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PROGRESS REPORT

Implementation of California Water Plan Update 2009

Comments and Questions

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California Water Plan Update 2013

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Acronyms and Abbreviations

AB	Assembly Bill
CDPH	California Department of Public Health
CNRA	California Natural Resources Agency
CWP	California Water Plan
DAC	disadvantaged community
DAC/EJ	Disadvantaged Community and Environmental Justice Community Caucus
EWMP	efficient water management practice
IRWM	integrated regional water management
LID	Low Impact Development
SWRCB	State Water Resources Control Board
UC	University of California
Update 2009	<i>California Water Plan Update 2009</i>
Update 2013	<i>California Water Plan Update 2013</i>

Purpose of the Progress Report

The California Water Plan (CWP) is a strategic plan for achieving healthy watersheds and integrated, reliable, and secure water resources and management systems, as well as public safety, by 2050. The CWP is the strategic plan addressing water issues for all State agencies, not only the Department of Water Resources. The intention of the CWP is to provide a guide for everyone participating in water management decisions — at regional, local, and personal levels — to achieve this comprehensive vision. Since 2005, hundreds of people have spent thousands of hours collaborating on the CWP updates.

Lester Snow, Secretary of Resources in 2009:

It is my pleasure to introduce the 2009 California Water Plan Update (Update 2009), which sets forth a blueprint for sustainability and forges a new direction for water management in California.

California water management cannot be changed overnight, but Update 2009 and the momentum behind it provide the plan, tools, and strategies to achieve momentous change beginning now. I hope you will agree that Update 2009 is the state's blueprint for sustainability and integrated water management and marks a significant new chapter in the way California manages its water resources.

Mark Cowin, Director of the Department of Water Resources in 2009:

The California Water Plan Update 2009 will help chart our course toward more sustainable, integrated resources management. ... By doing so, we increase our chances of realizing the Water Plan's vision: a productive economy, healthy ecosystem, and desirable quality of life for all Californians.

Given the ambitious and inclusionary goals of the CWP and the time and resources dedicated to it, it is fair to ask whether the CWP is being implemented. By statute, the CWP has no power to mandate that its recommendations be followed. CWP goals and recommendations must be furthered by agencies or voting bodies empowered to implement them independently. Is that happening? What progress is being made toward realizing CWP objectives?

This purpose of this Progress Report is to answer the preceding questions and others. Is the CWP being implemented? Are we making progress on the actions or recommendations in the CWP? If so, where are these actions taking place? If not, what constraints and barriers are blocking that progress? The results of this assessment can be used to direct State policy and to improve the next CWP update.

Caveats

- The Progress Report is evaluated at a statewide level. Because California contains many diverse regions that manage water resources very differently, the progress between regions could vary widely.
- This is the first CWP Progress Report. The methods for measuring progress and gathering data were developed in parallel, and both activities, as is the case with much of the CWP, depend heavily on stakeholder collaboration and feedback. Moreover, the process of monitoring and assessing progress and the data gathering itself are open to stakeholder comment and revision.

Each CWP update will have independent and developing recommendations and implementation plans. Because those may change from update to update, the data gathered will not establish a complete baseline for longitudinal tracking and evaluation of progress. Some elements may remain constant for several CWP updates, and the Progress Reports will track those continuously.

- Much of the influence of the CWP update involves the effects of the collaborative process on the participants, which include water managers throughout the state. The 2013 Progress Report does not measure that.

Value of the Progress Report

The value of the Progress Report is that it draws attention to whether and how much the objectives of the *California Water Plan Update 2009* (Update 2009) have been implemented. Within the objectives, the Progress Report data show progress being made on individual related actions. This information can be used to direct attention and resources to actions that are not progressing.

Evaluating the progress of each objective and its related actions meant that stakeholders in caucuses and agencies had to read the implementation chapter of Update 2009 closely. Their careful attention to the 2009 objectives and related actions persuaded many to become involved in developing and writing the implementation chapter of the *California Water Plan Update 2013* (Update 2013).

Creating the Progress Report upholds one of the statements of Update 2009.

*A comprehensive list of progress toward implementing Update 2005 recommendations can be found in **Volume 4 Reference Guide**. Meanwhile, more actions, reports, policies, and coordination are planned and will be monitored as a part of future Water Plan updates. (Volume 1, Chapter 1, page 20)*

Progress on the Implementation Plan of the 2009 Water Plan Update

Table 1. Overview of Thirteen Objectives

Update 2009 Objective	Status	Trend
1 – Integrated Regional Water Management	Good	Neutral
2 – Water Use Efficiency	Requires Attention	Good
3 – Conjunctive Management	Requires Attention	Good
4 – Water Quality	Requires Attention	Good
5 – Environmental Stewardship	Requires Attention	Neutral
6 – Flood	Good	Good
7 – Delta	Good	Good
8 – Emergency Response	Neutral	Requires Attention
9 – Energy	Neutral	Neutral
10 – Data	Good	Good
11 – Technology	Good	Good
12 – Tribal	Neutral	Requires Attention
13 – Ensuring Equitable Distribution of Benefits	Requires Attention*	Neutral*

Note: This evaluation is of the progress of implementing the related actions of each objective.

*The status and trend of Objective 13 – Ensuring Equitable Distribution of Benefits was the voted-on assessment of the CWP's Environmental Justice Caucus, not the calculated result of aggregating the evaluation responses.

Of the thirteen objectives, the statewide status of five objectives is reported to be “Good.” The status of three others is “Neutral.” For five of the thirteen objectives, the statewide status is reported as “Requires Attention.” Although the current status for the thirteen objectives is split fairly evenly among Good, Neutral, and Requires Attention, the trend for the objectives is more optimistic. In slightly more than half, the trend is reported as Good. Four of the thirteen are reported as Neutral. For only two of the thirteen objectives, the trend is neither Neutral nor Good, but instead Requires Attention.

Four objectives (6 – Flood, 7 – Delta, 10 – Data, and 11 – Technology) achieve both a Good status and a Good trend. Three other objectives (2 – Water Use Efficiency, 3 – Conjunctive Management, and 4 – Water Quality) receive an ongoing status of Requires Attention, but the trend is Good. Two objectives (8 – Emergency Response and 12 – Tribal) acquire a current status of Neutral, but the trend is moving in the

wrong direction and Requires Attention. Objective 9 – Energy obtains Neutral for both its status and trend. Objective 5 – Environmental Stewardship receives Requires Attention as its status, and the trend is Neutral, as is the case with Objective 13 – Ensuring Equitable Distribution of Benefits.

Objective 1 – Expand Integrated Regional Water Management

Promote, improve, and expand Integrated Regional Water Management to create and build on partnerships that are essential for California water resources planning, sustainable watershed and floodplain management, and increasing regional self-sufficiency.

Progress

Status: **Good**

N = 16, No Answer = 5

Poor or Fair: 1

Good or Excellent: 10

Trend: **Neutral**

N = 16, No Answer = 6

Slow or No Progress: 5

Medium or Fast Progress: 5

Successful Actions

Actions related to grant guidelines have been met, as has the goal of establishing and approving integrated regional water management (IRWM) regions. Items that DWR could include in their own grant guidelines have been incorporated.

Delayed Actions

Actions that specify that “counties and cities” should incorporate assessments of climate change risk into their general plan could not be assessed.

Prominent Barriers

Regions may need additional funding to assess climate change risk and incorporate that into their IRWM Plans.

It will be necessary to figure out how to continue IRWM after the final round of funding is granted.

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.

Progress

Status: **Requires Attention**

N = 21, No Answer = 5

Poor or Fair: 10

Good or Excellent: 6

Trend: **Good**

N = 21, No Answer = 5

Slow or No Progress: 7

Medium or Fast Progress: 9

Successful Actions

Model Landscape Ordinance was adopted.

DWR has reported to the Legislature about agricultural efficient water management practices (EWMPs).

The 2009 Recycled Water Survey was completed.

Salt and nutrient plans are being developed throughout the state.

The 20 x 2020 Program was established.

DWR adopted the Agricultural Water Measurement Regulation on July 11, 2012. The regulation sets accuracy standards and provides for a range of options that suppliers may use.

Delayed Actions

Agricultural Water Districts will not have much time to develop agricultural water management plans by the deadline after the guidebook is released. This will also delay reporting to the Legislature on results of agricultural water EWMPs.

Recycled water projects are coming up against financial and physical constraints, including a wide variance in water quality.

Some communities lack the financial resources to reuse municipal wastewater.

Prominent Barriers

Some communities lack the financial resources to re-use municipal wastewater.

The primary constraints to widespread reuse of recycled water are availability, storage, water quality, and lack of financial resources.

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.

Progress

Status: **Requires Attention**

N = 52, No Answer = 26

Poor or Fair: 16

Good or Excellent: 10

Trend: **Good**

N = 52, No Answer = 21

Slow or No Progress: 14

Medium or Fast Progress: 17

Successful Actions

DWR is providing technical assistance for monitoring compliance, but the effort is limited by staff availability.

DWR is working to create a priority schedule for monitoring groundwater basins, but the effort is limited by staff and data availability.

DWR and others have developed a system (California Statewide Groundwater Elevation Monitoring, or CASGEM) for electronic reporting, storage, and retrieval of groundwater monitoring data in useful formats.

Many groundwater quality protection measures have been incorporated into the State Water Resources Control Board's (SWRCB's) Strategic Plan.

Delayed Actions

Actions that require plans of other entities (regional, local, and tribal governments) were not reported or reported poor progress in this report.

Developing a water budget for all groundwater basins was delayed by financial, technical, political, and institutional constraints. The lack of a clear guidance document highlighting multiple examples and best management practices, as well as the lack of a requirement to consistently report the status of groundwater resource planning, also contributed to this delay.

Streamlining the SWRCB water rights permitting process to facilitate water transfers associated with the development of statewide and basin-wide conjunctive water management strategies was delayed.

Prominent Barriers

Some of these related actions have not been prioritized by DWR or other agencies.

Some related actions have technical and financial barriers.

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.

Progress

Status: **Requires Attention**

N = 19, No Answer = 4

Poor or Fair: 11

Good or Excellent: 4

Trend: **Good**

N = 19, No Answer = 4

Slow or No Progress: 5

Medium or Fast Progress: 10

Successful Actions

Actions that coincide with priorities for the Bay-Delta are seeing progress.

Sustainable local water supplies available for meeting existing and future beneficial uses by 1,725,000 acre-feet per year were increased, and adequate flows for fish and wildlife habitat were further ensured.

The public acceptance of the use of recycled water was promoted and increased, as was the reuse of stormwater 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 (Assembly Bill [AB] 32) and other relevant State and regional efforts.

Delayed Actions

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.

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.

Prominent Barriers

Priorities have been shifted from the items in the SWRCB's 2008 Strategic Plan to the items prioritized by the 2009 water legislation and the items being developed for the 2013 Delta Plan.

Objective 5 – Expand Environmental Stewardship

Practice, promote, improve, and expand environmental stewardship to protect and enhance the environment by improving watershed, floodplain, and instream functions and to sustain water and flood management systems.

Progress

Status: **Requires Attention**

N = 10, No Answer = 4

Poor or Fair: 4

Good or Excellent: 2

Trend: **Neutral**

N = 10, No Answer = 4

Slow or No Progress: 3

Medium or Fast Progress: 3

Successful Actions

DWR has adopted an environmental stewardship policy (DAM 2140), Water Resource Engineering Memo 58b providing guidance on implementing the policy and principles, and a sustainability policy (DAM 8001). These policies include stated commitments to create net environmental benefits (i.e., improvements beyond mitigation requirements), sustainability of public trust resources, protection of natural resources and ecosystems that ensure they are available for future generations, and a set of seven environmental stewardship principles. The sustainability policy states DWR's intention to be a State leader in sustainability and ecosystem stewardship. DWR is attempting to lead by example in its planning approaches by including environmental stewardship objectives in project planning and management. DWR has adopted a climate change action plan and is reporting its carbon footprint to the carbon registry.

DWR is contributing to AB 32 greenhouse gas reduction goals related to water and flood systems operations through enhancing carbon sequestration mechanisms by re-establishing 500,000 acres of historic vegetated floodplain corridors and restoring 500,000 acres of upper watershed forests. Studies are ongoing by DWR and partners on carbon sequestration benefits from wetland restoration and rice cultivation within the Delta.

Delayed Actions

IRWM and regional flood management plans that incorporate corridor connectivity and restoration of native aquatic and terrestrial habitats to support increased biodiversity and resilience for adapting to a changing climate should receive additional credits in State government water and flood grant programs.

Prominent Barriers

Difficulty exists in practicing multi-benefit decision-making. Program inertia and culture have not fully embraced new policies. Building meaningful partnerships with entities outside DWR and across programs within DWR has also proved difficult.

Despite delays in project funding, DWR funding is now secured; however, federal cost share is still uncertain. Delays in federal cost share agreement for the Project Feasibility Study have significantly delayed project implementation.

Objective 6 – Practice Integrated Flood Management

Promote and practice integrated flood management to provide multiple benefits including better emergency preparedness and response, higher flood protection, more sustainable flood and water management systems, and enhanced floodplain ecosystems.

Progress

Status: **Good**

N = 20, No Answer = 0

Poor or Fair: 6

Good or Excellent: 14

Trend: **Good**

N = 20, No Answer = 0

Slow or No Progress: 5

Medium or Fast Progress: 15

Successful Actions

DWR collaboratively developed a multi-objective Central Valley Flood Protection Plan that includes actions to improve integrated flood management in the Central Valley and accounts for the expected impacts of climate change. The plan will provide strategies for greater flood protection and environmental resilience.

DWR completed a FloodSAFE report that identifies and characterizes significant flood risks throughout each of California's regions and documents needs and opportunities to improve integrated flood management statewide.

Some local governments have implemented land use policies that consider flood risk.

Delayed Actions

Improve tools and observations to better support decision-making for individual events and seasonal and inter-annual operations, including water transfers and stream gage data.

Local governments should utilize Low Impact Development (LID) techniques that store and infiltrate urban and stormwater runoff while protecting groundwater.

Prominent Barriers

Cost is high, and agency alignment (internal and external) for developing tools to support decision-making has been problematic.

Cost is high, and developers and landowners or municipalities have provided opposition; also, difficulties have been encountered with regard to:

- Agency coordination of statewide use of LID techniques that infiltrate urban and stormwater runoff.
- Provision of expanded floodplains for improved flood management and overall public safety and environmental benefits to the public.

As FloodSAFE and the Central Valley Flood Prevention Plan are developed, new priorities and recommendations are replacing the recommendation of Update 2009.

Objective 7 – Manage a Sustainable California Delta

Set as co-equal goals a healthy Delta ecosystem and a reliable water supply for California, and recognize the Delta as a unique and valued community and ecosystem to promote and practice management for a sustainable California Delta.

Progress

Status: **Good**

N = 33, No Answer = 23

Poor or Fair: 2

Good or Excellent: 8

Trend: **Good**

N = 33, No Answer = 23

Slow or No Progress: 2

Medium or Fast Progress: 8

Successful Actions

A strong and consistent investment in science and engineering important to the Delta continues through a robust, well-coordinated Delta Science and Engineering Program, with transparent oversight and review from a Delta Science and Engineering Board.

The Delta Stewardship Council is being established. The council will be composed of seven voting members: four appointed by the Governor and confirmed by the Senate, one appointed by the Senate Committee on Rules, one appointed by the Speaker of the Assembly, and the Chair of the Delta Protection Commission.

The Delta Protection Commission has been enhanced. The mission of the Delta Protection Commission was modified to focus its efforts in

the areas of land use and economic development.

