt preventive programs that integrate source water protection, pollution prevention, matching water quality to use, salt and salinity management, urban</p>		

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<p>runoff management, groundwater/aquifer remediation, and water treatment and distribution.</p>		
<p>7. CDPH will continue to implement its Small Water System Program Plan to assist small water systems (especially those serving disadvantaged communities) that are unable to provide water that meets primary drinking water standards.</p> <ul style="list-style-type: none"> a. CDPH will share the Small Water System Program Plan with relevant state, federal, and local agencies, and stakeholders to foster additional opportunities for funding, coordinate construction projects in communities, and to assist in local and regional planning efforts. b. CDPH will utilize Geographic Information System (GIS) tools to identify large water systems in close proximity to targeted small water systems, and conduct targeted outreach to these large water systems to encourage them to consolidate the small systems into their service area. c. CDPH will work with stakeholders to identify obstacles to consolidation (including financial, legal and local issues) and develop possible actions to address these obstacles. d. CDPH will participate in statewide planning efforts to address the water infrastructure needs of small water systems. CDPH should seek input from other states and the federal government on innovative, successful efforts to address the needs of small water systems, and should share its results on implementation of its Small Water System Program Plan. 	<p>Bring 63 small community public water systems that currently violate primary drinking water quality standards into compliance.</p>	

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Objective 5 – Expand Environmental Stewardship

Practice, promote, improve, and expand environmental stewardship to protect biological diversity and sustain natural water and flood management systems in watersheds, on floodplains, and in aquatic habitats.

Related Actions	Performance Measures	Notes/Tracked in PR
<p>1. All agencies that own and operate water and flood management systems should include actions in their respective natural resource management plans that restore natural processes of erosion and sedimentation in rivers and streams and increase and improve the quantity, diversity, quality, and connectivity of riverine and floodplain habitats. The combined and coordinated local planning activities, including Integrated Regional Water Management (IRWM), Urban Water Management Plans, Natural Community Conservation Plans, Habitat Conservation Plans, and other water resource or floodplain focused efforts, should include objectives to meet these goals.</p> <ul style="list-style-type: none"> ○ By 2020, re-establish one million acres of contiguous natural riparian and floodplain habitat that is subject to periodic flooding for at least fifty percent of the river miles in the regions. ○ Contribute to AB 32 GHG reduction goals through enhanced carbon sequestration by re-establishing 500,000 acres of floodplain forest vegetation and restoring 500,000 acres of upper watershed forests. ○ IRWM and regional flood management plans that incorporate corridor connectivity and restoration of native aquatic and terrestrial habitats to support increased biodiversity and resilience to a changing climate should receive additional credits in State government water and flood grant programs. (See objectives 1, 2, and 6) 		
<p>2. State government should work with dam owners/operators, federal resource management agencies, Tribes, and other stakeholders to evaluate opportunities to introduce or reintroduce anadromous fish to upper watersheds. Re-establishment of anadromous fish upstream of dams may provide flexibility in providing cold water downstream, in conjunction with revised water delivery schedules. (See Objectives 1, 3, and 6)</p>		
<p>3. By 2015, State government should identify and prioritize for protection lands at the boundaries of San Francisco Bay and the Sacramento-San Joaquin Delta that will provide the habitat range for tidal wetlands to adapt to and shift with</p>		

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<p>sea level rise. Such lands can help maintain estuarine ecosystem functions and create natural land features that act as storm buffers, protecting people and property from flood damages related to sea level rise and storm surges. (See Objectives 6 and 7)</p>		
<p>4. By 2015, State government should prioritize and expand Delta island and Suisun Marsh subsidence reversal and land accretion projects to create equilibrium between land and estuary elevations along select Delta fringes and islands. Sediment-soil accretion is a cost-effective, natural process that can help sustain the Delta and Suisun Marsh ecosystem, protect communities from flooding, and sequester carbon. (See Objectives 6 and 7)</p>		
<p>5. By 2030, the State and federal government should encourage, prioritize, and financially support actions to protect, enhance, and restore at least 1 million acres of upper watershed forests and meadows that act as natural water and snow storage. These actions should include efforts to reduce the risks and impacts of catastrophic wildfire. This measure improves water supply reliability, protects water quality, and safeguards high-elevation habitats and migratory corridors. (See objectives 1, 3, and 4)</p>		
<p>6. State and federal government should fund natural resource protection agencies to study and support reallocation of water to protect fish and wildlife and their habitats. These actions can serve as an adaptation to climate change.</p>		
<p>7. Government and the private sector should develop and support programs that pay private landowners and managers to protect and improve habitat and nature's water-related services, including flood protection, water quality, groundwater recharge and storage, reversal of land subsidence, prevention of large wildfires, shading of rivers and streams, and reduced soil erosion.</p>		
<p>8. Federal, state, and local agencies should provide greater resources and coordinate efforts to control invasive species and prevent their introduction.</p>		

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Objective 6 – Improve Flood Management Using an Integrated Water Management Approach

Promote and practice flood management using an integrated water management (IWM) approach that reduces flood risk to people and property while maintaining and enhancing natural floodplain functions. This IWM approach utilizes a systemwide perspective and considers all aspects of water management including public safety, environmental sustainability, water supply reliability, water quality, emergency management, resiliency, and economic stability.

Related Actions	Performance Measures	Notes/Tracked in PR
<p>1. In April 2013, DWR published the <i>California Flood Future Report: Recommendations for Managing the State’s Flood Risk</i>. This plan identifies seven recommendations that can be implemented consistent with an IWM approach to flood management. The recommendations are intended to guide discussions and encourage collaboration between public agencies, elected officials, and key stakeholders to achieve necessary policy reforms and program results. The State should take the lead in working with Federal and local flood management and resource agencies to:</p> <ul style="list-style-type: none"> ○ Update the Flood Future Report by 2018. ○ Conduct regional flood risk assessments to better understand statewide flood risk by identifying acceptable local level of flood risk, developing a consistent, regionally appropriate flood risk assessment methodology, and conducting flood risk assessments. ○ Increase public awareness about flood risk to facilitate informed decisions by sharing information and materials and developing consistent flood management messaging. ○ Increase support for flood emergency preparedness, response, and recovery programs to reduce flood risk by identifying data and forecasting needs, conducting statewide flood emergency management (EM) exercises, working with locals to improve flood EM plans, and support increased coordination between flood EM responders, planners, facility managers, and resource agencies. (see Objective 8) ○ Encourage land use planning practices that reduce the 		

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<p>consequences of flooding by working with local flood management agencies to develop best management planning principles (BMPs) for local decision-makers, facilitating regular coordination between planners, resource managers, and EM managers, and linking funding to implementing land use BMPs. (see Objective 15)</p> <ul style="list-style-type: none"> ○ Implement flood management from regional, systemwide, and statewide perspectives to provide multiple benefits by developing regional flood management collaboratives to identify and prioritize local projects as well as improve coordination between water management and flood management entities. ○ Increase collaboration among public agencies to improve flood management planning, policies and investments by forming regional working teams to address permitting, planning, and implementation issues including developing a methodology to prioritize and implement flood management investments. (see Objective 16) ○ Establish sufficient and stable funding mechanisms to reduce flood risk by improving access to financing information and assessing the applicability of financing options, and proposing new strategies in a statewide Flood Management Finance Strategic Plan. (see Objective 17) 		
<p>2. In June 2012, the Central Valley Flood Protection Board adopted the first <i>Central Valley Flood Protection Plan (CVFPP)</i>. Prepared by DWR, the plan presents a long-term vision for improving integrated flood management in the Central Valley, and achieving a more flexible, resilient, and sustainable flood management system over time. In implementing this vision, the State should take the following actions:</p> <ul style="list-style-type: none"> ○ Update the CVFPP in years ending in 2 and 7 (a) ○ Continue to work with local and regional entities and the federal government to plan and refine physical improvements to the State Plan of Flood Control, consistent with the goals of the 		

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<p>CVFPP (b)</p> <ul style="list-style-type: none"> ○ Periodically update the <i>Flood Control System Status Report</i>, which provides information on the current status and conditions of State Plan of Flood Control facilities (c) ○ Continue to develop criteria and guidance to assist local cities and counties located within the Sacramento-San Joaquin Valley to make findings related urban level of flood protection consistent with State law(d) ○ Continue to develop policies, guidance, and funding mechanisms to implement flood management projects using an integrated water management approach in the Central Valley consistent with the CVFPP (e) ○ Continue to develop guidance and take actions to support wise management of floodplains and residual flood risks present-in floodplains protected by the State Plan of Flood Control(f) 		
<p>3. In May 2013, the Delta Stewardship Council adopted the Delta Plan. The Delta Plan was developed to guide State and local agencies to help achieve the coequal goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. To support the implementation of the Delta Plan, the following flood related actions should be taken:</p> <ul style="list-style-type: none"> ○ Establish a Delta Flood Risk Management Assessment District with fee assessment authority (including over State infrastructure) to provide adequate flood control protection and emergency response for the regional benefit of all beneficiaries, including landowners, infrastructure owners, and other entities that benefit from the maintenance and improvement of Delta levees, such as water users who rely on the levees to protect water quality. ○ The State should evaluate a bypass and floodway on the San Joaquin River near Paradise Cut that would reduce flood stage on the mainstem San Joaquin River adjacent to the urban and 		