The Delta Stewardship Council has adopted a Delta management plan (Delta Plan) that is informed by and incorporates information, actions, and recommendations from Delta and Suisun planning efforts.

Delayed Actions

Update Bay-Delta regulatory flow and water quality standards to protect beneficial uses of water. Fully implement these new standards as well as the existing standards.

Prominent Barriers

Local and regional opposition remains to the proposed through-Delta conveyance systems that improve water supply management options and protect important aquatic species and environmental conditions. Opposition remains to changing the status quo of water conveyance through the Delta.

The State has identified conflicts between public values of protecting existing Delta islands from elevated flood risk at a high public cost for regional agricultural benefits and directing funds toward other public trust resource benefits.

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.

Progress

Status: **Neutral**

N = 15, No Answer = 6

Poor or Fair: 5

Good or Excellent: 4

Trend: **Requires Attention**

N = 15, No Answer = 2

Slow or No Progress: 11

Medium or Fast Progress: 2

Successful Actions

DWR has developed a long-term California Drought Contingency Plan; progress has been made on two subsections: (1) Identification of needed improvements to real-time surface water and groundwater monitoring programs, and (2) Identification of needed research in drought forecasting.

DWR has worked with the California Emergency Management Agency to develop preparedness plans to respond to other catastrophic events — such as earthquakes, wildfires, chemical spills, facility malfunctions, and intentional disruption — that would disrupt water resources and infrastructure.

The California Emergency Management Agency, Governor's Office of Planning and Research, and the California Natural Resources Agency (CNRA) lead an effort to update the

State Emergency Plan and State Multi-Hazard Mitigation Plan to strengthen consideration of climate impacts on hazard assessment planning, implementation priorities, and emergency responses.

Delayed Actions

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.

Many aspects of the California Drought Contingency Plan have not been implemented.

Prominent Barriers

High cost and agency resource capability and availability have factored into the delays.

Lack of interest during two normal/wet years, as well as lack of drought staff to implement the Drought Plan, has also contributed to the delays.

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 the AB 32 Scoping Plan to mitigate greenhouse gas emissions.

Progress

Status: **Neutral**

N = 23, No Answer = 10

Poor or Fair: 6

Good or Excellent: 7

Trend: **Good**

N = 23, No Answer = 13

Slow or No Progress: 4

Medium or Fast Progress: 6

Successful Actions

Local agencies and governments should implement cost-effective, energy efficiency measures in water system infrastructure projects.

Five recommendations that came from the 2009 water legislation have seen good progress:

(1) CII task Force was established and the report was completed, (2) Urban Technical Methodologies were implemented, (3) Fourth Target Method was implemented, (4) water regulations were processed, and (5) the Urban Water Management Plan Guidebook was updated.

Delayed Actions

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.

State government will establish a public goods charge for funding investments in IRWM strategies that will help mitigate and adapt to climate change.

Prominent Barriers

There is no requirement to report recycled water numbers to anyone.

The cost of salt/nutrient planning has been prohibitively high.

Recycled water is not a priority in all regions.

The California Department of Public Health (CDPH) is underfunded and understaffed.

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, which support IRWM and flood and water resources management systems.

Progress

Status: **Good**

N = 22, No Answer = 8

Poor or Fair: 6

Good or Excellent: 8

Trend: **Good**

N = 22, No Answer = 8

Slow or No Progress: 6

Medium or Fast Progress: 8

Successful Actions

DWR has participated with the National Oceanic and Atmospheric Administration and Scripps Institute of Oceanography to implement the Hydrometeorological Test Bed program, which enhances off-shore and land measurements of weather variables.

State government has established an interim range of sea level rise projections for short-term planning purposes for local, regional, and statewide projects and activities.

The CNRA, in coordination with other State agencies, has convened and supported a scientific panel of the National Research Council 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.

Delayed Actions

The University of California (UC) should establish a system-wide Climate Change Adaptation Research Center.

DWR will implement pilot studies in different areas of the state to explore how information can be more effectively integrated among local, regional, and statewide water planning and management activities. The initial focus of this effort will be to improve how information produced for urban water management plans can be used to more effectively support IRWM plans and the CWP while streamlining reporting requirements.

Prominent Barriers

There has been no initiative on this action by UC or by the State Legislature (for funding).

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.

Progress

Status: **Good**

N = 3, No Answer = 0

Poor or Fair: 0

Good or Excellent: 3

Trend: **Good**

N = 3, No Answer = 0

Slow or No Progress: 0

Medium or Fast Progress: 3

Successful Actions

State government has been working with California research and academic institutions to identify, prioritize, and begin funding applied research projects as part of a broad and diverse scientific agenda to fill gaps in knowledge about California's water resources.

State government has invested in pilot projects to help local agencies and governments and regional partnerships implement promising water technologies — to improve water use efficiency, water recycling and reuse, water supplies and quality, water and wastewater treatment, stormwater capture and reuse, desalination, and other — more cost effectively with knowledge and experience specific to each region.

The California Energy Commission, through its Public Interest Energy Research Program, has conducted research and demonstration projects that explore ways to reduce the energy intensity

of the water use cycle and to better manage the energy demand of water systems.

Delayed Actions

None.

Prominent Barriers

Cost, funding, outreach and education, as well as time and effort for collaboration among agencies, highlight the lack of perceived value of investing time and funding in new water technologies. Federal and State agencies are still spending greater funds and efforts on new dams or expanding existing dams for additional water supply benefits. Some work is being focused at the state level to evaluate groundwater conjunctive-use opportunities, but lack of groundwater regulation and resistance to such regulation locally is an impediment.

Objective 12 – Improve Tribal Water and Natural Resources

Develop tribal consultation, collaboration, and access to funding for water programs and projects to better sustain tribal water and natural resources.

Progress

Status: **Requires Attention**

N = 46, No Answer = 4

Poor or Fair: 23

Good or Excellent: 19

Trend: **Requires Attention**

N = 37, No Answer = 1

Slow or No Progress: 34

Medium or Fast Progress: 2

Successful Actions

The Tribal Advisory Committee, which incorporates tribal perspectives on water, culture, and land into the CWP, was created.

The first California Tribal Water Summit occurred in November 2009, with a second Summit scheduled for April 2013.

A new resource management strategy to discuss tribal and non-tribal cultural significance of water was developed.

IRWM guidelines now include Native American tribes to be contacted as part of the planning process.

With Proposition 50 funding, the Agricultural Water Use Efficiency Proposal Solicitation Package listed tribes as eligible applicants.

Pursuant to Executive Order B-10-11, the CRNA adopted a final tribal consultation policy.

Delayed Actions

Executive Order B-06-011 mandates that all Tribal Advisory Committee meetings be in Sacramento, discouraging tribes who live far away from participating. While there has been improvement in some areas of concern, slow or no action has occurred in others. Not all recommendations from the 2009 Tribal Water Summit have been fully addressed. More work needs to be done to improve Objective 12. In response to the CNRA consultation policy, DWR is developing a department-specific consultation policy.

Prominent Barriers

Some tribes' limited resources have curtailed their participation in the CWP process. Capacity varies among tribes to utilize the CWP reports. While the lack of government-to-government relationship has posed a problem, some tribes have an outright distrust of State government. The ability of tribes to participate and receive funding through IRWM is restricted, as they are unable to be the lead applicant. There have been delays in tribes receiving funding, and there are no mandates requiring local agencies to communicate with tribes. A majority of the available funding goes only to federally recognized tribes. Staff needs to be trained on cultural sensitivity and how to effectively communicate with tribes. The ability of DWR and tribes to share information varies.

Objective 13 – Ensure Equitable Distribution of Benefits

Increase the participation of small and disadvantaged communities in State processes and programs to achieve fair and equitable distribution of benefits. Consider mitigation of impacts from the implementation of State government programs and policies to provide safe drinking water and wastewater treatment to all California communities and to ensure that these programs and policies address the most critical public health threats in disadvantaged communities.

Progress

Status: **Requires Attention**

N = 25, No Answer = 4

Poor or Fair: 21

Good or Excellent: 0

Trend: **Requires Attention**

N = 25, No Answer = 5

Slow or No Progress: 20

Medium or Fast Progress: 0

Successful Actions

The Enchanted Heights Sewer project in the City of Perris is a good example of a coordinated effort. The City of Perris, with two other local agencies, partnered with CDPH and the SWRCB to build a \$15 million sewer project where the residents were directly involved in the project. This project can be used as a template for other communities. The Governor's Drinking Water Stakeholder Group is a recent effort that has been developed to focus on a limited scope of disadvantaged community (DAC) water issues

and regions of the state. Although an important first step, it is not clear what ultimate changes will take place....

Delayed Actions

The SWRCB's and CDPH's drinking water programs have technical assistance programs ... that include significant Disadvantaged Community and Environmental Justice Community Caucus (DAC/EJ) representatives for the Drinking Water State Revolving Fund and Clean Water State Revolving Fund. Still, more regular review and input from DAC/EJ stakeholders is necessary.... DWR has no such program focused on DACs.... Regional DWR offices also have not adequately developed technical assistance programs with local/regional DAC/EJ representatives.

Prominent Barriers

1) In terms of governance, there is a lack of DAC representation within IRWMs; 2) Lack of technical assistance with project application preparation, combined with cost-prohibitive application and scoring requirements from DWR in the application guidelines, has resulted in most DAC projects not being included in implementation applications; 3) DWR's overall guidance undermines any incentive or leverage to effectively integrate DACs into the IRWMs; 4) Lack of effective outreach to DACs, time-consuming processes with often hostile or overly technical environments, and lack of experienced and perceived benefits to DACs have resulted in a continued marginalization of DACs in IRWMs; 5) IRWMs often exacerbate local power dynamics that perpetuate drinking water and other local water challenges for DACs; 6) Even when a DAC project is awarded, DWR's delayed reimbursement process makes the implementation extremely difficult for small DACs.

Findings

- Related actions that could be completed within State government often saw rapid progress, especially if they originated in legislation. For example, DWR’s IRWM branch incorporated the listed grant guidelines. The State created the Delta Stewardship Council. DWR set up a Water Use Efficiency Task Force.
- The related actions that had “local and regional governments” as the agents could not be tracked. For a project with limited resources, there are too many local governments to survey.
- Land Use connection to water was not effectively evaluated because of way the objectives were set up for 2009. Although land and water use are closely linked, Land Use as a topic did not have an independent objective.
- When the objectives and related actions were gathered or written in Update 2009, they were not written to be measured. Many fail to clearly tie a single distinct action to a clear performance metric.
- During the close look at the Update 2009 objectives required for tracking progress, the overall choice of objectives and structure was affirmed, although related actions could be changed. Through the Progress Report process, CWP staff heard a call for new objectives.
- Many evaluators were surprised by the breadth of the Implementation Plan’s objectives and related actions.

Method

When CWP staff began to develop the Progress Report, the first decision was to “measure progress on which section of the Water Plan?” There were a few options. The second volume of Update 2009 contains 28 resource management strategies, all of which have many recommendations. Should the Progress Report attempt to follow the implementation of all of those recommendations? The Strategic Plan of Update 2009 has two sections that potentially could be tracked. In Chapter 2, nine crosscutting recommendations are listed. Chapter 7 contains the implementation plan for the CWP with 13 objectives, each with related actions.

After looking at the sections and consulting our advisory groups, the CWP staff decided that Chapter 7 was the best measure of whether the CWP is being implemented. First, it is referred to and is intended to be the implementation plan for achieving the CWP. Second, 13 objectives with 115 related actions offered a level of specificity that could be tracked. The nine crosscutting recommendations were broader and correspondingly harder to track. The CWP staff decided against monitoring and reporting on the recommendations contained in Volume 2, *Resource Management Strategies*, after counting more than 435 of them.

Once the CWP staff decided to report progress on the 13 objectives and their 115 related actions, they went to the text of Chapter 7. A spreadsheet with a tab was created for every objective. Every related action was given a row so that it could be reported on individually. Before the spreadsheets were finalized, they were vetted with two stakeholder groups and the resulting suggestions were incorporated.

The columns allow for different kinds of reporting. The first four columns are standardized. If the program is new, a dropdown menu allows the respondent to choose between No Action, Authorized, Initiated, Planned, In Progress (early), In Progress (mid), In Progress (late), or Completed. If the program is existing and on-going, the respondent can choose whether the status is Poor, Fair, Good, Excellent, or

Unreportable. The next column asks whether the trend for that related action is No progress/regressing, Slow progress toward implementation, Medium progress toward implementation, Fast progress toward implementation, or Unreportable. The last standardized column acknowledges that progress may be uneven throughout California, and asks whether the progress on the related action covers Parts of California, Most of California, or is Statewide.

The next four columns ask for unconstrained, narrative descriptions of progress. The first of the non-standardized columns asks for a description of activities (What has been initiated, completed, implemented, in pursuit of this objective?). The second asks for a listing of the barriers or constraints on progress, if any (What has been initiated, completed, implemented, in pursuit of this objective?). The next column asks how this related action can be refined for the upcoming CWP (How can this recommendation be more relevant, implementable, specific, and/or trackable?). The final column asks for future reporting metrics to help craft Update 2013 objectives and associated actions. The intent of these column headings was to give respondents different ways to evaluate progress and to report on relevant factors in greater detail in a narrative, if they so chose.

Once the spreadsheets were complete, CWP staff asked for our collaboration groups to fill out the spreadsheets on the topics they were familiar with. Five objectives align well with the topic-based caucuses formed for Update 2013. The Tribal Advisory Committee has the requisite knowledge to fill out Objective 12 – Improve Tribal Water and Natural Resources. The groundwater caucus has the expertise to respond to Objective 3 – Expand Conjunctive Management and Objective 4 – Surface and Groundwater Quality. The Land Use Caucus could evaluate the related actions for each objective that involve Land Use. The Technology Caucus could evaluate Objective 10 – Technology. In late spring of 2012, CWP staff brought the spreadsheets to each relevant caucus, gave presentations, and conducted lengthy phone calls. The Tribal Advisory Committee filled out the spreadsheet for Objective 12. The Technology Caucus evaluated Objective 10. The other caucuses ran into the methodological difficulties of evaluating each related action. After much discussion, those caucuses did not believe they could report accurately on progress and declined to fill out the spreadsheets.

Over the summer, State agency staff, primarily DWR staff, filled out the spreadsheets. We asked staff familiar with programs related to each objective to report on progress. Thus, the perspective is that of State-level staff in Sacramento.

As the spreadsheets were completed, we presented them to the public at two public workshops. We held a Progress Report workshop at the CWP's September Plenary, presenting two-thirds of the completed objectives spreadsheets, and asking stakeholders to review and add to the materials in the spreadsheets. We incorporated their responses and additional information from DWR's Climate Change program. We presented that material and further completed spreadsheets at a public workshop on November 19th. Both workshops garnered some additional comment, but not substantial revisions.

At the November 19, 2012 workshop, we compiled the existing data and proposed three ways to compile the data on the spreadsheets into one evaluation of progress. The stakeholders at the November 19th workshop chose a relatively simple metric that compares counts of No or Slow Progress to counts of Medium or Fast Progress. If there are more "No Progress" and "Slow Progress" than "Medium Progress" and "Fast Progress," the assessment is that the objective requires attention. If there are about the same number of "No Progress" and "Slow Progress" as "Medium Progress" and "Fast Progress," the

assessment is that progress on the objective is neutral. If there are more “Medium Progress” or “Fast Progress” ratings than “No Progress” or “Slow Progress” ratings, the assessment is that progress on the objective is good. The stakeholders believed that the precision of this metric appropriately matches the level of precision in the underlying data.

We summarized the progress for each objective into 13 one-page summaries and one overall summary. We presented those to the State Agency Steering Committee in January 2013, asking for comments and revisions. These summaries were presented to our Public Advisory Committee on February 14, 2013, for final comment and feedback for the Progress Report.

Methodological Difficulties

The primary difficulty tracking progress of the Update 2009 objectives and related actions was that when they were originally written, they were not written to be quantitatively measured. The related actions for each objective came from different sources. Some came from stakeholder comment. Some were brought in from companion plans written by other State agencies. Some originated in State legislation. They were written for many purposes and were not originally tied to a measurable performance metric. Other difficulties with measuring progress of the related actions include:

- Some require multiple actions to multiple targets, creating a matrix of possible actions. For example, one related action in Objective 6 – Integrated Flood Management is:

Improve communications and coordination during emergencies, such as floods and droughts.

This can be parsed into four actions: (1) improving communications during flood, (2) improving communications during droughts, (3) improving coordination during floods, and (4) improving coordination during droughts. Many of the original related actions are similarly compounded.

- Some have open-ended, long-term time frames that are intended to achieve the vision of the CWP in 2050. Three years after Update 2009, it is difficult to say whether we have made significant progress on related actions that may take decades to implement.
- Some require actions to be taken by local or regional governments. With sufficient resources, it is possible to track whether, for example, local governments have included flood-resistant design requirements in local building codes. But without the resources to survey all local building codes, it is difficult to track progress on this related action.

Many of the related actions were taken from the existing companion plans to the CWP. Since then, those plans have been revised, creating new goals and implementation strategies. The original goals are maintained in Update 2013 from Update 2009, but not with the people who would be responsible for implementing them. They have objected to being evaluated against a set of actions they are no longer trying to implement.

Recommendations to Improve Update 2013 Objectives

A primary finding of the Progress Report is that the objectives from the implementation plan (Volume 1, Chapter 7 of Update 2009) were not written with measurement in mind. The following improvements to the next round of objectives will make it significantly easier to prepare Progress Report 2016.

- If tracking the progress of the objectives and related actions is important, write the related actions to be measurable.
- Separate related actions into aspirational and measurable actions. A long-term strategic plan can appropriately contain actions intended to be visionary or inspirational rather than immediately acted upon. If so, indicate that they are not intended to be measured in the Progress Report. Actions whose progress should be measured should include a performance metric.
- Incorporate the feedback from progress evaluators into the objectives and related actions for Update 2013. The spreadsheets included a column for suggested revisions; the evaluators made many such suggestions.

Appendix A

Original Data for Each Objective

Objective:	1	2	3	4	5	6	7	8	9	10	11	12	13
	IRWM	WUE	Conjunctive Management	Quality	Env. Stewardship	Flood	Delta	Emergency	Energy	Data	Technology	Tribal	Equity
New Programs:													
No Action	0	3	8	3	1	0	0	0	2	2	0	0	0
Authorized	0	0	0	0	0	0	1	0	1	0	0	0	0
Initiated	0	4	4	0	2	1	1	0	3	6	0	0	0
Planned	0	0	1	0	1	0	2	0	1	0	0	0	0
In Progress (early)	0	6	4	4	0	5	0	0	1	1	0	0	0
In Progress (mid)	0	2	9	7	2	2	4	0	0	2	2	0	0
In Progress (late)	0	1	3	2	0	12	1	0	2	0	0	0	0
Completed	0	2	2	0	0	0	0	10	4	4	1	0	0
Status:													
Poor	1	2	6	3	1	1	1	4	1	4	0	21	9
Fair	0	8	10	8	3	5	1	1	5	2	0	2	0
Good	7	5	10	4	0	14	6	4	7	4	0	17	0
Excellent	3	1	0	0	2	0	2	0	0	4	3	2	0
Unreportable	0	1	6	1	0	0	0	1	1	0	0	0	0
Trend:													
No progress/regressing	0	0	4	2	1	0	1	6	2	2	0	4	2
Slow progress toward implementation	5	7	10	3	2	5	1	5	2	4	0	30	6
Medium progress toward implementation	4	8	17	10	3	15	6	2	3	3	3	1	0
Fast progress toward implementation	1	1	0	0	0	0	2	0	3	5	0	1	0
Unreportable	1	1	1	1	0	0	0	0	0	0	0	0	0
Area:													
Parts of California	0	1	7	1	5	11	4	0	0	3	0	19	0
Most of California	0	1	3	3	0	0	3	0	0	1	0	8	0
Statewide	8	15	21	12	0	9	1	13	13	8	3	5	8

Option: Use ratio of poor progress to good progress to create a good/neutral/delayed reporting metric.

	Number of Related Actions													
Status	Poor or Fair	1	10	16	11	4	6	2	5	6	6	0	23	9
	Good or Excellent	10	6	10	4	2	14	8	4	7	8	3	19	0
Trend	Slow or No Progress	5	7	14	5	3	5	2	11	4	6	0	34	8
	Medium or Fast Progress	5	9	17	10	3	15	8	2	6	8	3	2	0
Status:		10.0	0.6	0.6	0.4	0.5	2.3	4.0	0.8	1.2	1.3	3.0	0.8	0.0
Trend:		1.0	1.3	1.2	2.0	1.0	3.0	4.0	0.2	1.5	1.3	3.0	0.1	0.0

Objective 1: Expand Integrated Water Management										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or trackable?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	Promote, improve, and expand Integrated Regional Water Management (IRWM) to create and build on partnerships that are essential for California water resources planning, sustainable watershed and floodplain management, and increasing regional self-sufficiency.	On-going		Excellent	Stabalized	Statewide	The expand IRWM portion of this objective has essentially been met. As of 2011, there are 48 IRWM regions that cover 98% of the state's population and 82% of the state's geographical footprint. The utility of IRWM planning has increasingly become evident. Additional work is needed to promote and improve regional planning and to ingrain IRWM in water management culture of California. To promote IRWM planning, in 2011, DWR \$21 million to 30 IRWM region to support the development, improvement, and enhancement of IRWM plans.	The issue here is not the existence of barriers or constaints on meeting this standard, since it has basically been achieved. However, the concern is whether the existing level of IRWM planning and implementation can be maintained. This will be especially relevant once the final anticipated rounds of grant funding are award - Planning Grants in 2012 and Implementation Grant in 2015.	Since IRWM regions essentially cover most of California, the "expand" portion of this object should be altered. Recommend this objective should be revised to read "Promote, improve, and <u>maintain</u> Integrated Regional Water Management throughout California to meet long term water needs of the state including the delivery of safe drinking water and the protection of water quality and the environment. A strategic plan for the future of IRWM should developed to help clarify the State's future role in supporting IRWM and to ingrain IRWM in the water management culture of California."	Outputs - # of IRWM Plans meeting 2012 IRWM Plan Standards; Change in geographic coverage (+/-); Change in total population coverage (+/-) - adjusted for normal population migration/changes. OUTCOMES - Improved water supply reliability, improve water quality, improved ecosystems
1	State government should encourage—through both financial and technical assistance—IRWM planning and implementation throughout California with greater emphasis on adapting to effects of changing climate including possible increases in drought frequency and duration and possible increases in flood events.	On-going		Good	Medium progress toward implementation	Statewide	IRWM Program Guidelines require that IRWM Plans address Climate Change adaptation and mitigation. The Climate Change Handbook provides tools, such as the Vulnerability Analysis check list. In February 2011, 30 regions received \$21 million in Round 1 Planning grants, which included approximately \$1 million for assessing regional climate change risks. CC regional specialists provide on-going support to IRWM regions in the use of Handbook and other resources.	Additional tools, such as downsized models, may be warranted. The IRWM region scale may not be the appropriate scale for assessing/modeling Climate Change impacts – the hydrologic region scale may be more appropriate. There may be a need to foster consensus on possible range of impacts in order to successfully develop effective adaptation and mitigation strategies. Tools are limited for assessing how climate change is affecting drought and flood risks at regional levels. Some regions have limited capacity for addressing climate change risks, and in maintaining stakeholder engagement, particular among disadvantaged communities and tribes.	Minor changes to the recommendation to reflect current status – "State government should <u>continue to</u> encourage—through both financial and technical assistance—IRWM planning and implementation throughout California with <u>continuing emphasis</u> on adapting to effects of changing climate including possible increases in drought frequency and duration and possible increases in flood events."	Outputs - For Financial Assistance could be \$\$ awarded, # grant awarded, # grant agreements executed, \$\$ invoices paid, # projects completed; # of grants closed out. OUTCOMES - Increased system capacity to respond to extreme events.

Objective 1: Expand Integrated Water Management										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or trackable?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	State government should promote and provide incentives to regional partnerships to move toward water and flood planning at a watershed-scale or IRWM plan-scale and to consider using watershed and groundwater basin boundaries when determining IRWM planning region boundaries.	On-going		Good	Medium progress toward implementation	Statewide	The IRWM Region Acceptance Process evaluated the structure, organization, and functions of IRWM regions determine whether, among other factors, the IRWM region is based on the appropriate scale, which includes watershed and groundwater basin boundaries. DWR conducted RAP reviews in 2009 and 2011, which resulted in DWR accepting 48 IRWM regions in to the IRWM grant program. In 2011, DWR awarded \$21 million to 30 IRWM region to support the development, improvement, and enhancement of IRWM plans.	Additional work is needed to promote and improve the integration of flood management planning into on-going IRWM planning efforts. DWR is current evaluating proposal for the second and final, scheduled round of IRWM planning grant funding. Therefore, future IRWM planning financial incentives are uncertain.	State government should <u>continue to promote RWMGs to continue water and flood planning at the IRWM region-scale and provide incentives to promote the inclusion or enhancement of the flood management component of IRWM planning should be provided.</u>	Outputs - For Financial Assistance incentives see above. Check with RPB for technical assistance outputs and outcomes. OUTCOMES - Improved water management. Reduce flood risk.
	State government should closely coordinate its participation in the IRWM Program, State Watershed Program, Regional Blueprint Planning Program, and other regional planning efforts to prevent duplication, leverage resources, and provide clear and consistent guidance to stakeholders.	On-going		Good			Defer response on this item to others - Possible sources - RPB, CWP FESSRO.			
	State government should prioritize funding and technical assistance to support the development of IRWM plans where none exist to ensure that all regions have access to funding. State government should ensure plans are developed across the entire state to achieve the recommended planning and actions within the California Water Plan.	On-going		Excellent	Fast progress toward implementation	Statewide	This recommendation has basically been met. The IRWM grant program is a competitive process, but "tie-breaker" points were established in the Round 2 Planning Grant solicitation that provides a preference to applicants that have yet to receive Proposition 84 planning grant funding. RPB should comment on technical assistance aspects. As noted above, IRWM regions basic cover the entire state. Plans for these regions either exist (and a generally being updated to meet current standards) or are being develop.	The IRWM Planning Grant program is a competitive grant program. Although some preference was provided to IRWM regions that did not previously receive a Proposition 84 Planning Grant, the preference was not as stated in this recommendation. Also, the preference is a "tie-breaker", so if a proposal from a region is scored outside of the available funding range it is likely that the preference would not be utilized. For the 2 nd action, IRWM planning is a voluntary activity and the State does not have a statutory role in ensuring the development of IRWM plans. DWR does review the IRWM plan content and ensure plan adoption as part of the IRWM Grant Program (funding eligibility requirements).	Eliminate recommendation - basically met.	None needed.

Objective 1: Expand Integrated Water Management										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or trackable?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	State government should acknowledge that additional assistance is warranted to IRWM plans and regions with significant rural areas and/or higher percentages of disadvantaged communities to address critical water needs and to enable them to be competitive for IRWM plan funding.	On-going		Poor	Slow progress toward implementation	Statewide	The IRWM Program Guidelines identify meeting the critical water supply and water quality needs of disadvantaged communities as a program preference and the existing appropriations mandate that \$3.9 million of the \$30 million planning grant program and \$35 million of the \$350 million appropriated for implementation grants be allocated to assisting disadvantaged communities participate in IRWM planning process and to meeting the critical water supply and water quality needs of such communities, respectively. These targets were partially met during 2011 grant solicitations and the remaining obligation will be addressed in the next round of grant awards (Planning Grants scheduled for 2012 and Implementation Grants in 2013). Proposition 84 allocated funding to individual "Funding areas" (generally based on the CWP Hydrologic Regions). That allocation included a baseline level of funding to all 11 funding areas with additional funding, generally, allocated based on population. Funding cannot be reallocated to different funding areas. Therefore, IRWM grant funding to IRWMs regions is rural Funding Areas is limited.		Since the recommendation is basically infeasible from the IRWM grant program perspective, recommend either eliminating, restructuring, or altering focus. Also, just because a region is rural or has a significant disadvantaged communities that does not make them inherently non-competitive. This recommendation also conveys the message that IRWM is just about getting funding.	None needed.
	State government should provide incentives to encourage IRWM plans to address multiple issues and involve and provide benefits to multiple interest groups. When evaluating grant proposals, State government should award higher scores for projects that address multiple issues with a collaborative project team that includes representatives from different sectors.	On-going		Excellent	Fast progress toward implementation	Statewide	Recommendation met, if not exceeded. By definition an IRWM plan must address multiple issues and involve and provide benefits to multiple interest groups. No scoring preference is provided for multi-benefit projects since project are mandate to have multiple benefits in order to receive funding.		Eliminate recommendation - basically met if not exceeded.	None needed.