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<p>urbanizing communities of Stockton, Lathrop, and Manteca in accordance with Water Code section 9613(c).</p> <ul style="list-style-type: none"> ○ The State should evaluate whether additional areas both within and upstream of the Delta should be designated as floodways including considering the anticipated effects of climate change in its evaluation of these areas. ○ The State should develop criteria to define locations for future setback levees in the Delta and Delta watershed. ○ Require adequate levels of flood insurance for residences, businesses, and industries in floodprone areas. ○ The State should consider statutory and/or constitutional changes that would address the State's potential flood liability, including giving State agencies the same level of immunity with regard to flood liability as federal agencies have under federal law. ○ USACE should consider a variance that exempts Delta levees from the U.S. Army Corps of Engineers' levee vegetation policy due to ecosystem value of remaining riparian and shaded riverine aquatic habitat along Delta levees. 		
<p>4. Communities implementing flood management projects should, where feasible, evaluate and incorporate alternatives that protect, maintain, or improve utilization of floodplains, including use of setback levees, riparian habitats and to reconnect river and streams with their natural floodplains, as well as better utilize natural floodplain processes. These evaluations should consider the impacts of sea level rise and climate change.</p>		

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Objective 7 – Manage a Sustainable California Delta

Manage the Delta as both a critically important hub of the California water system and as California’s most valuable estuary and wetland ecosystem. Achieve the two coequal goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects, maintains, and, where possible, enhances and restores the overall quality of the Delta environment, including, but not limited to, Delta culture, agriculture, wildlife habitat, and recreational activities and improves the Delta’s flood protection to ensure an increased level of public health and safety.

Related Actions	Performance Measures	Notes/Tracked in PR
1. State or local public agencies undertaking covered actions must file certifications of consistency with the Delta Stewardship Council. Certifications of Consistency must include detailed findings that demonstrate how the covered action is consistent with all the policies of the Delta Plan.		
2. Provide a more reliable water supply for California by implementing the following: <ul style="list-style-type: none"> a. All water suppliers should fully implement applicable water efficiency and water management laws, including urban water management plans, the 20% reduction in statewide urban per capita water usage by 2020, agricultural water management plans and other applicable water laws, regulations, or rules. b. The State Water Resources Control Board should evaluate all applications and petitions for a new water right or a new or changed point of diversion, place of use, or purpose of use that would result in new or increased long-term average use of water from the Delta watershed for consistency with the constitutional principle of reasonable and beneficial use. c. The Department of Water Resources, in consultation with the Delta Stewardship Council, the State Water Resources Control Board, and others, should develop and approve, by December 31, 2014, guidelines for the preparation of a water supply reliability element as part of the update of an urban water management plan, agricultural water management plan, integrated water management plan, or other plan that provides equivalent information about the supplier’s planned investments in water conservation and water supply development. The expanded water supply reliability element should include the details recommended in the Delta Plan. Water suppliers that receive water from the Delta watershed should include an expanded water supply reliability element in their water management plans, 		

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<p>starting in 2015.</p> <p>d. The Department of Water Resources and the State Water Resources Control Board should establish an advisory group with other state agencies and stakeholders to identify and implement measures to reduce impediments to achievement of statewide water conservation, recycled water, and stormwater goals by 2014. This group should evaluate and recommend updated goals for additional water efficiency and water resource development by 2018.</p> <p>e. The Department of Water Resources, the State Water Resources Control Board, the Department of Public Health, and other agencies, in consultation with the Delta Stewardship Council, should revise State grant and loan ranking criteria by December 31, 2013, to be consistent with Water Code section 85021 and to provide a priority for water suppliers that includes an expanded water supply reliability element in their adopted urban water management plans, agricultural water management plans, and/or integrated regional water management plans.</p> <p>f. DWR and the USBR will complete the Bay Delta Conservation Plan (both the Habitat Conservation Plan[HCP]/Natural Communities Conservation Plan [NCCP] and the Environmental Impact Report/Environmental Impact Statement[EIR/EIS]), a 50-year ecosystem-based plan designed to restore fish and wildlife species in the Delta in a way that protects California’s water supplies while minimizing impacts to Delta Communities and farms, by early 2014.</p> <p>g. Upon adoption of BDCP and receiving the necessary permits by the regulating agencies, DWR and the USBR will implement the 22 proposed Conservation Measures in BDCP to help wildlife and reverse the decline of native fish populations in the Delta. These measures in particular aim to help the delta smelt, salmon, and other native fish species listed under the U.S. and California endangered species acts.</p> <p>h. The Department of Water Resources, in coordination with the State Water Resources Control Board, the Department of Public Health, Public Utilities Commission, Energy Commission, Bureau of Reclamation, California Urban Water Conservation Council, and other stakeholders, should develop a coordinated statewide system for water use reporting. Water suppliers that export water from, transfer water through, or use water in the Delta</p>		
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<p>watershed should be full participants in the data base.</p> <ul style="list-style-type: none"> i. The Department of Water Resources, in consultation with the State Water Resources Control Board, and other agencies and stakeholders, should evaluate and include in the next and all future California Water Plan updates information needed to track water supply reliability performance measures identified in the Delta Plan, including an assessment of water efficiency and new water supply development, regional water balances, improvements in regional self-reliance, reduced regional reliance on the Delta, and reliability of Delta exports, and an overall assessment of progress in achieving the coequal goals. j. Financial and technical assistance. Immediately provide financial incentives and technical assistance through the Integrated Regional Water Management Plans and Local Groundwater Assistance Program to improve surface water and groundwater monitoring and data management. 		
<p>3. Water quality in the Delta should be maintained at a level that supports, enhances, and protects beneficial uses identified in the applicable State Water Resources Control Board or regional water quality control board water quality control plans.</p> <ul style="list-style-type: none"> a. The State Water Resources Control Board should update the Bay-Delta Water Quality Control Plan objectives as follows: <ul style="list-style-type: none"> i. By June 2, 2014, adopt and implement updated flow objectives for the Delta that are necessary to achieve the coequal goals. ii. By June 2, 2018, adopt, and as soon as reasonably possible, implement flow objectives for high-priority tributaries in the Delta watershed that are necessary to achieve the coequal goals. b. The State Water Resources Control Board and Regional Water Quality Control Boards should work collaboratively with the Department of Water Resources, Department of Fish and Wildlife, and other agencies and entities that monitor water quality in the Delta to develop and implement a Delta Regional Monitoring Program that will be responsible for coordinating monitoring efforts so Delta conditions can be efficiently assessed and reported on a regular basis. c. The Department of Fish and Wildlife and other appropriate agencies should 		

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<p>prioritize and implement actions for nonnative invasive species from the <i>Conservation Strategy for Restoration of the Sacramento–San Joaquin Delta Ecological Management Zone and the Sacramento and San Joaquin Valley Regions</i> (DFG 2011).</p>		
<p>4. The Department of Fish and Wildlife, the Delta Conservancy, and other ecosystem restoration agencies should encourage habitat enhancement and wildlife-friendly farming systems on agricultural lands to benefit both the environment and agriculture.</p>		
<p>5. The Delta Protection Commission should complete its application for designation of the Delta and Suisun Marsh as a National Heritage Area and the federal government should complete the process in a timely manner.</p> <p style="padding-left: 20px;">a. The Department of Fish and Wildlife, in cooperation with other public agencies, should collaborate with nonprofits, private landowners, and business partners to expand wildlife viewing, angling, and hunting opportunities.</p>		
<p>6. By January 1, 2014, responsible local, State, and federal agencies with emergency response authority should consider and implement the recommendations of the Delta Multi-Hazard Coordination Task Force. Such actions should support the development of a regional response system for the Delta.</p> <p style="padding-left: 20px;">a. By January 1, 2014, in consultation with local agencies, the Department of Water Resources should expand its emergency stockpiles to make them regional in nature and usable by a larger number of agencies in accordance with Department of Water Resources' plans and procedures. The Department of Water Resources, as a part of this plan, should evaluate the potential of creating stored material sites by "over-reinforcing" west Delta levees.</p> <p style="padding-left: 20px;">b. By January 1, 2014, local levee maintaining agencies should consider developing their own emergency action plans, and stockpiling rock and flood fighting materials.</p> <p style="padding-left: 20px;">c. By January 1, 2014, state and local agencies and regulated utilities that own and/or operate infrastructure in the Delta should prepare coordinated emergency response plans to protect the infrastructure from long-term outages resulting from failures of the Delta levees. The emergency procedures should consider methods that also would protect Delta land use</p>		

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<p>and ecosystem.</p>		
<p>7. The Legislature should take action to reduce flood risk in the Delta:</p> <ul style="list-style-type: none"> a. The Legislature should create a Delta Flood Risk Management Assessment District with fee assessment authority (including over State infrastructure) to provide adequate flood control protection and emergency response for the regional benefit of all beneficiaries, including landowners, infrastructure owners, and other entities that benefit from the maintenance and improvement of Delta levees, such as water users who rely on the levees to protect water quality b. The Central Valley Flood Protection Board should evaluate whether additional areas both within and upstream of the Delta should be designated as floodways and these efforts should consider the anticipated effects of climate change in its evaluation of these areas. c. The Legislature should fund the Department of Water Resources and the Central Valley Flood Protection Board to evaluate and implement a bypass and floodway on the San Joaquin River near Paradise Cut that would reduce flood stage on the mainstem San Joaquin River adjacent to the urban and urbanizing communities of Stockton, Lathrop, and Manteca. d. The Legislature should require an adequate level of flood insurance for residences, businesses, and industries in floodprone areas. 		

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Objective 8 – Prepare Prevention, Response, and Recovery Plans

Prepare prevention, response, and recovery plans for floods, droughts, and catastrophic events to help residents and communities, particularly disadvantaged communities, make decisions that reduce the consequences and recovery time of these events when they occur.

Related Actions	Performance Measures	Notes/Tracked in PR
<p>1. Communities in floodplains should consider the consequences of flooding and should develop, adopt, practice, and regularly evaluate formal flood emergency preparedness, response, evacuation, and recovery plans (see Objective 6).</p> <ul style="list-style-type: none"> ○ State government should assist disadvantaged communities located in floodplains to prepare for and recover from flood emergencies. 		These Related Actions are from the 2009 Water Plan.
<p>2. By December 2010, the water shortage contingency plans prepared as part of Urban Water Management Plans and IRWM drought contingency plans should assume, until more accurate information is available, a 20 percent increase in the frequency and duration of future dry conditions.</p>		
<p>3. By February 2010, DWR will develop a long-term California Drought Contingency Plan (and update it on the same schedule as the California Water Plan) that includes:</p> <ul style="list-style-type: none"> ○ articulation of a coordinated strategy for preparing for, responding to, and recovery from drought; ○ assessment of state drought contingency planning and preparedness; ○ description of State government’s role and responsibilities for drought preparedness; ○ identification of needed improvements for drought monitoring and preparedness; ○ identification of measures to mitigate the economic, environmental, and social risks and consequences of drought events; ○ assessment of and adaptation to the impacts of drought under existing and future conditions including climate change; ○ identification of needed improvements to real-time surface water and groundwater monitoring programs; ○ identification of needed research in drought forecasting; and ○ identification of needed research of the indices and metrics for assessing the levels of drought. 		

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<p>4. DWR will work with the California Emergency Management Agency to develop preparedness plans to respond to other catastrophic events that would disrupt water resources and infrastructure; events like earthquakes, wildfires, chemical spills, facility malfunctions, and intentional disruption.</p>		
<p>5. By December 2010, the California Emergency Management Agency, Governor's Office of Planning and Research, and the California Natural Resources Agency should lead an effort to update the State Emergency Plan and State Multi-Hazard Mitigation Plan to strengthen consideration of climate impacts to hazard assessment planning, implementation priorities, and emergency responses.</p>		

Objective 9 – Reduce Energy Consumption of Water Systems and Uses

Reduce the energy consumption of water and wastewater management systems by implementing the water-related strategies in AB 32 Scoping Plan to mitigate greenhouse gas emissions.

Related Actions	Performance Measures	Notes/Tracked in PR
<p>1. Water use efficiency reduces not only water demand but, in many instances, reduces energy demand as well, which in turn can lead to reductions in GHG emissions. (See Objective 2 for related actions).</p>		<p>Related Actions 1-6 are from the 2009 Water Plan.</p>
<p>2. Municipal recycled water may represent a relatively energy efficient water management strategy in some areas of the state (this action also appears in objectives 2 and 4).</p> <ul style="list-style-type: none"> o Water agencies should adopt policies by 2015 that promote the use of recycled water for all appropriate, cost-effective uses while protecting public health, the beneficial uses of surface water and groundwater quality, and the environment. o The State Water Board will (a) implement its Recycled Water Policy to encourage the use of recycled water while protecting beneficial uses of water resources and the environment, and (b) require the use of recycled water where the use of potable water would be considered a waste or an unreasonable use of water. o By 2015, water and wastewater utilities should collaboratively develop water recycling plans as part of Integrated Regional Water Management plans. 		

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<p>3. Local agencies and governments should implement cost effective, energy efficiency measures in water system infrastructure projects.</p> <ul style="list-style-type: none"> ○ Large water and wastewater utilities should conduct an assessment of their carbon footprint and consider implementation of strategies described in the AB 32 Scoping Plan to reduce GHG emissions. To take advantage of an existing framework and process for calculating their carbon footprint, these utilities should join The Climate Registry. ○ The Water-Energy Subgroup of the Governor’s Climate Action Team (WETCAT) will conduct a study to assess reasonable energy efficiency and reduction targets for water and wastewater systems. Reduction in electricity consumption could in turn reduce the GHG emission associated with this amount of electricity generation. ○ The California Energy Commission, in collaboration with the WETCAT, will develop tools and protocols to evaluate, measure, and verify the energy impacts of water system and end use conservation and efficiency activities/programs. 		
<p>4. Urban and, where feasible, rural communities should invest in facilities to capture, store, treat and use storm water runoff, such as percolation to usable aquifers, underground storage beneath parks, small surface basins in drainages, or the creation of catch basins or sumps downhill of development. Depending on the source and application, captured storm water may be suitable for use without additional treatment, or it may be blended or otherwise treated to augment local supplies. All levels of government should establish policies and provide incentives to promote better urban runoff management and reuse. (Action also appears in Objective 2).</p>		
<p>5. Water and wastewater utilities should identify renewable generation projects that can be co-located with existing water system infrastructure, and where feasible begin their implementation. Examples of energy existing within water and wastewater systems include water moving through conduits, sunlight, wind, and gases emitted from decomposing organic wastes. Producing energy from these resources at water and wastewater facilities will reduce GHG emissions by offsetting the need for the facilities to consume electricity derived from natural gas and coal.</p> <ul style="list-style-type: none"> ○ State government should remove impediments to implementing renewable energy projects. 		
<p>6. State government will establish a public goods charge for funding investments in Integrated Regional Water Management strategies that will help</p>		

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mitigate and adapt to climate change.		
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Objective 10 – Improve Data & Analysis for Decision-making

Improve and expand monitoring, data management, and analysis to support decision-making, especially in light of uncertainties, that support Integrated Regional Water Management and flood and water resources management systems.

Related Actions	Performance Measures	Notes/Tracked in PR
Recommendations to Link Collaborative Processes with Technical Enhancements		
<p>1. Embrace Shared Vision Planning. Shared Vision Planning is a process for integrating to tried-and-true planning principles, systems modeling, and collaboration into a practical forum for making water resources management decisions. Shared Vision Planning can help to:</p> <ul style="list-style-type: none"> a. Strengthen the linkage between the technical information developed and the policy relevance of that information b. Obtain consensus on quantitative deliverables for the Water Plan c. Build a common understanding of the water management system. d. Improve transparency of Water Plan information. 		
<p>2. Clarify role of subject matter experts — DWR should develop guidelines describing the responsibilities of subject matter experts to follow professional standards when developing content for the Water Plan and procedures for responding to comments received.</p>		
<p>3. Clarify role of public process for addressing comments — DWR should develop guidelines for how the Water Plan manages public comments that contradict findings of staff subject matter experts including criteria for forming external expert panels to advise on controversial matters.</p>		
<p>4. Develop criteria for deferring work (“parking lot”) — DWR should develop guidelines for clarifying when lack of consensus on a subject or lack of</p>		

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resources will require deferring content development to a future Update.		
Recommendations to Provide Effective Analytical Tools		
5. DWR should take the lead in developing shared conceptual understanding of the water management system and how the real world functions of the system are represented within analytical tools at different spatial and temporal scales for use by local, regional, state, and federal entities.		
6. DWR should support the California Water and Environmental Modeling Forum to update their 2005 modeling protocols and standards that provide guidance to water stakeholders and decision-makers, and their technical staff as models are developed and used to solve California's water and environmental problems.		
7. The Department of Water Resources, in consultation with the State Water Resources Control Board, and other agencies and stakeholders, should evaluate and include in the next and all future California Water Plan updates information needed to track water supply reliability performance measures identified in the Delta Plan, including an assessment of water efficiency and new water supply development, regional water balances, improvements in regional self-reliance, reduced regional reliance on the Delta, and reliability of Delta exports, and an overall assessment of progress in achieving the coequal goals. DWR should expand upon the pilot studies developed in Update 2013 for the Central Valley to include coverage of statewide vulnerabilities.		
Recommendations to Improve Information		
8. A DWR-convened technical task force of State, federal, Tribal, and local water and resource managers and planners should develop a strategic plan describing specific information needs to support Integrated Regional Water Management activities and the institutional arrangements for collecting and maintaining the information. The plan should identify the range of different program needs to respond to flood and drought management, climate change, ecosystem restoration, water quality improvement, and other		