Objective 1: Expand Integrated Water Management										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or trackable?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
2	IRWM plans must address the following objectives and issues and the plan elements listed on page 7-10 of the 2009 Water Plan Update. [Required Elements of Integrated Regional Water Management]	On-going		Good	Medium progress toward implementation	Statewide	IRWM Program Guidelines, issued August 2010, include IRWM Plan Standards which detail the required plan content needed for RWMGs seeking IRWM grant funding. Those standards reflect the mandated content requirements as codified by the IRWM Planning Act of 2008, Proposition 84, and related implementing legislation. Most IRWM regions are in the process of updating prior IRWM plans to meet the Proposition 84 Plan Standards, are reflected in the August 2010 IRWM Program Guidelines. Several IRWM Regions have adopted plans based on the August 2010 standards.	One issue of concern is whether all regions will be able to effectively address Climate Change adaptation and mitigation. Some regions may not be able to fund development of an IRWM plan absent receipt of a planning grant. Some face capacity constraints for involving disadvantaged communities and tribes in order to identify their needs for inclusion in IRWM plans. Regions are allowed 2 years after entering into a grant agreement with DWR to have an adopted updated plan. Initial Round 1 Implementation grants were executed in 1st quarter 2012, so the earliest that plans must be updated by is 1st Q 2014.	The Water Code and Public Resources Code specify the legally mandated plan requirements which are in turn reflected in the IRWM Program Guidelines; therefore it is more appropriate to utilize the IRWM Program Guidelines as the standard bearer for plan content. "IRWM plans must address the IRWM Plan Standards contained in the IRWM Program Guidelines. (DWR August 2010 – revised guidelines scheduled for adoption fall 2012)"	Output - # of plans updated to 2012 standards by date. OUTCOMES - Measurements of increased water supply reliability, improved water quality, improved ecosystem function, reduced flood risks
3	All IRWM plans should include the following elements to help their region adapt to a changing climate using the IRWM partnership's best available information:	By 2011		Good	Medium progress toward implementation	Statewide	IRWM Program Guidelines, issued August 2010, include IRWM Plan Standards which detail the required plan content needed for RWMGs seeking IRWM grant funding. Those standards reflect the mandated content requirements as codified by the IRWM Planning Act of 2008, Proposition 84, and related implementing legislation. Climate Change adaptation and mitigation is one of the standards. The Climate Change Handbook provides RWMG with tools, including a vulnerability analysis checklist.	IRWM Planning is a voluntary program and the plan content is only subject to scrutiny if an IRWM region applies for IRWM grant funding.		
	An assessment of the region's vulnerability to the long-term increased risk and uncertainty associated with climate change.	By 2011		Good	Medium progress toward implementation		In August 2011, DWR awarded \$205 million in Implementation Grant funding to 25 IRWM regions. A funding condition for the grants, is that the IRWM Plan either address climate change adaptation and mitigation or that the IRWM Plan be revised, within 2 years of entering into a binding agreement with DWR, to address climate change adaptation and mitigation.	In August 2011, DWR awarded \$205 million in Implementation Grant funding to 25 IRWM regions. A funding condition for the grants, is that the IRWM Plan either address climate change adaptation and mitigation or that the IRWM Plan be revised, within 2 years of entering into a binding agreement with DWR, to address climate change adaptation and mitigation.	As mentioned above, some regions may lack capacity (in terms of stakeholder engagement, partnerships with research institutions) to develop adequate adequate methodologies for assessing long-term climate change risks and uncertainties.	OUTPUTS: # of vulnerability analysis conducted. OUTCOMES - reduced risk and reduced uncertainty

Objective 1: Expand Integrated Water Management										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or trackable?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	Strategies for substantial water conservation and higher use efficiency.	By 2011		Good	Medium progress toward implementation		IRWM Program Guidelines, issued August 2010, include IRWM Plan Standards which detail the require plan content needed for RWMGs seeking IRWM grant funding. The standards require the CWP RMSs be considered to meet IRWM Plan objectives and which were incorporated into the IRWM Plan. Agriculture Water Use Efficiency and Urban Water Use Efficiency are RMSs that must be considered. Use and Reuse Water More Efficiently is one of the IRWM Grant Program's Statewide Priorities.			OUTPUTS: # of water conservation/WUE projects funded OUTCOMES - % increased in water conservation - above 20x2020; volume of reduced water demand
	Conjunctive water management strategies.	By 2011					IRWM Program Guidelines, issued August 2010, include IRWM Plan Standards which detail the require plan content needed for RWMGs seeking IRWM grant funding. The standards require the CWP RMSs be considered to meet IRWM Plan objectives and which were incorporated into the IRWM Plan. Conjunctive water management is an RMSs that must be considered.			OUTPUTS: # of water CWM projects funded OUTCOMES - Measurements of increased coordinated management of a region's surface and groundwater supplies.
	An integrated flood management element.	By 2011					IRWM Program Guidelines, issued August 2010, include IRWM Plan Standards which detail the require plan content needed for RWMGs seeking IRWM grant funding. The standards require the CWP RMSs be considered to meet IRWM Plan objectives and which were incorporated into the IRWM Plan. Integrated Flood Management is an RMSs that must be considered. Practice Integrated Flood Management is one of the IRWM Grant Program's Statewide Priorities.			OUTPUTS: # of water flood management projects funded OUTCOMES - Reduced flood risk
	A drought contingency element that describes how entities within a region can share supplies and infrastructure during droughts and emergencies.	By 2011					Drought Preparedness is one of the IRWM Grant Program's Statewide Priorities.			OUTPUTS: # of IRWM Plans with a drought contingency element OUTCOMES - measurements of increase drought resiliency

Objective 1: Expand Integrated Water Management										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or trackable?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	Strategies for improving coordination with land use policies and planning that help restore natural processes in watersheds and encourage Low Impact Development.	By 2011					IRWM Program Guidelines, issued August 2010, include IRWM Plan Standards which detail the require plan content needed for RWMGs seeking IRWM grant funding. The standards require the plan to address the relation to Local Land Use Planning. Low Impact Development is one of the examples of the IRWM Grant Program Statewide Priorities - Use and Reuse Water More Efficiently and Practice Integrated Flood Management.			OUTPUTS: # of General Plans with a water element OUTCOMES: improved natural processes
	Counties and cities in general plans and other planning tools should identify areas at risk of increased wildfires and flooding and other catastrophic events due to climate change.	By 2011				Defer response on this item to others - Possible sources - Climate Change staff.	I don't have much information on this, but it might be worth mentioning that the 2010 and 2012 IRWM Guidelines require IRWM plans to consult with land use planning processes. Ideally, this would enable greater sharing of information about wildfire and flood risks, which affect both land and water use.	Some IRWM regions have limited capacity to conduct stakeholder outreach and may miss opportunities for building connections with land use planning processes that might help support an integrated approach to coping with wildfires and floods.		

Objective 2: Use and Reuse Water More Efficiently									
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)
	Use water more efficiently with significantly greater water conservation, recycling, and reuse to help meet future water demands and adapt to climate change.	On-going					DWR water use efficiency program actions related to climate change include: 1)GHG emission reduction from both 2012 Agricultural Water Use Efficiency grant program and future desalination grant program (in progress); 2) Water and energy use efficiency related to climate change adaptation and mitigation in California Water Plan update 2013 (in progress); 3)Developed measures for both urban water use efficiency and agricultural water use efficiency best practices ; 4)Collected information on climate change sections from urban water management plans received; 5) Included Climate change effects on water supply from Guidebook for Agricultural Water Management Plan.(QL) DWR has actively encouraged the local water agencies in implementing Efficient Water Management Practices (EWMPs) and provided funding to them in achieving water savings/energy savings and GHG emission		
1	DWR will work cooperatively with the California Urban Water Conservation Council to establish a task force that will identify best management practices to assist the commercial, industrial, and institutional sector in meeting the water conservation goal.	On-going	In Progress (late)				CII Task Force Report nearly final	lack of CII Data	Not as a recommendation for 2013 urban RMS
2	DWR, the State Water Resources Control Board (State Water Board), and other State agencies will develop a standardized water information reporting system to streamline water reporting required under the law.	On-going	Initiated	Fair	Slow progress toward implementation	Statewide	DWR has discussed the project with the relevant State agencies and DTS. DWR is in the process of developing a RFO to hire a consultant to begin development.	Funding and reliance on other projects/programs	Phased development approach has been determined with timeline so tracking implementation should be achievable
3	Governor Schwarzenegger directed DWR to collaborate with the State Water Board and its nine Regional Water Quality Control Boards (Regional Boards), the California Energy Commission, the California Public Utilities Commission, the California Department of Public Health, and other agencies to implement strategies to increase regional water supply self-sufficiency and achieve a statewide 20 percent reduction in per capita urban water use by 2020.	On-going	In Progress (early)	Good	Medium progress toward implementation	Statewide	urban water suppliers have reported 2015 and 2020 water use target in their 2010 urban water management plans	Multiple issues	Not a 2013 Urban WUE recommendation
	all terms of water management loans and grants to an urban water supplier administered by DWR, the State Water Boards, and California Bay Delta Authority is conditioned on implementation of the water demand management measures described in Urban Water Management Plans.	Effective January 2009	Completed	Excellent	Fast progress toward implementation	Statewide	Grant funding guidelines already include the condition to receive funding by urban suppliers on compliance the UWMP requirements and the implementation of DMMS.	No significant barriers or constraints	Generalize recommendation to include other SB X7-7 requirements.

Objective 2: Use and Reuse Water More Efficiently									
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	all Urban Water Management Plans should include provisions to implement all cost-effective, feasible, and urban best management practices established by the California Urban Water Conservation Council and should identify conservation actions for disadvantaged communities within the service area.	By 2010	No Action				Requirement to implement cost effective BMPs established under AB1420 not through UWMPs.	UWMPs are planning documents, implementation of BMPs not required	Not a 2013 recommendation
	Local and regional water use efficiency programs—residential, commercial, industrial, institutional, and agricultural—should emphasize those measures that reduce both water and energy consumption, notwithstanding other water management objectives.	On-going		Good	Medium progress toward implementation	Statewide	Lots of discussion and interest in the water energy nexus.		Not a 2013 Urban WUE recommendation
	DWR will identify and develop through a public process a method to identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, DWR will follow the provisions set forth in SB 7 Statewide Water Conservation.	By Dec 31, 2010	Completed				Completed Provisional Target Method 4, February 2012. Method to be revised by 2014.	Lack of landscape area data is a constraint	Not a recommendation for 2013
	local governments should initiate and pursue water conservation programs to reduce water use on existing and new landscapes. All local governments are now required by statute to adopt the State Model Water Efficient Landscape Ordinance or an ordinance that is as effective as the State model ordinance in water conservation.	By 2010		Fair	Medium progress toward implementation	Statewide	Model Landscape Ordinance adopted. Local governments should initiate more landscape programs.	Landscape area measurements	changed to recommend that DWR provide more technical assistance for landscape area measurement and the establishment of water budgets. Also recommend update of model efficient landscape ordinance
4	Agricultural water agencies should fully implement Efficient Water Management Practices, in accordance with the memorandum of understanding regarding Agricultural Efficient Water Management Practices, to reduce net unit water use, improve the quality of drainage water and return flows, and to report on EWMP implementation in their agricultural water management plans.	On-going	No Action	Fair	Slow progress toward implementation	Statewide	Activities include the implementation of agricultural EWMPs to improve water use efficiency, water quality, and reduce energy usage.	Implementation of agricultural EWMPs vary by agricultural water supplier priorities and cost effectiveness.	Recommendation updated to include SB X7-7 requirement. Notably, the implementation by agricultural suppliers (serving 25,000 acres or more of irrigated land) of the two critical EWMPs (Measurement and volumetric pricing) as well as other EWMPs when locally cost effective
	DWR and other State agencies will provide technical assistance and financial incentives to agricultural water agencies and growers to increase the percentage of California agricultural lands that are irrigated with highly efficient irrigation systems and management practices.	on-going	In Progress (mid)	Good	Medium progress toward implementation	Statewide	Technical as well as financial assistance is provided to agricultural water suppliers through grant programs to fund a variety of water use efficiency activities and programs. DWR rolled out the last portion of Proposition 50 funding (~\$15 million) dedicated for this purpose in the second half of 2012.	The State budget crisis affected the progress of funded projects due to the funding freeze and the "work stop" order issued in January of 2009.	Currently, and after the depletion of Proposition 50 funding for water use efficiency, there is a need to identify future funding to continue with assisting agricultural water use efficiency efforts statewide.

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	Agricultural water suppliers will measure water deliveries and adopt a pricing ostructure for water customers based at least on quantity delivered, and where technically and economically feasible, implement additional measures to improve efficiency.	Starting July 31, 2012	In Progress (early)	Fair	Slow progress toward implementation	Statewide	To help agricultural water suppliers comply with the measurement requirement, and as Authorized by the legislation, DWR adopted the "Agricultural Water Measurement Regulation" on July 11, 2012. The regulation set accuracy standards and provides for a range of options that suppliers may use.	The adoption of the "Agricultural Water Measurement Regulation" was delayed by a longer than expected stakeholders' process. Agricultural water suppliers need time and money to be able to plan and install measurement devices. Even, though some Suppliers do already measure water deliveries to their customers, there is still a need to more time and certainly funding to implement measurement programs.	Repeat recommendation in 2013.
	agricultural water suppliers will submit Agricultural Water Management Plans and include in those plans information relating to the water efficiency measures they have undertaken and are planning to undertake.	Starting Dec 31, 2012	Initiated	Poor	Slow progress toward implementation	Statewide	Per SB X7-7 agricultural water suppliers serving 25,000 or more irrigated acres are required to submit Agricultural Water Management Plans (AWMP) to DWR starting Dec 31, 2102 and in 2015 and every 5 years thereafter.	DWR is in the process of preparing a guidebook to help agricultural water suppliers with the preparation of their AWMPs. The guidebook is expected to be finalized by the end of October 2012. There is a very small window of time left for the suppliers to prepare their plans. However, based on lessons learned from the first round of AWMP submittals, DWR, in consultation with stakeholders, will embark on updating future versions of the Guidebook.	Repeat recommendation in 2013.
	DWR will report to the Legislature the agricultural efficient water management practices being undertaken and reported in agricultural water management plans.	In 2013, 2016, and 2021	No Action	Unreportable	Unreportable	Statewide	By December 31, 2013, DWR shall submit a report to the Legislature on agricultural EWMPs that have been and are planned to be implemented and an assessment of the manner in which the implementation of EWMP has affected and will affect ag operations and estimate of water use efficiency improvements. Subsequent reports will be prepared in 2016 and 2021.	DWR report to the Legislature will be contingent upon receiving AWMPs from the agricultural water suppliers with the needed information related to their implementation of EWMPs.	Repeat recommendation in 2013.
5	State government should authorize and fund new incentive-based programs to promote the widespread and mainstream adoption of substantial and aggressive water conservation, recycling and reuse, and related water use and reuse monitoring programs, by urban and agricultural water systems and their users. These programs should include a monitoring plan that will allow agencies to track the effectiveness of the programs and the extent to which they provide equitable benefits to disadvantaged communities.	On-going							Not an urban wue recommendation in 2013. For the Municipal Recycled Water RMS, further state and federal funding is recommended.

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6	Municipal recycled water may represent a relatively energy-efficient water management strategy in some areas of the state.	On-going	In Progress (early)	Fair	Slow progress toward implementation	Statewide	Completion of 2009 Recycled Water Survey provides current data on implementation of municipal recycled water projects. Conducting the survey also provided information on challenges, communities that have ceased recycling, and others that are interested in implementing programs.	The primary constraints are financial and the planning required to implement a successful project. There is a perception that there are regulatory constraints and there is an attempt to work on these in cooperation with WateReuse.	
	State government should provide policies and incentives to promote and accelerate the use of municipal recycled water statewide.	On-going	Initiated	Good	Medium progress toward implementation	Statewide	Existing policies exist to promote municipal recycling, but the increase in recycling is slowing because of actual and perceived difficulties, as well as the cost to implement some types of programs. In addition, funding for recycled water projects has been available from grants and loans through SWRCB and DWR programs.	The primary constraints are financial - the costs associated with planning, permitting, and implementing a recycled water program can be high. Ongoing funding sources will be needed to support continued aggressive growth in recycled water projects.	Consider refocusing efforts on agricultural reuse, which would have more focused infrastructure and lower treatment needs. Existing SB918 will look at feasibility of implementing direct potable reuse in California by 2016. These concepts are included in the Municipal Recycled Water RMS, but is not included as specific recommendations.
	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.	On-going	In Progress (mid)	Good	Medium progress toward implementation	Statewide	The Recycled Water Policy is currently being implemented, as well as revised to incorporate monitoring requirements for chemicals of emerging concern. For part b, State law already requires the use of recycled water, where appropriate. As for implementation of State law, the State Water Board would only issue a requirement for the use of recycled water if an appeal is directed towards the Board. Primarily, decisions regarding the source of water for projects is made by the project proponent with the input of local water suppliers and the regional boards. Constraints to implementing State law are local availability of recycled water, public infrastructure limitations, and onsite infrastructure requirements or process modifications.	The primary constraints are financial and availability of recycled water.	Not included as a Municipal Recycled Water RMS recommendation, but is an ongoing activity of the SWRCB
	Water and wastewater agencies should adopt policies 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.	by 2015	In Progress (early)	Fair	Medium progress toward implementation	Statewide	Currently, there are parts of the state that are promoting recycled water use and development. In the Los Angeles-San Diego region, up to 7 percent of urban demands are met with municipal recycled water. However, in most of the rest of the state, it is only 1 to 3 percent.	If the State determines that this recommendation should be more fully implemented, it could require that receipt of SWP water could be linked to wastewater reuse. However, some communities are not in the financial position to implement recycled water projects.	Not included as a Municipal Recycled Water RMS recommendation, but is an ongoing activity under current state and local ordinances