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<p>integrated water management objectives. Based on program needs the strategic plan should:</p> <ul style="list-style-type: none"> a. establish standards and protocols for data collection, b. Prioritize long-term improvements in the monitoring network that consider risk based decision making. c. Ensure adequate resources for long-term maintenance and accessibility to water management information. a. Work with local agencies and tribal representatives to develop drought metrics (indicators) with the goal of providing early detection and determination of drought severity. d. Improve monitoring of key Indicators of regional water vulnerabilities. e. Improve system of stream gauging for the purpose of managing water resources in low flow conditions and improving the accuracy of seasonal runoff and water supply forecasts. f. Augment real-time monitoring of groundwater data with additional wells statewide. g. Improve wildlife and habitat monitoring and develop an accessible and standardized database for reporting habitat conditions, populations, and human-wildlife contact incidents. h. Improve groundwater monitoring and assessment. i. Develop reporting methods for collection of regional water vulnerabilities 		
<p>9. The Department of Water Resources, in coordination with the State Water Resources Control Board, the Department of Public Health, Public Utilities Commission, Energy Commission, Bureau of Reclamation, California Urban Water Conservation Council, and other stakeholders, should develop a water use and water quality measurement and reporting strategy and implementation plan. Accurate measurement of water use and water quality can facilitate better water planning and management, especially in the context of managing aquifers more sustainably, and is necessary for the development of more accurate hydrologic budgets.</p>		
<p>10. DWR will participate with the National Oceanic and Atmospheric</p>		

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<p>Administration and Scripps Institute of Oceanography in implementing the Hydrometeorological Test Bed program which enhances off-shore and land measurements of weather variables.</p> <p>The Natural Resources Agency, in coordination with other State agencies, should convene and support a scientific panel of the National Research Council (NRC) to provide expert guidance regarding long-range sea level rise estimates and their application to specific California planning issues. These estimates should be revisited and revised regularly to reflect updated science.</p> <ul style="list-style-type: none"> j. Based upon guidance from the NRC, DWR in collaboration with other State agencies should develop long-range sea level rise scenarios and response strategies. k. As part of the ongoing California Water Plan Update process, DWR will provide revised estimates of changes to sea level, droughts, and flooding that can be expected over the subsequent 25 years (or the planning horizon for each Water Plan update). 		
<p>11. In association with research institutions such as the Regional Integrated Science and Assessment centers (of National Oceanic and Atmospheric Administration), Lawrence Livermore and Berkeley National Laboratories, and the University of California:</p> <ul style="list-style-type: none"> l. State agencies should identify focused research needs to provide guidance on activities to reduce California's vulnerability to climate change. m. State government should also explore partnerships with the federal government, other Western states, and research institutions on climate change adaptation. 		
<p>12. State government should sponsor science-based, watershed adaptation research pilot projects to address water management and ecosystem needs. Funding for pilot projects should only be granted in those regions that have adopted Integrated Regional Water Management plans that meet DWR's plan standards and have broad stakeholder support.</p>		

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<p>13. DWR, the State Water Resources Control Board and Regional Water Boards, and other State agencies that collect water data will develop a water use measurement inventory, reporting strategy and implementation plan. Accurate measurement of water use can facilitate better water planning and management, especially in the context of managing aquifers more sustainably, and is necessary for the development of more accurate hydrologic budgets.</p>		
<p>14. Documentation of Historical Floods: DWR should work with local flood management agencies to compile statewide information of past and current alluvial fan flooding events, building upon the information was assembled by the Alluvial Fan Task Force.</p>		
<p>15. Improve decision-making through use of best available science by state entities and agencies by leveraging the scientific community to support management and policy directions to compile and translate data into accessible information products that can be efficiently applied by water managers, decision-makers, and the public.</p>		
<p>Recommendations to Improve Sharing of Information</p>		
<p>16. DWR should lead a collaborative effort to explore how information can more effectively be integrated among local, regional, and statewide water planning and management activities. The initial focus of this effort should improve how information produced for Urban Water Management Plans can be used more effectively to support Integrated Regional Water Management Plans and the California Water Plan while streamlining reporting requirements. This initial focus will require looking beyond these plans to consider related activities that collect urban water planning and management information. Other sources of information include:</p> <ul style="list-style-type: none"> a. Local and regional agency water planning and policy studies b. DWR and US Bureau of Reclamation modeling studies of the Central Valley water management system operations, the Delta, climate change, and additional surface storage c. DWR water portfolios and water supply, demand, and modeling 		

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<p>studies</p> <p>d. California Energy Commission-sponsored studies of climate change</p>		
<p>17. DWR should develop the Water Planning Information Exchange to share water management information between State, regional and local agencies and governments. Water PIE would facilitate sharing data and networking existing databases among State, federal, regional, and local agencies and governments and citizen monitoring efforts. This information exchange system will improve analytical capabilities and develop timely surveys of statewide land use, water use, and estimates of future implementation of resource management strategies.</p>		
<p>18. Collaboratively develop guidelines for data collection and management that facilitate sharing of information between agencies by identifying and cataloging existing water data for California, creating a water data dictionary, and developing standards and for water data monitoring, collection, and reporting. Specific objectives are to:</p> <ul style="list-style-type: none"> e. Organize and facilitate multi-stakeholder workshops and meetings to design some key scientific questions to guide identification of data sources across the state. f. Create an inventory of water data types and categories. g. Identify and create a comprehensive inventory of existing water data within each category collected and managed by different public and private entities in various temporal and spatial scales. h. Create a data dictionary that will include relevant information about each data including source (responsible organization), length, location, temporal and spatial resolution, units used to measure the data, methodologies used in estimating the data (if relevant). i. Summarize state-of-the-art approaches for data monitoring, collection, and reporting standards in order to create a common language/terminology and format to facilitate effective data sharing among various stakeholders. j. Develop standards for metadata - requirements which are intended to establish a common understanding of the meaning or semantics of the data, to ensure correct and proper use and interpretation of 		

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<p>the data by its owners and users. To achieve this common understanding, a number of characteristics, or attributes of the data have to be defined, also known as metadata.</p>		
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Objective 11 – Invest in New Water Technology

Identify and fund applied research and pilot studies on emerging water technology to make them attainable and more cost effective.

Related Actions	Performance Measures	Notes/Tracked in PR
<p>1. Advance new water technology to improve Data Management and Modeling by implementing the following:</p> <ul style="list-style-type: none"> a. Support should be given to the California Water and Modeling Forum to maintain current modeling protocols and standards that provide guidance to water stakeholders and decision-makers, and their technical staff as models are developed and used to solve California's water and environmental problems (CWP 2013 Update) b. California should embrace a distributed data storage and use policy with the various data base managers compliant to a common data management protocol with all data linked to the appropriate metadata. c. Data base portals such as Water Planning Information Exchange being developed by DWR should be able to host translators capable of integrating data into information and formats desired by the users. d. The Resources Agency, CalEPA, Health and Human Services, Public Utilities Commission, Energy Commission, Bureau of Reclamation, USEPA, and other stakeholders should develop and implement a water use and quality measurement and reporting strategy and implementation plan necessary for sustainable California water planning and management. 		
<p>2. Advance new water technology to improve In Situ Data Acquisition by implementing the following:</p> <ul style="list-style-type: none"> a. Together with a distributed data storage policy for California with the various data base managers compliant to a common data management 		

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<p>protocol, the protocol should also include data acquisition requirements.</p> <ul style="list-style-type: none"> b. Investment is required in analytical capability, including sensors to be used in situ, that effectively and economically detects with required statistical certainty constituents at concentrations having a public health, environmental or economic consequence. c. Where analytical capability is deployed in real world environments, economical sensors and analytical procedures for the desired constituents must be developed that are capable of – <ul style="list-style-type: none"> i. withstanding the rigors of the environment in which they are deployed, ii. producing accurate and precise data over long periods of time. 		
<p>3. Advance new water technology to improve Remote Sensing by implementing the following:</p> <ul style="list-style-type: none"> a. Together with a distributed data storage policy for California with the various data base managers compliant to a common data management protocol, the protocol should also include data acquisition requirements; b. Development and use of robust, cost effective sensors capable of accurately determining quantitatively certain parameters for fresh water bodies including turbidity, salinity, and chlorophyll; c. Continue the development of utilizing airborne drones to provide targeted data to complement satellite data on snowpack; d. Develop inexpensive, local remote sensors to replace or complement in situ sensors for the purpose of providing monitoring capability that is less susceptible to vandalism; e. Increase partnerships between NASA, state and private sectors to enhance providing a better use of existing resources while realizing savings by reducing duplicative monitoring and/or increasing required data acquisition opportunities; f. Develop the software necessary to translate data from both remote and in situ sensors so that it is compatible with models used for planning and operational purposes. 		

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<p>4. Advance new water technology to improve efficiencies for the Water-Energy Nexus by implementing the following:</p> <ul style="list-style-type: none"> a. Greater use of smart grid technologies, especially to increase use of renewable energy sources and possibly for water management; b. Minimizing unnecessary energy dissipation at point of use by delivering water with the energy needed and thereby not wasting excess energy (e.g., unnecessarily high pressure); c. Increased use of low water consumption technologies in the production of energy, especially electrical power (e.g. dry cooling, etc.) d. Implementation of energy harvesting technology where feasible (e.g. retrieving energy when water is fed from a high pressure system to a system requiring less pressure); and e. Increased use of technologies to improve energy efficiency for water treatment and transport processes as well as energy production (e.g., using a relatively low energy biological process that will provide a comparable treatment efficiency as a high pressure membrane process for the targeted constituents). 		
<p>5. Advance new water technology to improve Membrane Water Treatment by implementing the following:</p> <ul style="list-style-type: none"> a. Further development of more economical and energy efficient, robust general-purpose membranes, capable of removing contaminants - <ul style="list-style-type: none"> i. not currently removed by membranes (e.g. boron and other elements and compounds smaller than water molecules), and ii. capable of proficiently processing wastewaters for water re-use iii. causing treatment issues for inland brackish waters; b. Further development of energy recovery technology from high pressure membrane processes; and c. Significantly broadened deployment of concentrate diffusion technologies for seawater already used in venues outside California 		

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<p>d. Development of smart control technology with appropriate sensor development for operation of water treatment processes both distributed and on-site.</p>		
<p>6. Advance new water technology to improve Biological Water Treatment by implementing the following:</p> <p>a. Further development of biological treatment processes capable of economically, efficiently and with minimal energy requirements removing nitrate and other chemical constituents principally from groundwater followed by coarse filtration and disinfection to meet public health requirements for direct injection in drinking water distribution systems;</p> <p>b. Use of engineered wetlands and meadows, optimized to produce a biologically treated effluent capable of meeting secondary treatment requirements with the wetlands and meadows also providing habitat benefits.</p> <p>c. Further development of animal wastes digestion systems that optimizes substrate processing so that it is both environmentally compliant and maximizes biofuel production and use while producing one or more of the following –</p> <ul style="list-style-type: none"> i. methane for injection into California’s natural gas pipeline systems, ii. methane suitable for on farm use or for injection into an engine powering a generator, and/or iii. fertilizer having a 3% minimum N content with much of the N in the inorganic form, capable of storage without deterioration for a year or longer and being dispersed through conventional fertigation systems <p>d. Development of smart control technology with sensor development for operation of water treatment processes both distributed and on-site.</p>		
<p>7. Advance new water technology to improve Watershed Management by implementing the following:</p> <p>a. Software development that leads to the combining and utilization if</p>		

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<p>applicable models more effectively in recognition of climate change impacts on watersheds;</p> <p>b. Improved data collection for surface water and groundwater basin descriptive parameters, including water runoff and storage as a function of time throughout the basin by more extensive use of satellite monitoring, where applicable, and partnering with other agencies (i.e., DWR, SWRCB, USGS, etc.) where possible, and</p> <p>c. Expanded use of flood plains and other sites having good recharge potential for groundwater recharge.</p>		
<p>8. Advance new water technology to improve Agricultural Water Use Efficiency by implementing the following:</p> <p>a. Widespread adoption of water measurement and soil moisture sensing technologies to both maximize water application and timing;</p> <p>b. Select and install high efficiency water distribution systems, provide necessary maintenance, and utilize proper irrigation scheduling methods;</p> <p>c. Universal adoption of one or more technologies for water management, including remote sensing, weather based, and/or crop/soil based technologies;</p> <p>d. Development of cost-effective information management and controller technology for monitoring drip and micro-sprinkler line pressures throughout fields;</p> <p>e. Use agricultural water and land whenever possible to provide environmental benefits (e.g. flooded rice ground to provide seasonal wetlands for migratory birds and reproduction habitat for fish);</p> <p>f. Identification of multiple use opportunities for water supplies (e.g. water exchanges between agricultural and urban users);</p> <p>g. Improving water use efficiency with the adoption of pressurized irrigation systems; Migration to lower water intensity crops and less acreage in permanent plantings; and</p>		

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<p>h. Fully understanding third-party impacts before implementing any large-scale changes in agricultural practices.</p>		
<p>9. Advance new water technology to improve Urban Water Use Efficiency by implementing the following:</p> <ul style="list-style-type: none"> a. Enhanced metering infrastructure to promote more efficient water use (i.e., individual apartments; remote access to water use data, etc.); b. Greater use of incentive based pricing to encourage more water conservation; c. Greater deployment of lower water use technologies such as low flow appliances such as toilets and clothes and dish washers in the home and low flow cleaning technologies in the commercial and industrial sectors; d. Greater reuse and more reliance on partially treated water for non-potable purposes such as for landscape irrigation and cooling; e. Enhanced leak detection and repair programs; and f. Greater use of low water intensity landscaping (may require stricter codes/regulation). 		

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Objective 12 – Improve Tribal/State Relations and Natural Resources Management

Develop relationships with Tribes that Acknowledges and Respects the inherent rights of California Native American Tribes to exercise sovereign authority and ensure Tribes are incorporated into planning and water resources decision making processes in a manner that is consistent with their sovereign status.

Related Actions	Performance Measures	Notes/Tracked in PR
<p>1. The State Water Board and Bureau of Indian Affairs, in collaboration with California Native American Tribes, should address Tribal water rights, including: Tribal water rights dating back to time immemorial; Federally-reserved water rights; jurisdiction; and trust responsibilities, including individual allotments, by:</p> <ul style="list-style-type: none"> • Convening a Task Force to articulate a consistent state policy and protocol that recognizes Tribal water rights in all aspects of water planning including supply, timing, and flows, quality, and quantity • Developing joint training on State, Federal and Tribal water rights including trust responsibilities, the implications for different Tribal trust lands (reservations, Rancherias and individual allotments) and jurisdiction 		
<p>2. State government should write legislation and contracts in a way that enables California Native American Tribes to be a lead agency and directly receive and manage state funding (as fiscal agent or otherwise) for water planning and management.</p>		
<p>3. California Department of Fish and Wildlife and California Native American Tribes will develop and initiate pilot projects to develop resource management plans, characterized by the integration of Traditional/Tribal Ecological Knowledge and western science. This will include developing a process for requesting proposals, identifying existing examples of partnerships, and launching pilot projects.</p>		
<p>4. State agencies should use Tribal Ecological Knowledge to inform their work and decisions including: establishing baseline resource conditions, and developing options to share information in ways that protect specific details about cultural resources.</p>		
<p>5. State agencies, in collaboration with California Native American Tribes, should develop and conduct trainings for agencies on Tribal sovereignty, trust responsibilities and cultural awareness/sensitivity, and Traditional/Tribal</p>		

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<p>Ecological Knowledge by developing a curriculum with a Tribal working group, establishing consistent training protocols for all agencies, and initiating trainings.</p>		
<p>6. State and Federal agencies, in coordination with California Native American Tribes, should identify, coordinate and provide technical training for Tribes, to increase technical capacity – including, but not limited to: basic training modules (e.g. Basic Inspector Academy, GIS, advanced technologies – such as LiDAR and satellite imagery, small water systems operations; and establish a criteria and protocol for ensuring vendors preferred by California Native American Tribes are utilized.</p>		
<p>7. State agencies should engage Tribal communities in compiling and developing climate change adaptation strategies that will mitigate climate impacts to their people, waterways, cultural resources, or lands.</p>		
<p>8. The State Water Resource Control Board, in collaboration with California Native American Tribes, will develop and adopt a statewide Beneficial Use standard that respects and acknowledges cultural and subsistence use of water.</p>		
<p>9. State agencies and California Native American Tribes should utilize and implement communication strategies, protocols and procedures, that are developed and/or implemented by California Native American Tribes, including but not limited to the Tribal Communication Plan, U.N. Declaration on the Rights of Indigenous Peoples, 2013 Tribal Water Summit Guiding Principles and Goals and tribal MOUs.</p>		
<p>10. State agencies, in collaboration with California Native American Tribes, should enhance Tribal outreach, collaboration and the work of Tribal liaisons by: identifying and implementing strategies to strengthen Tribal involvement in State outreach and engagement approaches, clarify Tribal liaison roles and responsibilities, and identify options for creating a statewide network of Tribal liaisons to address multiple aspects of Tribal concerns (e.g. legal, policy and local conditions).</p>		
<p>11. State agencies should engage in meaningful consultation by: encouraging and moving towards earlier involvement by Tribes (at the design/planning stages), initiate consultation for programmatic decisions – as well as project-</p>		

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<p>level decisions, adjust timelines to allow adequate time to bring items before Tribal councils and leaders, conduct meetings on Tribal lands, and documenting Tribal comments.</p>		
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Objective 13 – Ensure Equitable Distribution of Benefits

Increase the voice of small and disadvantaged communities in State processes and programs to achieve fair and equitable distribution of benefits. Provide access to safe drinking water and waste water treatment for all California communities and ensure programs and policies address the most critical public health threats in disadvantaged communities.