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	Local government and wastewater entities, together with local salt nutrient contributing stakeholders as identified by the Association of California Water Agencies (ACWA), the California Association of Sanitation Agencies (CASA), and the WaterReuse Association (together "the Associations") together with the Regional Water Boards will increase the use of recycled water from municipal wastewater sources in a manner that implements State and federal water quality laws, prepare consistent salt/nutrient management plans for every groundwater basin/subbasin in California by 2016. These salt/nutrient management plans shall be prepared as outlined in the State Water Board's Water Quality Control Policy for Recycled Water adopted May 14, 2009.	by 2016	In Progress (early)	Fair	Slow progress toward implementation	Most of California	Salt and Nutrient Management Plans are currently being developed throughout the state.	There are no known constraints (at this time) to implementing the requirement by 2016.	Not included as a Municipal Recycled Water RMS recommendation, but is an ongoing activity under current SWRCB's Recycled Water Policy
7	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 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 to augment local supplies.	On-going	In Progress (early)	Poor	Slow progress toward implementation	Parts of California	Runoff management is occurring in some regions where developing local water supplies are a priority, such as southern California. Stormwater is being used as a direct or blending source for groundwater recharge projects, as well local irrigation (Irvine). Also, it is being used for local river restoration and enhancement (Santa Ana, Los Angeles rivers).	Water quality and storage are primary constraints. Stormwater can have highly variable quality, which can make it challenging to treat for subsequent use. In addition, developing sufficient storage can be an obstacle for large-scale development of stormwater reuse projects.	
8	The Water Board and Regional Boards and the California Public Utility Commission will exercise their authority to require water conservation measures in permitting and other proceedings. Additional State legislation may be needed to further ensure attainment of these conservation efforts. Prior to any new measures, State government will evaluate the impacts on housing costs, including affordability to low and moderate income families and workers.	On-going	Initiated	Fair	Medium progress toward implementation	Statewide	20x2020 program established		Not a urban WUE recommendation in 2013

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1	State and federal government, Tribes, and local agencies should develop conjunctive water management plans as part of their existing water planning efforts to identify strategies that can improve the coordination of local groundwater storage ... surface storage and other water supply sources when available, and to facilitate re-operation of the Central Valley flood management system for multiple benefits.	By 2013		Unreportable	Slow progress toward implementation	Parts of California	Parts of California	Legal, Financial, Technical, & Institutional. Currently there is some confusion as to the legal authority of some agencies to utilize their existing surface water for groundwater recharge.	1) Utilize the Statewide Agency Steering Committee to identify State Goals, Objectives, and recommendations for CM in CA. 2) Develop a consistent set of ground rules for local agencies to follow when implementing a CM program. 3) Provide an expedited regulatory and environmental approval process for CM programs that meet the Statewide goals' and objectives. 4) Implement a State CM incentive program for projects following Statewide CM goals and objectives.	1) Utilize the goals and objectives identified in the Statewide CM Guidance Document and conduct an inventory and assessment associated with meeting these goals & objectives. 2) Require all Ag, Urban, IRWM, or GM plans to report their compliance with this action item every five years. - Develop an web based CM Project Activity site that will allow agencies to update and report CM Activities. The site which would allow rapid assessment of activities rather than large periodic inventory updates.
2	All Integrated Regional Water Management (IRWM) plans should identify strategies that can improve the coordination of local groundwater storage and banking with local surface storage and other water supply sources when available. The IRWM partnerships should utilize and build on their existing conjunctive water management plans.	By 2011	Initiated	Unreportable	Slow progress toward implementation	Parts of California	Parts of California	The strategies wouldn't be too difficult to develop, but overall haven't been developed due to other pressing more regulatory and financial issues (time and money).	1) Communicate to the IRWM groups that development of these communication strategies is a priority. 2) Provide an on-line site for IRWM RWMG to post or link to IRWM plan updates and activities. 3) Roll the requirement to develop these coordinating strategies into the next update of the IRWM Plan Standards.	Require IRWM RWMGs to report their actions associated with this objective into their annual reporting, or into the next CWP update.
3	Streamline the State Water Resources Control Board water rights permitting process to facilitate water transfers associated with the development of statewide and basin-wide conjunctive water management strategies.	On-going	No Action	Poor	Slow progress toward implementation	Parts of California	Parts of California	Barriers and/or Constraints are unknown but appear to be time and leadership. Upper management is extremely busy and it is unclear who within DWR should be taking the lead on this issue.	1) Follow recommendations in the issue paper...1) Schedule a meeting with the State Board to discuss their vision for CM and GW Recharge, and to discuss if they truly feel that existing grant funded CM programs are operating illegally. 2) Work together to develop consistent goals and objectives for CM permitting. 3) Provide recommendations in the CWP that are consistent with the agreed to goals and objectives, and conduct workshops to help explain these goals & objectives, and identify the process for permitting CM programs.	1) Develop a DWR-State Board policy paper documenting the Statewide goals & objectives for CM. 2) Provide a clear written process for permitting these projects that identify opportunities to expedite the process 3) Inventory CM programs before and after implementation of the recommendations.

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4	Local agencies should develop and implement AB 3030 Groundwater Management Plans with basin management objectives, or groundwater management plans prepared in accordance with other provisions of law, as a fundamental component of IRWM plans.	On-going	Planned	Fair	Slow progress toward implementation	Parts of California	Parts of California	Barriers and/or Constraints are financial, technical, political, and institutional. Lack of a clear guidance document highlighting multiple examples and best management practices. Lack of a requirement to consistently report the status of GW resource planning.	1) Develop a web portal water management networking site where CA water resource managers could post all the various water resource planning documents and get input and feedback on best practices for water mgmt. 2) Require that all water resource planning documents be uploaded into this single Water Management Portal, or into on-line Water Resource Management Networking site. 3)other option is to require that all agencies participating in a water resource planning activity post their own management plans, and annual updates, to their own web site. DWR could then provide a portal that would link to all these various sites.	Evaluate the existing recommendations and identify to what degree water resources planners are posting their planning documents, and implementing effective GW Mgmt.
5	Local land use agencies should adopt ordinances that protect the natural functioning of groundwater recharge areas.	On-going	Initiated	Poor	Slow progress toward implementation	Parts of California	Parts of California	Barriers and/or Constraints are financial, technical, political, and institutional. There is lack of a clear guidance or protocols for the mapping of recharge areas, and the assessment of how these recharge areas function. There is a lack of funding for this work, there is a lack of leadership (in AB359, DWR is identified as the agency that will collect and post the information, but there is not direction on who is to lead or help guide this effort).	1)Work with State and local agencies to develop an accepted method or protocol for mapping and assessing recharge areas. 2) Provide funding to help support the State and local work associated with this effort (although AB359 requires DWR to implement and maintain a number of additional work products, there is no funding to support these work activities) 3)Hold workshops with land use and water resource managers to explain the new recharge mapping and reporting requirements.	1) Have protocols or guidance documents been provided. 2) Has funding or other incentives been provided to help implement this work. 3) Has outreach been conducted. 4) Re-assess the GMPs and local ordinances to see if these requirements have been incorporated.
6	State and local governments should increase funding incentives to protect groundwater basins from pollution or contamination, and to remediate pollution or contamination when either occurs.	On-going								

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7	State government should provide funding to implement monitoring, assessment, and maintenance of baseline groundwater levels, including the fractured rock hydrogeology.	On-going	No Action	Unreportable	No progress/regressing	Statewide	Statewide	Some of the Barriers and/or Constraints are associated with awareness of the problem...I'm not sure that too many people understand the lack of groundwater data in fractured rock regions. Other issues are 1) Prioritization (local monitoring group have limited resources and need to prioritize their efforts on more highly used B118 GW Basins; 2) Regulatory (CASGEM monitoring requirements don't cover fractured rock aquifers; and 3) Political (fractured rock areas have less people and less political clout to initiate these efforts). (What are some key constraints to achieving this objective?)	Develop white paper identifying the issue and conduct outreach activities. Meet with Mountain County IRWM groups to further highlight this issue and discuss options. Consider changing the CASGEM GW Level monitoring and reporting requirements to also cover fractured rock aquifers.	1) Has the issue been adequately characterized. 2) Has outreach to the mountain and foothill communities been conducted. 3) Have we determined that this is a priority issue. 4) have we considered supporting legislation to include fractured rock aquifers into the CASGEM program.
	<ul style="list-style-type: none"> DWR will establish a priority schedule for monitoring groundwater basins and the review of groundwater elevation reports and make recommendations to local entities to improve the monitoring system. 	Spring 2013	Initiated	Good	Medium progress toward implementation	Statewide	Statewide	Barriers and/or Constraints are technical, financial, and institutional. 1) Limited DWR funding and staff resources limits the speed at which the CASGEM program can be implemented. 2) The data that is required to be included in the groundwater basin prioritization is not collected or reported at the spatial scale needed to be readily compatible with GW basins. 3) Some data sets are incomplete. 4) Some data sets are protected from public disclosure. 5)The political or social aspects associated with implementing a Groundwater Basin Priority are fairly significant. Addressing these aspects require a larger than normal public outreach and communication program in order to accurately define the objectives and implications for the groundwater basin prioritization project.	1) Solicit comments and recommendations regarding basin prioritization. 2) Identify a schedule for Implementation of the GW Basin Prioritization 3) Identify how the GW Basin Prioritization can be used to assess and prioritize GW Management in CA.	1) Is the Draft GW Basin Prioritization included in the 2013 Update? 2) Have concerns and recommendation been addressed, 3) Have the next steps been provided.

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	<ul style="list-style-type: none"> DWR will assist local monitoring entities with compliance with this statute. 	On-going	In Progress (late)	Good	Medium progress toward implementation	Statewide	Statewide	Barriers and/or Constraints are financial and institutional. 1)Limited DWR staff and funding have restricted the amount of assistance DWR staff can provide to Mont. Entities. 2) Contract to develop CASGEM Portal was limited in funding and scope, and expired prior to all the bugs being fixed. 3)The amount of DTS staff resource dedicated to maintaining the CASGEM portal is limited and insufficient to handle the number of bugs and fixes that exist with the CASGEM Portal. 4)DWR contracting and budget issues have hampered implementation of a timely response to CASGEM portal problems. 5)Limited DWR staff resources have caused delays in migrating Water Data Library data into CASGEM, and limited development of rewriting of WDL code so as to be compatible with CASGEM. All of these issues significantly limit DWR's ability to assist local ME to comply with the CASGEM legislation.	Provide DWR with adequate funds and staff resources to properly implement and maintain the CASGEM program, so as to provide adequate assistance with local monitoring entities compliance.	DWR should provide annual CASGEM program updates. The updates should include results from ME outreach surveys that solicit input as to how the CASGEM program is working and how might we improve the system to aid local compliance with this statute.
	<ul style="list-style-type: none"> Local entities are allowed to determine regionally how best to set up groundwater monitoring program, crafting the program to meet their local circumstances. 	On-going	In Progress (mid)	Good	Medium progress toward implementation	Statewide	Statewide	Barriers and/or Constraints are primarily institutional/legal. DWR is required to review and approve ME monitoring plans and ensure that they meet the criteria established under the CA Water Code. DWR has some flexibility in the monitoring plan review and approval, but our flexibility is limited. In some cases, what is required by CA Water Code may not always follow the local entity's interpretation or determination of what best meets the local circumstances or need.	Conduct further outreach or surveys to seek input and gauge the effectiveness of mont. entities ability to develop a groundwater level monitoring program that meets their local needs and the legal requirements stipulated by the CA Water Code.	DWR should provide annual CASGEM program updates. The updates should include results from ME outreach surveys that solicit input as to how the monitoring entities monitoring plans meet their needs and the legal requirements of the CA Water Code.

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	<ul style="list-style-type: none"> DWR will implement groundwater monitoring programs in regions where local agencies fail to implement a monitoring program or fail to provide the required reports. 	On-going	No Action	Unreportable	Slow progress toward implementation	Statewide	Statewide	Barriers and/or Constraints are financial and political/social. 1) Limited DWR funding and staff resources limits the speed at which the CASGEM program can be implemented. Currently, the same staff that are responsible for developing the Groundwater Content for the CWP Update 2013, are also responsible for implementing the CASGEM program. However, even with the limited resources this particular aspect of the CASGEM program is slowly progressing. 2) Basin Prioritization and outreach needs to be conducted prior to DWR implementing gw level monitoring in nonmonitored basins 3) The political or social aspects associated with implementing a Groundwater Basin Priority are significant. Addressing these aspects require a larger than normal public outreach and communication program in order to accurately explain the meaning and implications for the groundwater basin prioritization.	DWR will continue to evaluate existing groundwater level monitoring versus groundwater basin prioritization and develop recommendations for high priority groundwater basins still needing additional monitoring.	
	<ul style="list-style-type: none"> DWR in conjunction with public agencies will report to the Governor and Legislature findings of investigations of the state's groundwater basins that include geological and hydrological conditions and general patterns of groundwater pumping and recharge; findings will reported to the Governor and Legislature thereafter in years ending in 5 and 0. 	Not Started	No Action	Unreportable	No progress/regressing	Statewide	Statewide	Barriers and/or Constraints are financial, technical and political/institutional. 1) No funding has been appropriated for DWR to conduct this work. This lack of funding prohibits DWR from initiating this important, but resource demanding project. 2) Technical issues associated with the availability, quality, and confidentiality of groundwater data serve to constrain the scope and effectiveness of this work. 3) political and institutional issues associated with identifying groundwater basins that are subject to conditions of overdraft constraining the schedule/timing of this investigation by requiring substantial outreach and coordination in order to make this project a success.	Recommendation is to adequately fund DWR to conduct this important and much needed groundwater investigation. The recommendation could read something like...In accordance with CWC §12923 and §12924, within three years of adequate funding being appropriated and available to the Department of Water Resources, the department, in conjunction with other public agencies, shall conduct an investigation of the state's groundwater basins and provide an update of Bulletin 118. The department shall identify the state's groundwater basins on the basis of geological and hydrological conditions and consideration of political boundary lines whenever practical. The department shall also investigate existing general patterns of groundwater pumping and groundwater recharge within those basins to the extent necessary to identify basins that are subject to critical conditions of overdraft and/or unsustainable groundwater management practices. Recommended funding resources associated with implementing the appropriate investigations and outreach to update Bulletin 118 according to the above criteria is estimated at five million dollars.	Reporting Metrics should be tied to implementation of the recommendations. 1) DWR is provided funding to do this work. 2) DWR coordinates with public and local entities. 3) DWR investigates the gw basins as described in CWC Section 12924 within a three year period of the availability of adequate funding.