Related Actions	Performance Measures	Notes/Tracked in PR
<p>1. Provide incentives for the acquisition or management of small water systems.</p> <p>This is critically important as too often small systems do not have the wherewithal that a large system has. The small systems are often staffed by inexperienced operators who are directed by volunteer boards who are often inexperienced themselves. Too often these “smalls” serve disadvantaged communities.</p> <p>In some instances, the residents, who are property owners, do not know that they own shares in the mutual. Often times there are language barriers which prevent the residents from getting the information they need to understand the roles and rights they have as shareholders.</p> <p>The needs to be incentives to encourage consolidation with the “smalls” by the larger system. There are valid concerns on the part of the larger system when approached with the idea of acquiring small, dysfunctional systems. Education of the shareholders is extremely important to a proposed consolidation. Informed shareholders make better decisions. There may be dissatisfaction with the “small” on the part of the shareholders but it may be an unknown. This is why public outreach is so important.</p>		
<p>2. Graduated rates for wastewater removal</p> <p>Even if the community agrees to hook up to municipal systems, often times there is a question of affordability of not only hookup fees but also monthly sewer charges. These are one of the obstacles which can occur when</p>		

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<p>converting on-site wastewater systems to municipal sewer. One possible solution is a graduated monthly sewer charge where there is an initial “introductory rate”. After a period of adjustment, the sewer rate is gradually brought into the level of other residential units in the area. This would allow the resident to avoid the sudden economic impact of having an unexpected monthly fee increase. This is especially important in disadvantaged communities.</p>		
<p>3. AB 685</p> <ul style="list-style-type: none"> • Ensure that the policy goals established by AB 685—safe, clean, affordable and accessible water adequate for domestic uses—are reflected in agency planning; • Give preference to policies that advance AB 685 and refrain from taking actions that adversely impact the human right to water; • Report on actions undertaken to promote AB 685 and make information relevant to the human right to water available to the public; • Foster meaningful opportunities for public participation in agency decision-making by California’s diverse population; • Facilitate access by rural and urban disadvantaged communities to state funds for water infrastructure improvements; and • Ensure the effectiveness of accountability mechanisms protecting access to clean and affordable water. 		
<p>4. CDPH will continue to implement its Small Water System Program Plan to assist small water systems (especially those serving disadvantaged communities) that are unable to provide water that meets primary drinking water standards.</p> <ol style="list-style-type: none"> a. CDPH will share the Small Water System Program Plan with relevant state, federal, and local agencies, and stakeholders to foster additional opportunities for funding, coordinate construction projects in communities, and to assist in local and regional planning efforts. b. CDPH will utilize Geographic Information System (GIS) tools to identify large water systems in close proximity to targeted small water systems, and conduct targeted outreach to these large water systems to encourage them to consolidate the small systems into their service area. c. CDPH will work with stakeholders to identify obstacles to consolidation 	<p>Bring 63 small community public water systems that currently violate primary drinking water quality standards into compliance.</p>	

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<p>(including financial, legal and local issues) and develop possible actions to address these obstacles.</p> <p>d. CDPH will participate in statewide planning efforts to address the water infrastructure needs of small water systems. CDPH should seek input from other states and the federal government on innovative, successful efforts to address the needs of small water systems, and should share its results on implementation of it Small Water System Program Plan.</p>		
<p>5. Increase disadvantaged community participation in planning</p> <ul style="list-style-type: none"> o DWR and the other Water Plan Steering Committee members should incorporate environmental justice issues of precautionary applications, cumulative health impact reductions, public participation, community capacity building and communication, and meaningful participation into current and future California Water Plan Update processes and other programs. o DWR should require that grant and loan recipients conduct outreach to disadvantaged communities and vulnerable populations and their advocates seeking their participation in water planning programs, including the California Water Plan Update and Integrated Regional Water Management plans and other local water planning processes. 		<p>Related Actions 5-9 are from the 2009 Water Plan</p>
<p>6. Increase disadvantaged community access to funding</p> <ul style="list-style-type: none"> o DWR and other State agencies should work with disadvantaged communities and vulnerable populations and their advocates to review State government funding programs and develop guidelines that make funding programs equally accessible to disadvantaged and environmental justice communities. o DWR and other State agencies should work with disadvantaged communities and vulnerable populations and their advocates to develop a technical assistance program to provide resources, expertise, and information to disadvantaged and environmental justice communities to enable them to actively and equally participate in planning processes and access funding sources. 		
<p>7. Collect and maintain data on environmental justice and disadvantaged communities</p> <ul style="list-style-type: none"> o DWR, in coordination with the appropriate State and federal agencies, should review its current monitoring and regulatory programs to identify and address gaps in available data and monitoring programs that 		

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<p>impact disadvantaged communities and vulnerable populations.</p>		
<p>8. Develop Water Plan goals and objectives, in coordination with Integrated Regional Water Management partnerships, to resolve water-related public health issues in disadvantaged communities.</p> <ul style="list-style-type: none"> ○ The Water Plan should include goals and objectives to ensure that all Californians have access to safe drinking water. ○ California Tribes, both recognized and unrecognized, should provide goals and objectives to protect Tribal uses of water, especially those that impact the health of Tribal members (see Objective 12). ○ DWR, the Department of Fish and Game, and other State agencies should develop statewide goals and objectives for the provision of safe fish for communities that rely on fish as part of their subsistence diet. ○ DWR, in consultation with other State agencies, including the Department of Conservation, Tribes, and community groups, should develop goals and objectives to restore and protect watersheds making use of existing community-based watershed councils and groups that are an under-utilized tool in maintaining and restoring California's water resources. 		
<p>9. Assess environmental justice water-related concerns on a regional level</p> <ul style="list-style-type: none"> ○ DWR and other State agencies should assess environmental justice water-related concerns on a regional level and incorporate this analysis into the Water Plan Update regional reports. ○ DWR should include provisions for environmental justice and disadvantaged communities in the guidelines for the Integrated Regional Water Management planning and grant program. 		

Objective 14 – Protect and Enhance Public Access to the State’s Waterways, Lakes, and Beaches

Strengthen and protect human rights to the state’s waterways, lakes and beaches ensuring public access for cultural, recreational and economic purposes. Such rights and access will be consistent with maintaining healthy ecosystems.

Related Actions	Performance Measures	Notes/Tracked in PR
<p>1. State government will respect and vigorously protect waterways, lakes and beaches for beneficial public use.</p> <ul style="list-style-type: none"> a. The state will support the regulatory responsibilities of the California Coastal Commission (beach access), Bay Conservation and Development Commission 		

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<p>(SF estuary access), SWRCB (water quality and supply), SLC (navigation) and CDFW (inland fisheries) and others that protect beneficial uses such as fishing, boating and other public access rights.</p> <ul style="list-style-type: none"> b. State conservancies, such as the Sacramento-San Joaquin Delta Conservancy and Sierra Nevada Conservancy, will acquire and/or protect sensitive landscapes, such as key watershed lands and wetlands, flood conveyance zones, riparian woodlands and vernal pools with important natural resource and scenic values, and significant beneficial public uses. The conservancies, including the State Coastal Conservancy, will protect and/or acquire land to maintain public access to waterways, lakes, and beaches. c. Protect recreational resource values threatened by the effects of climate change using strategies of reinforcement, adaption and/or retreat as feasible. d. As water resources are developed, as flood control facilities are envisioned and as sea level rise is accommodated, State government, including, but not limited to, DWR and CalTrans, will protect and minimize impacts to cultural and recreational uses. 		
<p>2. State government will, when resources are available, engage in statewide recreational research and planning so that investments in recreational resources and facilities are efficient, effective and meets the needs of all Californians.</p> <ul style="list-style-type: none"> a. State government, such as California State Parks and DWR, will document and regularly report on the water-dependent recreational trends of California's growing population, the public health and economic benefits of recreational activities, and threats to the tourism and lifestyle benefits of California's water-dependent recreational infrastructure. b. State government, such as DWR, will consider the feasibility of incorporating public access facilities in all water resources and flood management infrastructure, watershed protection efforts and environmental restoration projects funded by the state and federal government. Prioritize multi-benefit projects that increase waterfront accessibility, create more inclusive access opportunities, support commercial and recreational fishing, encourage economic revitalization, promote excellence and innovation in urban design, enhance cultural and historic resources, and that are resilient to a changing climate. c. State conservation agencies, such as the State Coastal Conservancy, Bay Conservation and Development Commission, and California State Parks will collaborate with local agencies to systematically plan to reinforce, adapt and/or relocate recreational opportunities threatened by sea level rise, and transportation or wastewater infrastructure adaptations. d. California State Parks will lead comprehensive recreation resource planning of the State's inland waterways, engaging public, recreation providers, policy makers, 		

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<p>advocacy groups and public officials. The State will prioritize facilities that provide opportunities for the top outdoor recreation activities identified in the <u>Survey of Public Opinions and Attitudes on Outdoor Recreation in California</u>, especially those benefiting disadvantaged communities.</p>		
<p>3. All State agencies with water-dependent recreation and tourism responsibilities will, in concert with local agencies, enhance safe public access by providing water-dependent recreational facilities and programs that support beneficial uses, and/or improve the social and economic sustainability of state- and federally-funded infrastructure, watershed protection and environmental restoration projects.</p> <ul style="list-style-type: none"> a. State government, including DWR, California State Parks and all state Conservancies, will facilitate and/or construct water-dependent recreation projects that spur the economic development of disadvantaged communities, provide environmental stewardship benefits, enhance natural resource values, protect or relocate existing recreational opportunities, and meet the regional demand for healthy outdoor recreation opportunities for all Californians, especially children. b. The Delta Protection Commission and Sacramento-San Joaquin Delta Conservancy will encourage partnerships between other State and local agencies, and local landowners and business people to expand water-dependent recreation and tourism in the Delta and Suisun Marsh, while minimizing adverse impacts to non-recreational landowners. Use California State Parks' <u>Recreation Proposal for the Sacramento-San Joaquin Delta and Suisun Marsh</u> and Delta Protection Commission's <u>Economic Sustainability Plan</u> as guides. c. As the State's population increases, State government, such as DWR, DFW and California State Parks, will increase water-dependent recreation opportunities on existing public land, where feasible. State government will also pursue acquisition opportunities that provide open space and public access to water features such as the ocean, lakes, rivers, streams and creeks where demand exceeds supply. d. State agencies will Prioritize construction of water-dependent recreation facilities identified in Regional Water Management Plans; active-use facilities such as multi-use trails for equestrians, hikers, walkers and bikers which improve public health; facilities which mitigate or adapt to climate change; facilities that increase the safety of anglers, swimmers and boaters; and facilities that provide environmental education such as water conservation and water quality information. 		
<p>4. Engage/Promote-- All State agencies with water-dependent recreation and tourism responsibilities will cooperate with local agencies, businesses and the general public to promote healthy outdoor recreation and environmental stewardship to benefit public health, improve the environment and encourage resource-based tourism. All state</p>		

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<p>Conservancies, DWR, CDFW and California State Parks will, in particular, improve outreach and education to children and in disadvantaged communities that will improve public health, support California’s outdoor lifestyle and promote wise use of water resources.</p> <ol style="list-style-type: none"> a. By the end of 2014, leadership from, but not limited to, state Conservancies, DWR, CDFW, and California State Parks will convene a task force to identify priority sustainable water-based tourism and recreational opportunities and develop an education and outreach campaign to promote and engage the CA public. Included in this effort will involve the identification of unique and/or iconic tourism and recreational events state-wide. The task force will also be responsible for providing a budgetary estimate for years 2015-2019. b. Given the criticality of California’s headwaters for tourism, local livelihoods and CA’s water supply, by the end of 2014, agencies, in cooperation with local and county personnel will develop a Sierra Nevada Sustainable Tourism and Recreation Strategy to promote sustainable water-related recreation that supports regional livelihoods and maintains the region’s ecological integrity. c. To ensure required funding necessary to support sustainable water-based tourism, recreation and access to the State’s beaches and waterways, agency representatives working with appropriate budgetary authorities will develop a five-year funding source portfolio that builds on traditional funding mechanisms while also exploring non-traditional and public-private partnership opportunities. d. By the end 2016, all State agencies with water-dependent recreation and tourism responsibilities will implement above mentioned plan(s) with the intent of engaging visitors to, and the populace of CA in, sustainable tourism and recreational activities while ensuring and enhancing access to CA’s beaches and waterways. 		
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Objective 15 – Strengthen Alignment of Land Use Planning and Integrated Water Management

Strengthen the alignment goals, policies and programs for improving local land use planning and integrated water management (IWM).

Related Actions	Performance Measures	Notes/Tracked in PR
<ol style="list-style-type: none"> 1. State Government should provide additional regulatory and financial incentives to developers and local governments to plan and build using compact and sustainable development patterns. <ul style="list-style-type: none"> • Regulatory incentives include further streamlining of CEQA review for infill projects and further reductions in brownfields liability for innocent purchasers. 	<p>Inventory state regulatory and financial incentives to develop base data for future assessment of enhanced incentives.</p> <p>Number of expanded or new</p>	<p>Based on RMS recommendations 1 and 16.</p>

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<ul style="list-style-type: none"> Financial incentives include developing criteria for state grant and funding programs that incentivize compact and sustainable development. 	regulatory and financial incentives.	
2. The Governor's Office of Planning and Research (OPR) should provide guidance and financial incentives for integration of IWM approaches in General Plan Updates and Sustainable Communities Strategy (SCS) , including both substantive and planning process guidance.	State issuance of guidance and financial incentives.	Based on RMS recommendations 5 and 15. [modified]
3. Local governments should integrate IWM approaches into their General Plan updates.	Number of General Plan updates with effective integration of IWM strategies. "Effective integration" means substantial treatment of IWM approaches, either in existing General Plan elements or a new optional Water Element.	Based on RMS recommendations 10 and 15. The term "effective" is subjective, to provide flexible but substantive IWM approaches in GP updates.
4. The Strategic Growth Council should provide guidance and financial incentives for regional planning agency integration of IWM approaches into Sustainable Communities Strategies (SCSs), transportation blueprint plans, and other regional plans.	State issuance of guidance and financial incentives.	Based on recommendation 15.
5. Regional planning agencies should integrate IWM issues into their Sustainable Communities Strategies (SCSs), transportation blueprint plans, and other regional plans.	Percent of (or Number) of regional planning agencies meaningfully integrating IWM issues in their regional plans.	Based on RMS recommendation 7.
6. Local governments should ensure that Urban Water Management Plans inform and reflect IRWMP plan preparation and implementation, to further IWM integration in local land use planning promoting compact and sustainable development.	Number of UWMPs reflecting IRWMPs effective integration of local land use planning for compact and sustainable development.	Based on RMS recommendation 9.
7. Local governments should implement specific land use planning and regulatory measures to reduce flood risks, consistent with IWM principles and DWR "best practices" for land use planning. <ul style="list-style-type: none"> Measures include preservation of existing floodplains, aquifer recharge areas, and alluvial fans; restoration of natural floodplain functions; and design measures to increase post-flood resiliency. 	Number of General Plan updates and local flood management regulations with meaningful policies to reduce flood risks, consistent with IWM principles and DWR best practices.	Based on Land Use RMS recommendation 13, and Flood RMS recommendations 1 and 2. (Note: There are additional land use-related recommendations in the flood RMS not included here. Flood and Land Use related actions need to be coordinated.)
8. DWR should assist local governments and developers with implementing	Number of local governments and	Based on RMS

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the “Integrated Water and Land Smart Planning Tool,” which calculates life cycle water infrastructure costs for different development patterns.	developers using the Tool in their planning decisions.	recommendation 19.
9. State Government should evaluate the effectiveness of the 2007 flood management legislation in coordinating land use planning, flood planning, and natural resources, and recommend changes to existing laws and their implementation as appropriate.	Issuance of report evaluating effectiveness of 2007 flood legislation.	Based on RMS recommendation 22.
10. State Government should evaluate the effectiveness of SB 610 and SB 221 in coordinating land use and water supply planning, and recommend changes to existing laws and their implementation as appropriate.	Issuance of report evaluating effectiveness of SB 610 and SB 221.	Based on RMS recommendation 23.
11. State Government should invest in innovation and technology for assessment of land use and water supply and flood conditions to further integrated water management and land use.	Number innovations in technology for land use and integrated water management.	Based on Water Technology caucus
12. State agencies and local government should endorse and/or adopt the California Biodiversity Council’s Resolution (April 2013) to “Strengthening Agency Alignment for Natural Resource Conservation” that complements land use and integrated water management.	Number of state and local government adoption.	Based on Biodiversity Council

Objective 16 – Strengthen Alignment of Government Processes and Tools

Improve, align and transform processes and administrative tools (incentives & oversight) – from all levels of government – used for water planning, public engagement, program/project implementation, and policy- and regulation-setting to advance Integrated Water Management.

Related Actions	Performance Measures	Notes/Tracked in PR
1. State, federal, Tribal, and local government agencies should endorse and/or adopt the California Biodiversity Council’s Resolution (April 2013) to “Strengthening Agency Alignment for Natural Resource Conservation”. Agencies should adopt the Resolution’s vision, goals and principles, utilize its recommended practices and tools, and participate in Biodiversity Council venues and meetings intended to advance agency alignment.		
2. State government should more effectively use and coordinate the work of multi-organization collaboratives to align and implement State water policies and promote Integrated Resource Management -- like the Strategic Growth Council, Delta Stewardship Council, Ocean Protection Council, Water Plan State Agency Steering Committee, Conservancies, California Council on Science & Technology, and California Landscape Conservation Cooperative. <ul style="list-style-type: none"> • This should include developing and maintaining an inventory/repository 		

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<p>of processes and tools for strengthening government agency alignment including, but not limited to:</p> <ul style="list-style-type: none"> ○ State government water planning calendar ○ Inventory of companion State and federal plans ○ Inventory of State water data collection programs and databases ○ Inventory of water-related collaboration venues and public processes ○ Inventory of water-related State Listserves and electronic newsletters, etc. 		
<p>3. State government should recognize regional and local diversity by assisting, enabling & empowering regional water collaboratives like IRWM Regional Water Management Groups to determine how state water policies are implemented.</p>		
<p>4. State government should use a broad and consistent mix of administrative tools to advance integrated water management at a regional level, including technical & data support, financial incentives and support, guidelines, regulation, and legislation.</p>		
<p>5. State and federal government should use a more inclusive, outcome-based framework for setting policies and regulations.</p> <ul style="list-style-type: none"> ● State and federal government directives should focus on intended and regionally-appropriate outcomes (goals and objectives) in legislation, regulations, guidelines, and resource management plans; and should establish performance measures/indicators to evaluate progress. ● State and federal government should encourage regional collaboratives like IRWM Regional Water Management Groups to adaptively manage implementation to achieve the outcomes as appropriate to their local conditions and resources. This would include incorporating the needed mix of resource management strategies in their IRWM (or equivalent) Plan, describing their adaptive management approach for meeting outcomes, and submitting their implementation, finance and adaptive management plan. ● State and federal regulatory agencies should conduct a pilot project to evaluate if and how a Habitat Conservation Planning type approach could be utilized to align regulatory and permitting processes to create system oriented approaches for Integrated Water Management planning and project implementation. 		