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8	Groundwater monitoring programs should be required to provide additional information needed to adequately characterize a groundwater basin or subbasin. State and local governments and local water management agencies should work to establish the following:	On-going	In Progress (mid)	Good	Medium progress toward implementation		Statewide	Barriers and/or Constraints are primarily financial and institutional. 1) Limited funding has restricted monitoring entities participation and slowed DWR's ability to assess and report additional monitoring needs. 2) Confidentiality of some groundwater data restricts access and reporting.	Provide adequate funding to DWR to collect and assess the adequacy this data, and provide incentives to groundwater monitoring entities to conduct this work.	Has adequate funding been provided to DWR to collect and assess the adequacy of the data. Have incentives been provided to local monitoring entities to conduct this work. Evaluate the number and types of data that is being provided.
	<ul style="list-style-type: none"> A water budget that quantifies the amount of water flowing into and flowing out of the basin, subbasin, aquifers or aquifers, using the groundwater monitoring data, streamflow data, and groundwater extraction data that are collected by the local agency(is). 	No Time Frame	No Action	Poor	Slow progress toward implementation	Statewide	Statewide	Barriers and/or Constraints are financial, technical, and institutional. 1) Monitoring is expensive and limited funds are available for local entities to perform this work. 2) Some areas have technical issues with implementing accurate streamflow monitoring devices. 3) Fear of statewide regulation of groundwater results in most entities wanting groundwater extraction data to be kept confidential. 4) Fear of increased regulation or loss of surface water rights restricts some entities from reporting diversion and delivery data. 5) Environmental issues and permitting restrict access to install and maintain surface water monitoring devices in some locations.	Require all Agricultural water purveyors over 500 acres and Urban water purveyors over 1000 connections to develop and report a detailed water budget for their service area and incorporate the cost of this effort into their fee structure. NOTE: I WAS AT SOMEWHAT OF A LOSS FOR RECOMMENDATIONS ON THIS ACTION. THE ABOVE RECOMMENDATION IS MY PROFESSIONAL SUGGESTION OF WHAT IS REALLY NEEDED. HOWEVER, THIS RECOMMENDATION SHOULD BE RUN PAST PAUL AND KAMYAR BEFORE PROVIDING AS A CWP RECOMMENDATION.	Review UWMP and AWMP to identify how much of this information is being provided. Refer to the next B118 update's report on the availability, status, and adequacy of groundwater basin budgets.

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#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities (Federal, State, regional, local) (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	<ul style="list-style-type: none"> State government should require electronic submittal of monitoring data by local groundwater monitoring entities. 	On-going	Initiated	Fair	Medium progress toward implementation	Parts of California	Parts of California	Barriers and/or Constraints are financial, technical, and institutional. 1) Monitoring reporting is expensive and limited funds are available for local entities to perform this work. 2) Some areas have technical issues with implementing accurate streamflow diversion, or on-farm monitoring devices. 3) Fear of statewide regulation of groundwater results in most entities wanting groundwater extraction data to be kept confidential. 4) Fear of increased regulation or loss of surface water rights restricts some entities from reporting diversion and delivery data. 5) Environmental issues and permitting restrict access to install and maintain surface water monitoring devices in some locations.	Continue to coordinate with State, Federal and local agencies, and urban, agricultural and local water purveyors to improve and expand electronic submittal of groundwater monitoring.	Require managers of programs that include electronic reporting of groundwater data, to develop an annual report which evaluates and assesses the status of electronic groundwater data reporting.
	<ul style="list-style-type: none"> Guidelines and protocols developed by DWR for the collection and reporting of groundwater monitoring data by local water management agencies. 	Done for GW level data, and I think for UWMPs	Completed	Good	Medium progress toward implementation	Statewide	Statewide	No current constraints for CASGEM and UWMP data. Not sure about other gw monitoring data.	Need to develop guidelines for land subsidence monitoring, and surface water-groundwater interaction monitoring.	Review and report on the number of monitoring entities that utilize the electronic system. Develop land subsidence monitoring guidelines and sw-gw interaction monitoring guidelines.
	<ul style="list-style-type: none"> A system developed by DWR in cooperation with others for electronic reporting, storage, and retrieval of groundwater monitoring data in useful formats. 	Done for GW level data, and I think for UWMPs	Completed	Good	Medium progress toward implementation	Statewide	Statewide	No current constraints for CASGEM data portal. Not sure about the UWMP data portal, and not sure about other gw monitoring data.	Review and assess DWR electronic data reporting systems for functionality and usability.	Provide review and report of DWR electronic data reporting systems.
9	State government should establish a System Reoperation Task Force composed of 9. state personnel, federal agency, and Tribal representatives, and regional and local governments, agencies, and organizations to:									
	quantify the potential costs, benefits and impacts of system reoperation for water supply reliability, flood management, conjunctive water management, hydropower, water quality, fish passage, cold-water management for fisheries, and other ecosystem needs;									
	support the update of US Army Corps of Engineers operations guidelines (Rule Curves) for Central Valley reservoirs;									

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	support the update of flood frequency analyses on all major rivers and streams;									
	evaluate the need to amend flow objectives;									
	expand the study of forecast-based operations for incorporation into reservoir operations guidelines;									
	include watershed level analyses that detail localized costs and benefits;									
	identify key institutional obstacles that limit system reoperation benefits;									
	communicate and promote demonstration project results to encourage broader participation in system re-operation analyses; and									
	identify dam safety issues.									
10	As part of completing the CALFED surface storage investigations, feasibility study 10. reports, and associated environmental review and documentation, DWR and the US Bureau of Reclamation will:									
	Consider implementation of other strategies, including, but not limited to system reoperation and agricultural water use efficiency, recycling, desalination, conjunctive use of groundwater, conveyance, transfers and implementation of local Integrated Regional Water Management actions;									
	Consider climate change and its potential effects as it works to complete surface storage feasibility studies and environmental documentation for the North of Delta and Upper San Joaquin River Basin Storage Investigations;						Both investigations are considering climate change, consistent with requirements associated with the National Environmental Policy Act, California Environmental Quality Act, and Feasibility guidance. The NODOS investigation is developing a sensitivity analysis to describe the potential trend of effects associated with climate change on the NODOS alternatives, including the No Project / No Action alternative and the action alternatives evaluated in detail.	the investigations are following guidance associated with NEPA, CEQA, and Feasibility.	the investigations should continue to follow any new guidance related to climate change and NEPA, CEQA, and Feasibility studies.	
	DWR will make climate change recommendations as it works cooperatively with Contra Costa Water District on the Los Vaqueros Reservoir Expansion Investigation; and							the investigations are following guidance associated with NEPA, CEQA, and Feasibility.	the investigations should continue to follow any new guidance related to climate change and NEPA, CEQA, and Feasibility studies.	

Objective 3: Expand Conjunctive Management										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities (Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?))	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	DWR will advise Reclamation on climate change considerations for Reclamation's Shasta Lake Water Resources Investigation.							the investigations are following guidance associated with NEPA, CEQA, and Feasibility.	the investigations should continue to follow any new guidance related to climate change and NEPA, CEQA, and Feasibility studies.	
11	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	In Progress (mid)	Fair	Medium progress toward implementation	Statewide	This is Goal #1 in SWRCB's Strategic Plan Update 2008-2012. It includes 3 objectives and 14 supporting actions that are measured by the SWRCB.			
	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	In Progress (early)	Fair	Slow progress toward implementation	Statewide	This is SWRCB's Objective 1.1 which includes 5 actions. SWRCB's 2010 Strategic Plan Update listed no "Completed" actions. 2 actions are "In Progress" 1.1.2 - Pollutant and TMDL Groupings & 1.1.5 - Alternative "Non-TMDL" Restoration Strategies. 3 actions are "On Hold" 1.1.1 - Priority Watersheds, 1.1.3 - TMDL Implementation Plan Format, & 1.1.4 - Water Rights Actions/UAA's to Achieve WQ Standards.			
	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.	2020 and 2012	In Progress (mid)	Fair	Medium progress toward implementation	Most of California	This is SWRCB's Objective 1.2 which includes 5 actions. SWRCB's 2010 Strategic Plan Update listed part of 1 action is "Completed" 1.2.1 (a) - LID/Green Infrastructure Techniques (adopt incentives and requirements in stormwater permits). 3 actions are "In Progress" 1.2.3 - LID Impediments, 1.2.4 - Coastal MS4 Permits, & 1.2.5 - Stormwater Monitoring Strategy. 1 action and a part of another action are "On Hold" 1.2.1 (b) - LID/Green Infrastructure Techniques (adopt incentives and requirements in water quality certs) and stormwater permits) & 1.2.2 - Central Coast LID Center			

Objective 3: Expand Conjunctive Management										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	Take appropriate enforcement actions and innovative approaches as needed to protect and restore the beneficial uses of all surface waters.		In Progress (late)	Good	Medium progress toward implementation	Statewide	This is SWRCB's Objective 1.3 which includes 4 actions. SWRCB's 2010 Strategic Plan Update listed 2 actions are "Completed" 1.3.1 - Mandatory Minimum Penalties (MMP) Facilities Backlog & 1.3.4 - Updated Enforcement Policy. 2 actions are "In Progress" 1.3.2 - Pilot Programs to Protect Surface Waters & 1.3.3 - Pilot Programs to Protect Coastal Waters. No actions are "On Hold".			
12	Improve and protect groundwater quality in high priority use basins	By 2030	In Progress (mid)	Fair	Medium progress toward implementation	Most of California	This is Goal #2 in SWRCB's Strategic Plan Update 2008-2012. It includes 3 objectives and 10 supporting actions that are measured by the SWRCB.			
	<ul style="list-style-type: none"> Implement an integrated groundwater protection approach to improve and protect groundwater in high-use basins. 	Unknown	No Action	Unreportable	Unreportable	Statewide	Statewide	Barriers and/or Constraints are financial, technical, and institutional. 1) Implementation of new approaches to groundwater management require significant analysis and outreach, prior to implementation. Currently DWR does not have the funding to perform these tasks. 2) Implementation of protection approaches could require development and passage of new legislation and/or regulations. The political and institutional constraints associated with both these are significant. 3) Developing universal approaches to protecting groundwater in high use areas presents some technical challenges, but can be done.	Continue in CWP 2018 to examine and pursue development of indicators of groundwater sustainability.	Report the results of groundwater sustainability indicators for CWP 2018.

Objective 3: Expand Conjunctive Management										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities (Federal, State, regional, local) (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	<ul style="list-style-type: none"> Identify strategies to ensure that communities that rely on contaminated groundwater will have a reliable drinking water supply, which may include remediation of polluted or contaminated groundwater, surface water replacement, and groundwater treatment. 		In Progress (early)	Fair	Slow progress toward implementation	Parts of California	This is SWRCB's Objective 2.2 which includes 4 actions. SWRCB's 2010 Strategic Plan Update listed no "Completed" actions. 1 action is "In Progress" 2.2.4 - Expediated IRWM Plan Funding. 3 actions are "On Hold" 2.2.1 - Communities Relying on Contaminated Groundwater, 2.2.2 Improperly Abandoned, Destroyed, or Sealed Wells, & 2.2.3 - Actions on Sources Contaminating Groundwater.			
	<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. 		In Progress (mid)	Fair	Medium progress toward implementation	Most of California	This is SWRCB's Objective 2.3 which includes 2 actions.. SWRCB's 2010 Strategic Plan Update listed both actions are "In Progress" 2.3.1 - Waste Discharge Requirements (WDRs) to Protect Groundwater & 2.3.2 - Groundwater Contamination Plumes Remediation. No actions are "Completed" or "On Hold".			
	<ul style="list-style-type: none"> Prepare consistent salt/nutrient management plans for every groundwater basin/subbasin in California. 	by 2016					Preparation of salt/nutrient management plans to ensure compliance with water quality objectives. This will aid to increase the use of recycled water			
13	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, and ensure adequate flows for fish and wildlife habitat.	by 2015	In Progress (mid)	Good	Medium progress toward implementation	Statewide	This is Goal #3 in SWRCB's Strategic Plan Update 2008-2012. It includes 3 objectives and 8 supporting actions that are measured by the SWRCB.			
	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.		In Progress (mid)	Fair	Medium progress toward implementation	Statewide	This is SWRCB's Objective 3.1 which includes 3 actions. SWRCB's 2010 Strategic Plan Update listed 1 action is "Complete" 3.1.2 - Water Demand Management Measures. 1 action is "In Progress" 3.1.1 - Urban BMPs and Agricultural Practices. 1 action is "On Hold" 3.1.3 - Water Rights Conservation Plans and Actions.			

Objective 3: Expand Conjunctive Management										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities (Federal, State, regional, local) (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	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.		In Progress (mid)	Good	Medium progress toward implementation	Statewide	This is SWRCB's Objective 3.2 which includes 3 actions. SWRCB's 2010 Strategic Plan Update listed 1 action is "Complete" 3.2.2 - Stormwater Reuse Target. 2 actions are "In Progress" 3.2.1 - WWTP Water Recycling Plans & 3.2.3 - Funding Criteria Revision. There are no actions "On Hold".			
	Ensure that adequate stream flows are available for the protection of fish and wildlife habitat while meeting the need for diversions of water for other uses.		In Progress (late)	Good	Medium progress toward implementation	Statewide	This is SWRCB's Objective 3.3 which includes 2 actions. SWRCB's 2010 Strategic Plan Update listed 1 action is "Complete" 3.3.1 - Minimum Stream Flow Objectives. 1 action is "In Progress" 3.3.2 - Actions Beyond Minimum Stream Flow Objectives. There are no actions "On Hold".			
14	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.		In Progress (early)	Poor	Slow progress toward implementation	Statewide	This is Goal #4 in SWRCB's Strategic Plan Update 2008-2012. It includes 3 objectives and 5 supporting actions that are measured by the SWRCB.			
	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.		In Progress (early)	Fair	Medium progress toward implementation	Statewide	This is SWRCB's Objective 4.1 which includes 1 action. SWRCB's 2010 Strategic Plan Update listed this action as "In Progress" 4.1.1 - CA Water Quality Plan/CA Water Plan Coordination.			
	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.		No Action	Poor	No progress/regressing	Statewide	This is SWRCB's Objective 4.2 which includes 3 actions. SWRCB's 2010 Strategic Plan Update listed all 3 actions as "On Hold" 4.2.1 - Statewide Basin Plan and Ocean Plan Update, 4.2.2 - Statewide Basin Plan Format & 4.2.3 - Basin Plan Guide and Regulatory Compendium. There are no actions "Complete" or "In Progress".			

Objective 3: Expand Conjunctive Management										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	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.		No Action	Poor	No progress/regressing	Statewide	This is SWRCB's Objective 4.3 which includes 1 action. SWRCB's 2010 Strategic Plan Update listed this action as "On Hold" 4.3.1 - Basin Plan Amendments Priorities & Resources.			
15	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.	by 2015								
	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.									
16	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 runoff management, groundwater/aquifer remediation, and water treatment and distribution.									

Objective 4: Protect Water Quality										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
11	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	In Progress (mid)	Fair	Medium progress toward implementation	Statewide	This is Goal #1 in SWRCB's Strategic Plan Update 2008-2012. It includes 3 objectives and 14 supporting actions that are measured by the SWRCB.			
	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	In Progress (early)	Fair	Slow progress toward implementation	Statewide	This is SWRCB's Objective 1.1 which includes 5 actions. SWRCB's 2010 Strategic Plan Update listed no "Completed" actions. 2 actions are "In Progress" 1.1.2 - Pollutant and TMDL Groupings & 1.1.5 - Alternative "Non-TMDL" Restoration Strategies. 3 actions are "On Hold" 1.1.1 - Priority Watersheds, 1.1.3 - TMDL Implementation Plan Format, & 1.1.4 - Water Rights Actions/UAs to Achieve WQ Standards.			
	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.	2020 and 2012	In Progress (mid)	Fair	Medium progress toward implementation	Most of California	This is SWRCB's Objective 1.2 which includes 5 actions. SWRCB's 2010 Strategic Plan Update listed part of 1 action is "Completed" 1.2.1 (a) - LID/Green Infrastructure Techniques (adopt incentives and requirements in stormwater permits). 3 actions are "In Progress" 1.2.3 - LID Impediments, 1.2.4 - Coastal MS4 Permits, & 1.2.5 - Stormwater Monitoring Strategy. 1 action and a part of another action are "On Hold" 1.2.1 (b) - LID/Green Infrastructure Techniques (adopt incentives and requirements in water quality certs) and stormwater permits) & 1.2.2 - Central Coast LID Center			
	Take appropriate enforcement actions and innovative approaches as needed to protect and restore the beneficial uses of all surface waters.		In Progress (late)	Good	Medium progress toward implementation	Statewide	This is SWRCB's Objective 1.3 which includes 4 actions. SWRCB's 2010 Strategic Plan Update listed 2 actions are "Completed" 1.3.1 - Mandatory Minimum Penalties (MMP) Facilities Backlog & 1.3.4 - Updated Enforcement Policy. 2 actions are "In Progress" 1.3.2 - Pilot Programs to Protect Surface Waters & 1.3.3 - Pilot Programs to Protect Coastal Waters. No actions are "On Hold".			