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<p>6. State government agencies should hire, assign or train staff with collaboration and conflict resolution knowledge, skills and ability, whose primary job is to work with other State, federal, Tribal and local agencies to improve interagency communication, cooperation, collaboration, and alignment. State government should adopt a standard (common) duty statement for managers and higher classifications to promote state agency collaboration and alignment; should require these classifications to complete facilitation training.</p>		
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Objective 17 – Improve Integrated Water Management Finance Strategy and Investments

State government uses consistent, reliable and diverse funding mechanisms with an array of revenue sources to support statewide and regional IWM activities; and makes future State government investments in innovation and infrastructure (green and grey) based on an adaptive and regionally-appropriate prioritization process.

Related Actions	Performance Measures	Notes/Tracked in PR
<p>1. Regional and local entities should continue their investments in IWM activities based on regional and local conditions, goals, priorities, and solutions.</p> <p>Reliable and effective water finance planning should continue at the regional and local levels in partnership with State government. Locally sponsored initiatives will continue to be a cost effective approach for planning and implementing IWM innovation and infrastructure (green and grey) to provide multiple benefits to their respective jurisdictions. Regional and local investments should be augmented and amplified with State and federal public funding.</p>	<ul style="list-style-type: none"> • Regional and local expenditures; using: a.) investment categories defined in <i>IWM Activities</i> section of Chapter 7; and b.) data from <i>Existing Funding (Component 3)</i> related action. • Type and quality of IWM benefits produced; using benefit types defined in <i>IWM Scope and Outcomes</i> section of chapter 7 	
<p>2. State government should continue to provide incentives for regional IWM (IRWM) activities that achieve State goals and provide broad public benefits.</p> <p>This includes assisting regions technically and financially to</p>	<ul style="list-style-type: none"> • State government expenditures for regional and local incentives; using investment categories 	

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<p>implement their IRWM plans and/or help achieve State government goals and interests. State government should continue and enhance incentives for regional activities that provide a public benefit <i>and</i> that would not otherwise be cost effective. Examples of public benefits include ecosystem enhancements (not project mitigation), meeting the water needs of disadvantaged communities, and supporting economic stability. Incentives should be flexible and adaptable to be appropriate and cost-effective for California's geographically and economically diverse regions.</p>	<p>defined in <i>IWM Activities</i> section of Chapter 7</p> <ul style="list-style-type: none"> Type, location and quantity of IWM benefits produced; using benefit types defined in <i>IWM Scope and Outcomes</i> section of chapter 7 	
<p>3. State government should improve and facilitate access to State and federal public revenue sources.</p> <ul style="list-style-type: none"> State government should develop a central online resource catalog to describe different funding programs, potential IWM revenue sources, and a how-to guide explaining how to apply for funding from these programs. State government should provide guidance and assistance to local agencies on how to apply for funding that includes technical and financial assistance, as well as grant application training for regions that do not have the capacity or resources to apply. 	<ul style="list-style-type: none"> Resource catalog developed and deployed? (Y or N) Training and assistance program developed and deployed? (Y or N) 	
<p>4. The Governor and Legislature should broaden the ability of public agencies to partner with private agencies for IWM investments - beyond California's current limitation to pilot projects only.</p>		<p>Public private partnerships (P3s) can:</p> <ul style="list-style-type: none"> Provide ability to capitalize on innovative technologies. Help capitalize on potential private cost efficiencies. Offer renting and leasing finance strategies for public agencies.
<p>5. State government should focus its investments on IWM innovation activities that have broad public benefits using a more reliable, predictable and diverse mix of finance mechanisms and revenue sources, including, but not limited to, General Funds and General Obligation bonds.</p> <p>An important role of State government is to invest in innovation</p>	<ul style="list-style-type: none"> Magnitude and variability of State funding over time; using: a.) the historical expenditure methods and (additional) data presented in Update 	

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<p>activities having broad public benefits that include: improving water governance, improving water planning and public engagement, strengthening government agency alignment, enhancing information technology (data and analytical tools), and advancing the use of water technology and science.</p> <p>Finance mechanisms used for these IWM innovation activities should:</p> <ul style="list-style-type: none"> • Improve cost effectiveness, efficiencies and accountability. • Avoid stranded costs and funding discontinuity. • Leverage funding across State government agencies. • Increase certainty of desired outcomes. • Enable prioritization based on shared funding values, defined principles, goals, objectives, and criteria. 	<p>2013; and b.) investment categories defined in <i>IWM Activities</i> section of Chapter 7</p>	
<p>6. State government should reduce planning and implementation timeframes and costs associated with IWM activities by clarifying, aligning and reducing redundancies among State government agencies' policies, incentive programs, and regulations.</p> <ul style="list-style-type: none"> • Convene an interagency IWM finance alignment group that includes State planning, resource management, and regulatory agencies to identify and implement finance policies, procedures and protocols to enhance State government transparency, accountability, flexibility and cost-efficiencies. This effort would recommend ways to reduce duplication and fragmentation among State government agencies' policies, incentive programs, regulations, and budgets. • Prepare and update a <i>Return on State government Investment</i> report card through the California Water Plan Update collaborative process (5-year interval) that would track the occurrence of benefits/value derived from State government investments (and leveraged local investments) using specific criteria and sustainability indicators. 	<ul style="list-style-type: none"> • Level of collaboration with implementers and regulated entities regarding the project implementation climate throughout the state • ROI report card developed? (Y or N) 	

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<p>7. The Governor and Legislature should establish a <i>State IWM Innovation and Infrastructure Investment Fund (4I Fund)</i> that provides a consistent and consolidated State water financing framework.</p> <p>The purpose is to:</p> <ul style="list-style-type: none"> • Prioritize and fund State government IWM innovation and infrastructure investments. • Improve the transparency and accountability of State public fund disbursements. • Enhance stewardship of State government monies at both statewide and regional scales. <p>The 4I Fund would be endowed using multiple finance mechanisms and revenue sources as they become available as described in Chapter 7 Finance Planning Framework.</p>		<ul style="list-style-type: none"> • The fund framework should be designed to increase return on investment and enhance accountability by: <ol style="list-style-type: none"> a. Increasing the reliability, predictability and levels of State IWM funding b. Using competitive incentive programs to eliminate State funding earmarks c. Increasing flexibility to reflect local and regional conditions and IMW goals and investment priorities d. Providing proactive planning that avoids shovel readiness as a primary funding criteria e. Providing an opportunity to consolidate existing and future IWM revenues sources. This will improve the ability to track cumulative impacts from the variety of State regulations, fees and taxes on regional and local entities. • Money from this account can be used for implementing and sustaining: <ol style="list-style-type: none"> a. State IWM innovation activities b. Grants and loans for regional incentives as described in Related Action #2. c. Mitigating legacy impacts d. Assisting economically disadvantaged and/or other communities that cannot cover State regulatory compliance costs e. Leveraging federal money
<p>8. California Water Plan Update 2018 will enhance and refine the eight components of the Water Finance Storyboard as described in the next steps section of Chapter 7 Finance Planning Framework.</p>		<p><i>Note: The information below pertains to the Update 2018 process and will be included in the Next Steps section of Chapter 7 – Update 2013 Finance Planning Framework.</i></p> <p>Future work will cover each component (as</p>

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		<p>developed by the Finance Caucus for the Finance Storyboard) of the framework in the following ways:</p> <ul style="list-style-type: none">• IWM Scope and Outcomes (Component 1) – Revisit, clarify and adapt the scope of integrated water management to changing conditions and priorities.• IWM Activities (Component 2) – Develop more specificity regarding the types of activities that State government should invest in with a clearer nexus to the types of anticipated benefits.• Existing Funding (Component 3) – Continue to compile and synthesize data that tracks historical water related expenditures across local, state and federal governments in California.• Funding Reliability (Component 4) – Work with the State Agency Steering Committee to identify where potential funding gaps exist between the State IWM activities described in component 2 and existing funding levels and sources. Collaborate with regional water management groups to do the same for local and regional IWM activities.• State Role and Partnerships (Component 5) – Continue to clarify and elaborate on the future role of State government to support a more specific
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		<p>description and estimate of future costs.</p> <ul style="list-style-type: none">• Future Costs (Component 6) – Estimate future funding demands by: (a) launching IRWM, city, county and special district data pull; (b) work with State Agency Steering Committee to estimate the funding demand for existing and future IWM activities.• Funding, Who and How (Component 7)<ul style="list-style-type: none">- Continue to develop a prioritization method and rationale for apportioning IWM investment by the categories and subcategories developed in the Update 2013 Finance Planning Framework (i.e., Innovation, Infrastructure).<ul style="list-style-type: none">○ State government will work together with local and federal agencies to develop criteria for State government investment prioritization.○ Prioritization process will give equal regard for economic, environmental and social criteria.○ Review and adapt Shared Values for State IWM Investment to reflect changing State government and stakeholder priorities.○ Develop geographical apportioning criteria for State government investment that is driven by resource management needs from California's upper watersheds to its near coastal
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		<p>areas.</p> <ul style="list-style-type: none">• Trade-Offs (Component 8) – State government should develop a decision support system (DSS) to provide guidance and leadership for defining uncertainties of future cost, benefits, prioritization, and other tradeoffs . The DSS would inform prioritization of State government expenditures, estimation of expected IWM benefits and methods for apportioning costs across financiers. It also includes developing a clear and consistent methodology for identifying public benefits associated with the entire range of IWM activities.
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