Objective 4: Protect Water Quality										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
12	Improve and protect groundwater quality in high priority use basins	By 2030	In Progress (mid)	Fair	Medium progress toward implementation	Most of California	This is Goal #2 in SWRCB's Strategic Plan Update 2008-2012. It includes 3 objectives and 10 supporting actions that are measured by the SWRCB.			
	<ul style="list-style-type: none"> Implement an integrated groundwater protection approach to improve and protect groundwater in high-use basins. 	Unknown	No Action	Unreportable	Unreportable	Statewide	Statewide	Barriers and/or Constraints are financial, technical, and institutional. 1) Implementation of new approaches to groundwater management require significant analysis and outreach, prior to implementation. Currently DWR does not have the funding to perform these tasks. 2) Implementation of protection approaches could require development and passage of new legislation and/or regulations. The political and institutional constraints associated with both these are significant. 3) Developing universal approaches to protecting groundwater in high use areas presents some technical challenges, but can be done.	Continue in CWP 2018 to examine and pursue development of indicators of groundwater sustainability.	Report the results of groundwater sustainability indicators for CWP 2018.
	<ul style="list-style-type: none"> Identify strategies to ensure that communities that rely on contaminated groundwater will have a reliable drinking water supply, which may include remediation of polluted or contaminated groundwater, surface water replacement, and groundwater treatment. 		In Progress (early)	Fair	Slow progress toward implementation	Parts of California	This is SWRCB's Objective 2.2 which includes 4 actions. SWRCB's 2010 Strategic Plan Update listed no "Completed" actions. 1 action is "In Progress" 2.2.4 - Expediated IRWM Plan Funding. 3 actions are "On Hold" 2.2.1 - Communities Relying on Contaminated Groundwater, 2.2.2 Improperly Abandoned, Destroyed, or Sealed Wells, & 2.2.3 - Actions on Sources Contaminating Groundwater.			
	<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. 		In Progress (mid)	Fair	Medium progress toward implementation	Most of California	This is SWRCB's Objective 2.3 which includes 2 actions. SWRCB's 2010 Strategic Plan Update listed both actions are "In Progress" 2.3.1 - Waste Discharge Requirements (WDRs) to Protect Groundwater & 2.3.2 - Groundwater Contamination Plumes Remediation. No actions are "Completed" or "On Hold".			
	<ul style="list-style-type: none"> Prepare consistent salt/nutrient management plans for every groundwater basin/subbasin in California. 	by 2016					Preparation of salt/nutrient management plans to ensure compliance with water quality objectives. This will aid to increase the use of recycled water			

Objective 4: Protect Water Quality										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
13	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, and ensure adequate flows for fish and wildlife habitat.	by 2015	In Progress (mid)	Good	Medium progress toward implementation	Statewide	This is Goal #3 in SWRCB's Strategic Plan Update 2008-2012. It includes 3 objectives and 8 supporting actions that are measured by the SWRCB.			
	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.		In Progress (mid)	Fair	Medium progress toward implementation	Statewide	This is SWRCB's Objective 3.1 which includes 3 actions. SWRCB's 2010 Strategic Plan Update listed 1 action is "Complete" 3.1.2 - Water Demand Management Measures. 1 action is "In Progress" 3.1.1 - Urban BMPs and Agricultural Practices. 1 action is "On Hold" 3.1.3 - Water Rights Conservation Plans and Actions.			
	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.		In Progress (mid)	Good	Medium progress toward implementation	Statewide	This is SWRCB's Objective 3.2 which includes 3 actions. SWRCB's 2010 Strategic Plan Update listed 1 action is "Complete" 3.2.2 - Stormwater Reuse Target. 2 actions are "In Progress" 3.2.1 - WWTP Water Recycling Plans & 3.2.3 - Funding Criteria Revision. There are no actions "On Hold".			
	Ensure that adequate stream flows are available for the protection of fish and wildlife habitat while meeting the need for diversions of water for other uses.		In Progress (late)	Good	Medium progress toward implementation	Statewide	This is SWRCB's Objective 3.3 which includes 2 actions. SWRCB's 2010 Strategic Plan Update listed 1 action is "Complete" 3.3.1 - Minimum Stream Flow Objectives. 1 action is "In Progress" 3.3.2 - Actions Beyond Minimum Stream Flow Objectives. There are no actions "On Hold".			
14	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.		In Progress (early)	Poor	Slow progress toward implementation	Statewide	This is Goal #4 in SWRCB's Strategic Plan Update 2008-2012. It includes 3 objectives and 5 supporting actions that are measured by the SWRCB.			
	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.		In Progress (early)	Fair	Medium progress toward implementation	Statewide	This is SWRCB's Objective 4.1 which includes 1 action. SWRCB's 2010 Strategic Plan Update listed this action as "In Progress" 4.1.1 - CA Water Quality Plan/CA Water Plan Coordination.			

Objective 4: Protect Water Quality										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	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.		No Action	Poor	No progress/regressing	Statewide	This is SWRCB's Objective 4.2 which includes 3 actions. SWRCB's 2010 Strategic Plan Update listed all 3 actions as "On Hold" 4.2.1 - Statewide Basin Plan and Ocean Plan Update, 4.2.2 - Statewide Basin Plan Format & 4.2.3 - Basin Plan Guide and Regulatory Compendium. There are no actions "Complete" or "In Progress".			
	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.		No Action	Poor	No progress/regressing	Statewide	This is SWRCB's Objective 4.3 which includes 1 action. SWRCB's 2010 Strategic Plan Update listed this action as "On Hold" 4.3.1 - Basin Plan Amendments Priorities & Resources.			
15	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.	by 2015								
	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.									
16	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 runoff management, groundwater/aquifer remediation, and water treatment and distribution.									

Objective 5: Expand Environmental Stewardship										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or trackable?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	Practice, promote, improve, and expand environmental stewardship to protect and enhance the environment by improving watershed, floodplain, and instream functions and to sustain water and flood management systems.	ongoing	policies developed		Substantial increase in policy statements and discussion of stewardship, sustainability, and climate change impacts. Little change in project design and implementation that coincides with new policy.	Policies apply department wide.	DWR has adopted an Environmental Stewardship Policy (DAM 2140), a Water Resource Engineering Memo -58b providing guidance on implementing the Policy, and a Sustainability Policy (DAM 8001). These policies include stated commitments to create net environmental benefits (i.e. improvements beyond mitigation requirements), sustainability of public trust resources, protection of natural resources and ecosystems that ensure they are available for future generations, and a set of 7 environmental principles. The Sustainability Policy states DWR intent to be a State leader in sustainability and ecosystem stewardship. DWR has included stewardship considerations in project management templates. DWR has adopted a Climate Change Action Plan and is reporting its carbon footprint to the carbon registry.	Difficulty in practicing multi-benefit decision making. Program inertia and culture that has not fully embraced new policies. Difficulty in building meaningful partnerships with entities outside the Department and across programs within the Department.		
1	State, federal, Tribal, regional and local governments and agencies that own and operate water management systems and flood management systems, as well as public and private organizations, should include actions in their respective land use, water, flood, and natural resource management plans that would contribute to a statewide goal to protect and re-establish native riparian floodplain corridor habitat. The combined and coordinated activities of local planning activities including Integrated Regional Water Management (IRWM), Urban Water Management Plans, Natural Community Conservation Plans, Habitat Conservation Plans as well as other water resource or riparian floodplain focused efforts should include objectives to meet these environmental stewardship goals.	by 2020	Initiated	Fair	Slow progress toward implementation	Parts of California	IRWM groups have partially embraced this goal. There is no consensus on establishing native riparian floodplain corridors. Some plans include goals for ecosystem improvement and limited riparian corridor enhancement. Most plans contain at least some general language supporting this goal. A few projects, such as the Dos Rios project in San Joaquine Valley have dedicated acreage to riparian floodplain. Others, such as the San Joaquin Restoration Program are in the planning phase.	Lack of consensus about the details and meaning of this goal. Lack of economic incentive to commit riparian lands to habitat provides limited commercial value for corridor development. Only grants and mitigation requirements provide funding for native riparian corridor development. Communities have not generally embraced riparian corridors as valuable local resource and see lost opportunities for agriculture and urban use if land is dedicated to corridors. Maintenance costs and who bears them, and public safety concerns stifle project development.		
	Re-establish 1 million acres of contiguous natural riparian and floodplain habitat and its hydrologic connectivity between rivers/streams and their historical floodplains for at least 50 percent of the river miles in the regions.	By 2020	Initiated	Fair	Slow progress toward implementation	Parts of California	With adoption of Central Valley Flood Protection Plan, DWR has established the Conservation Strategy, a program that, in part, addresses this goal. Other DWR programs supporting this goal include Flood Protection Corridor and Urban Streams Restoration grant programs and Delta Subventions program.	Competing needs for floodplain lands, costs of land acquisition and conversion back to habitat, resistance of land owners to sell and of adjacent land owners to support projects. Regulatory programs with narrowly defined rules/mission that limit options for implementation.		

Objective 5: Expand Environmental Stewardship										
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	Contribute to AB 32 GHG reduction goals related to water and flood systems operations through enhancing carbon sequestration mechanisms by re-establishing 500,000 acres of historic vegetated floodplain corridors and restoring 500,000 acres of upper watershed forests.	By 2020	In Progress (mid)	Excellent	Medium progress toward implementation	Parts of California	To date approximately 900 acres on Sherman and Twitchell Islands have been converted to land management practices that sequester carbon. Over the last several years the Department has constructed the following subsidence mitigation projects: <ul style="list-style-type: none"> • 15 acre Research Wetland on Twitchell (1997) • 300 acre Rice Research Project on Twitchell (2008) • 305 acre Mayberry Farms Permanent Wetland on Sherman Island (2010) • 300 acre Rice Expansion Project on Twitchell (2011) An additional 2000 acres (1000 acres on Twitchell & 1000 acres on Sherman) are currently in the design and permitting stages for construction to commence in 2013 and 2014.	Funding, local participation, and potential land acquisitions are constraints to this project. Climate Action Registry, a partnering group with DWR, has not evaluated the GHG boundary sufficiently enough to establish a protocol for net GHG sequestration. Potential deleterious effects caused by growing tules and rice (Methyl-Mercury, dissolved organic compounds, and vector control) and transferability throughout the Delta by applied spatial modeling.	In addition to the planning, design, and construction activities for additional carbon sequestration projects in the West Delta, there is also a need for analytical monitoring of sites necessary for: <ul style="list-style-type: none"> • Regulatory monitoring required by environmental permits; and • Research activities required to document carbon sequestration effectiveness. 	<ul style="list-style-type: none"> • Additional acreage of carbon sequestration projects planned, designed and/or constructed • Reports and results from research activities and regulatory monitoring
1	IRWM and regional flood management plans that incorporate corridor connectivity and restoration of native aquatic and terrestrial habitats to support increased biodiversity and resilience for adapting to a changing climate should receive additional credits in State government water and flood grant programs.		No Action	Poor	No progress/regressing		Currently the IRWM program does not give any preference or priority to groups that incorporate corridor connectivity and restoration of native aquatic and terrestrial habitats to support increased biodiversity and resilience for adapting to a changing climate.	The grant scoring process does not currently include a provision for increased points for these types of projects.	The grant scoring process would need to be amended to offer additional credits to groups that include these types of projects.	
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-establishing anadromous fish upstream of dams may provide flexibility in providing cold water conditions downstream, and thereby inform with system re-operation. Candidate									
3	State government should identify and prioritize for protection lands at the boundaries of the San Francisco Bay and Sacramento-San Joaquin Delta that will provide the habitat range for tidal wetlands to adapt to and shift with 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.	Ongoing	Planned	Fair	Medium progress toward implementation	Parts of California	Since 2003, DWR involved in evaluating several proposed North Delta actions included in the CALFED ROD. These actions included changes in the North Delta's conveyance facilities to improve Delta water quality, fisheries, and water supply reliability, as well as modifications to improve flood protection and ecosystem health. FESSRO's program to implement North Delta actions is the North Delta Flood Control and Ecosystem Restoration Project (NDFC&ERP). The NDFC&ERP consists of flood control and habitat improvements where the Mokelumne River, Cosumnes River, Dry Creek, and Morrison Creek converge. These areas include areas suitable for tidal wetlands that can adapt with sea level rise. The project will reduce flooding and provide contiguous aquatic and floodplain habitat along the downstream portion of the Cosumnes River Preserve by modifying levees on McCormack-Williamson Tract and at Grizzly Slough. North Delta EIR was approved and certified in October 2010. DWR is providing funds to RD2110 to cost share a USACE Project Feasibility Study in an effort to receive federal funding for the project.	Delays in project funding, DWR funding now secured; however, federal cost share is uncertain. Delays in federal cost share agreement for the Project Feasibility Study has significantly delayed project implementation.	Note: Should include North Delta Project (McCormack Williamson Tract (MWT)). MWT was purchased with CALFED ERP funds for a joint flood improvement/environmental restoration objective. Also, need to include metrics that track planning process achievements as well as implementation.	Acres of habitat protected, acres undergoing planning, and acres of habitat restored (include floodplain, tidal and riparian habitat), acres of habitat with an endowment. Flood stage reduction. Increase in native wildlife populations (TBD).

Objective 5: Expand Environmental Stewardship										
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4	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 and protect communities from inundation, and sequester carbon.	By 2015,	In Progress (mid)	Excellent	Medium progress toward implementation	Parts of California	Activities conducted by both the Department and the Department's contractors since 1997 at the 15 acre Research Wetland on Twitchell have shown that growing crops that are flooded during most of the year (especially during the summer and early fall months) reverses subsidence. To date approximately 900 acres on Sherman and Twitchell Islands have been converted to land management practices that mitigate for subsidence, including the 300 acre Rice Research Project on Twitchell (2008), 305 acre Mayberry Farms Permanent Wetland on Sherman Island (2010), and the 300 acre Rice Expansion Project on Twitchell (2011). An additional 2000 acres (1000 acres on Twitchell & 1000 acres on Sherman) are currently in the design and permitting stages for construction to commence in 2013 and 2014.	Over the next ten years, the West Delta Program will continue to convert significant acreage on both Sherman and Twitchell Islands into land management practices that mitigate subsidence. However constraints including funding, local participation, and potential land acquisitions are potential act as barriers to these projects.	In addition to the planning, design, and construction activities for additional subsidence mitigation projects in the West Delta, there is also a need for analytical monitoring of sites necessary for: • Regulatory monitoring required by environmental permits; and • Research activities required to document carbon sequestration effectiveness.	• Additional acreage of subsidence mitigation projects planned, designed and/or constructed • Reports and results from research activities and regulatory monitoring
5	State government will encourage, prioritize, and financially support actions to protect, enhance, and restore at least 1 million acres of upper watershed forests and meadow systems that act as natural water and snow storage. This measure not only improves water supply reliability and protects water quality, but also safeguards significant high elevation habitats and migratory corridors.	By 2030,								
6	State government, including the Department of Fish and Game, should lead an effort to identify streamflows that will protect public trust uses, including fish and wildlife. This effort should include completion of studies that relate instream water flows and fish habitat and development of flow recommendations to protect sustainable fisheries.									
7	State government should acknowledge where California's water comes from when deciding how state money is regionally allocated and should weigh both the needs of population centers and the upper watersheds that must meet those needs. When administering grant programs, State government should increase funding to headwaters regions including the Sierra Nevada for local projects that will benefit downstream users.									

Objective 6: Practice Integrated Flood Management									
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or trackable?)
	Promote and practice integrated flood management to provide multiple benefits including better emergency preparedness and response, higher flood protection, more sustainable flood and water management systems, and enhanced floodplain ecosystems.	Ongoing	In Progress (early)	Good	Medium progress toward implementation	Statewide	<ul style="list-style-type: none"> SFMP Program began discussion and focus on flood using and IWM approach, this is also emphasized in recommendations for California Flood Future and Flood Management RMS of CWP. Ongoing DWR's Flood Hazard Mitigation Program Implementation of CVFPP Regional Planning effort Ongoing DWR IRWM Grant Program efforts Ongoing DWR Delta Flood Emergency, Response, and Recovery Plan 	Cost and agency alignment (internal and external)	Issue 5: Regional, Systemwide, and Statewide Planning in the Flood Management RMS and Recommendation 5 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
1	To facilitate coordinated operations, State and federal agencies collaboratively established a Joint Operations Center (JOC) that has served California's water supply and flood management needs. In order to successfully meet the potential threats posed by climate change, though, the capacity of the JOC should be expanded and enhanced to:								
	Improve tools and observations to better support decision-making for individual events and seasonal and inter-annual operations, including water transfers and stream gage data.	Ongoing	In Progress (early)	Fair	Slow progress toward implementation	Parts of California	<ul style="list-style-type: none"> Ongoing DWR Delta Emergency Response Program Ongoing DWR Flood System Operations and Maintenance Program Ongoing DWR System Reoperation Study Ongoing DWR Floodplain Evaluation and Delineation Program Ongoing DWR Forecast-Coordinated Operations for the San Joaquin River Watershed Ongoing DWR Flood Hazard Mitigation Program Ongoing DWR Flood Emergency Response Information System (FERIS)/California Data Exchange Center (CDEC) 	Cost and agency alignment (internal and external)	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
	Improve communications and coordination during emergencies, such as floods and droughts.	Ongoing	In Progress (early)	Good	Medium progress toward implementation	Statewide	<p>DWR's Flood Emergency Operations Program focused on improving processes and communication capabilities through implementation of the following activities:</p> <ul style="list-style-type: none"> Preseason Flood Managers Meetings 2012 Golden Guardian exercise, which focused on a flood emergency Development of Directory of flood officials Flood emergency operations manual Incident command system field operations guide Flood fight materials management plan Flood emergency communication plan, After action reports Improvement plans 	Cost and Agency resource availability	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
	Develop an operational information clearinghouse related to the major water systems in California, which would facilitate coordination with planning and research endeavors to ensure that climate change impacts related to operations are addressed.	Ongoing	In Progress (early)	Good	Slow progress toward implementation	Statewide	<ul style="list-style-type: none"> Development in progress of Flood Emergency Response Information System (FERIS)/California Data Exchange Center (CDEC) and State Climate Change Portal. Completion of Climate Change Handbook 	Cost, Data availability and standard practices, agency coordination	Issue 1: Risk Assessments, Issue 2: Flood Risk Awareness, and Issue 3 : Flood Readiness in the Flood Management RMS and Recommendations 1, 2, and 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
2	Flood management systems must better utilize natural floodplain processes. Flood management should be approached from a watershed perspective. The basic physical properties of water and sediment flow, and water storage in groundwater basins and reservoirs should be evaluated considering the ecology of watersheds. Agricultural, urban, and recreational activities and regulations should be considered and planned on this basis to identify integrated water management needs and opportunities.	Ongoing	In Progress (mid)	Fair	Medium progress toward implementation	Statewide	<ul style="list-style-type: none"> SFMP Program began discussion and focus on flood using and IWM approach, this is also emphasized in recommendations for California Flood Future and Flood Management RMS of CWP. Implementation of DWR's Flood Corridor Program Implementation of CVFPP Regional Planning effort Ongoing DWR IRWM Grant Program efforts Ongoing DWR San Joaquin River Restoration Program 	Cost, agency coordination, land acquisition, agency expertise	Issue 1: Risk Assessments, Issue 2: Flood Risk Awareness, Issue 4: Land Use Planning, and Issue 5: Regional, Systemwide, and Statewide Planning in the Flood Management RMS and Recommendation 1, 2, 4, and 5 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
3	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. State government should assist disadvantaged communities located in floodplains to prepare for and recover from flood emergencies.	Ongoing	In Progress (mid)	Fair	Medium progress toward implementation	Statewide	<ul style="list-style-type: none"> Ongoing DWR Delta Emergency Response Program DWR Flood Emergency Operations Program focused on improving processes and communication capabilities through implementation of the following activities: Preseason Flood Managers Meetings 2012 Golden Guardian exercise, which focused on a flood emergency Development of Directory of flood officials Flood emergency operations manual Incident command system field operations guide Flood fight materials management plan Flood emergency communication plan, After action reports Improvement plans 	Cost, agency alignment (internal and external), and agency resource availability	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.

Objective 6: Practice Integrated Flood Management									
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or trackable?)
4	DWR will collaboratively develop a multi-objective Central Valley Flood Protection Plan that includes actions to improve integrated flood management in the Central Valley and accounts for the expected impacts of climate change. The plan will provide strategies for greater flood protection and environmental resilience. It will address:	By January 1, 2012,							
	restoring the State/federal flood management system to refine definitions of floodplains and flood risks throughout the Central Valley to provide the design level of performance;	Ongoing	In Progress (late)	Good	Medium progress toward implementation	Parts of California	Ongoing DWR Floodplain Evaluation and Delineation Program	Cost, data availability and standard practices, agency coordination and resource availability	The recommendations from the CVFPP outline specific objectives related to levee design performance. In addition, Issue 1: Risk Assessment in the Flood Management RMS and Recommendation 1 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
	emergency preparedness, response, evacuation, and recovery actions;	Ongoing	In Progress (late)	Good	Medium progress toward implementation	Parts of California	DWR completed the following emergency response related activities during the CVFPP: <ul style="list-style-type: none"> Conducted 15 flood emergency exercises, including the Golden Guardian Statewide Flood Exercise Added about 50 flood forecasting and water supply gaging sites Developed a Flood Emergency Response Information System Developed Forecast-Coordinated Operations Program for Yuba-Feather River Updated hydrology for Central Valley streams Stockpiled 240,000 tons of rocks in the Delta for emergency response Enhanced environmental integration in emergency response activities, including an emergency response exercise with environmental resource and regulatory agencies 	Cost, information availability, agency coordination and resource availability	The CVFPP provides recommendations related to emergency response needs in the Central Valley including: <ul style="list-style-type: none"> Develop improved flood forecasting and notifications for rural-agricultural areas of the Central Valley, and provide assistance to local agencies in preparing for and responding to flood emergencies Invest in additional monitoring gages and forecasting points to facilitate timely and accurate dissemination of flood information, particularly for rural-agricultural areas subject to more frequent flooding To the extent funding is available, propose a State grant program to assist rural local agencies throughout the Central Valley preparing flood emergency responses plans for their jurisdictions, and to develop appropriate regional communication tools and processes for flood emergency response operations Continue implementation of F-CO of reservoirs and initiate F-BO programs, where feasible Provide flood system information to local flood emergency responders Formalize procedures for enhanced inspection and maintenance In addition, Issue 3: Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
	expansion of the flood bypass system to reduce pressure on critical urban levees and provide for habitat, open space, recreation, and agricultural land preservation;	Ongoing	In Progress (late)	Good	Medium progress toward implementation	Parts of California	Potential solutions were identified in the CVFPP; however, long-term project planning is being done in coordination with local agencies through regional planning effort.	Cost, information availability, agency coordination and resource availability	The CVFPP provides recommendations related to the flood bypass systems in the Central Valley. In addition, Issue 5: Regional, Systemwide, and Statewide Planning in the Flood Management RMS and Recommendation 5 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
	structural and nonstructural improvements to provide at least a historical 200-year level flood protection for all urban areas;	Ongoing	In Progress (late)	Fair	Slow progress toward implementation	Parts of California	CVFPP provided a framework for systemwide improvements. DWR is working in coordination with local agencies to develop regional plans to address the 200-year Level of protection requirement. Also, new legislation has been proposed to change the 200-year level requirement.	Cost, information availability, agency coordination and resource availability	The CVFPP provides recommendations related to the potential types of improvements required but not specific projects in the Central Valley. In addition, Issue 1: Risk Assessments and Issue 5: Regional, Systemwide, and Statewide Planning in the Flood Management RMS and Recommendation 1 and 5 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
	consideration of flood easements, zoning, set-back levees, and land acquisitions to provide greater public safety, floodplain storage, habitat, and system flexibility;	Ongoing	In Progress (late)	Good	Medium progress toward implementation	Parts of California	CVFPP provided a framework for systemwide improvements. DWR is working in coordination with local agencies to develop regional plans to meet these objectives.	Cost, information availability, agency coordination and resource availability	The CVFPP provides recommendations related to the potential types of improvements required but not specific projects in the Central Valley. In addition, Issue 4: Land Use Planning and 5: Regional, Systemwide, Statewide Planning and Issue in the Flood Management RMS and
	evaluation of dam modifications to pass potentially larger floods;	Ongoing	In Progress (late)	Good	Medium progress toward implementation	Parts of California	USACE/CVFPB Projects - Folsom Dam Modification Project	Cost, Downstream capacity, permitting	

Objective 6: Practice Integrated Flood Management									
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	flood insurance requirements to address residual risk;	Ongoing	In Progress (late)	Good	Medium progress toward implementation	Parts of California	CVFPP addresses flood insurance requirements and the need to address residual risk	Cost, agency coordination, pressures for development in floodplains	The CVFPP provides the following near-term action as a recommendation: • Work with FEMA to actively engage the agency in floodplain management in the Central Valley, including funding for floodproofing homes and structures in floodplains, relocating structures and homes from deep floodplains, and developing a special insurance program for structures located in floodplains that play a major role in promoting the vibrant agricultural economy in rural areas of the Central Valley In addition, Issue 1: Risk Assessments in the Flood Management RMS and Recommendation 1 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
	extensive, grassroots public outreach and education; and	Ongoing	In Progress (late)	Good	Medium progress toward implementation	Parts of California	CVFPP completed an extensive outreach program to local agencies including: • 300 meetings and more than 40 publications • 113 meetings with individuals and organizations across the planning area Regional and Valleywide forums, June 2009, 2010, and December 2010 • 7 Forums in various areas valleywide • 55 meetings with stakeholder participation across the planning area Special Topic work groups and subcommittees, August 2009 – November 2011 • 36 meetings covering a variety of subjects and attended by a variety of stakeholders • 20 Workshops on Flood Management Actions and levee design criteria • 46 Briefings to and coordination with local government, Legislature, interest groups, work groups, and media • 17 briefings for various Tribes and Tribal organizations on a variety of subjects	Cost, agency coordination, and resource availability	Continue CVFPP outreach with local agencies through implementation of the regional planning program. In addition, Issue 2: Flood Risk Awareness in the Flood Management RMS and Recommendation 2 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
	integrate flood management with all aspects of water resources management and environmental stewardship.	Ongoing	In Progress (late)	Good	Medium progress toward implementation	Parts of California	The CVFPP goal was to promote multibenefit projects.		IWM will be implemented in the CVFPP through coordination with local agencies on regional plan, projects, and improvements. In addition, Issue 5: Regional, Systemwide, and Statewide Planning in the Flood Management RMS and Recommendation 5 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
5	DWR will complete a FloodSAFE report that identifies and characterizes significant flood risks throughout each of California's regions and documents needs and opportunities to improve integrated flood management statewide.	Ongoing	In Progress (late)	Good	Medium progress toward implementation	Statewide	California's Flood Future Report identifies flood hazards statewide as well as opportunities to improve IWM.	Funding, Agency Alignment	California's Flood Future Report and Flood Management RMS recommendations outline future actions needed to improve characterization of risk statewide.
6	Local governments should implement land use policies that consider flood risk.								
	Local land use agencies should update their General Plans in light of existing and future climate change impacts. For planning purposes, DWR recommends using a higher than historical peak reference flow.	Ongoing	In Progress (late)	Good	Medium progress toward implementation	Statewide	AB 162 requires cities and counties statewide to amend the land use, conservation, safety, and housing elements of their general plan to address new flood-related matters.	Development Pressures, Internal Agency Alignment, Agency Resource Constraints	Issue 4: Land Use Planning in the Flood Management RMS and Recommendation 4 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
	Local governments should site new development where flood avoidance strategies are ensured. Flood management strategies should identify the relevant flood water elevations and describe how the public will avoid damage from this magnitude of flooding. These strategies should also account for the risks from floods of greater magnitude.	Ongoing	In Progress (late)	Good	Medium progress toward implementation	Statewide	AB 162 requires cities and counties statewide to amend the land use, conservation, safety, and housing elements of their general plan to address new flood-related matters.	Development Pressures, Internal Agency Alignment, Agency Resource Constraints	Issue 4: Land Use Planning in the Flood Management RMS and Recommendation 4 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
	Local governments should utilize Low Impact Development techniques that store and infiltrate urban and storm water runoff while protecting groundwater.	Ongoing	Initiated	Poor	Slow progress toward implementation	Statewide	LID is being implemented in some areas of the state. California's Flood Future Report recommends establishing BMPs, which could include LID.	Cost, opposition from developers, agency coordination	Issue 4: Land Use Planning in the Flood Management RMS and Recommendation 4 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
	Local governments should include flood-resistant design requirements in local building codes.	Ongoing	In Progress (early)	Fair	Slow progress toward implementation	Parts of California	DWR prepared voluntary flood-related Building Standards Code (California Code of Regulations, Title 24, Parts 2 and 2.5) for single-family residential occupancy groups R-3 and R-3.1 for adoption by cities and counties. California's Flood Future Report recommends establishing BMPs, which could include flood resistant design requirements.	Cost; Opposition from developers, Agency Coordination	Issue 4: Land Use Planning in the Flood Management RMS and Recommendation 4 in the SFMP California's Flood Future Report identify objectives and actions for this objective.

Objective 7: Manage a Sustainable California Delta										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or trackable?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	Set as co-equal goals a healthy Delta ecosystem and a reliable water supply for California and recognize the Delta as a unique and valued community and ecosystem to promote and practice management for a sustainable California Delta.	COMPLETE					The Legislature passed the Delta Reform Act of 2009 (SBX7 1)			
	<i>The Delta Ecosystem Must be Protected and Revitalized/ Recommended actions that have authorization</i>									
1	Complete the Bay Delta Conservation Plan and associated environmental assessments.	by December 31, 2014	In Progress (mid)	Good	Medium progress toward implementation	Most of California	Draft Plan and Draft EIR/EIS to be released Fall 2012.	The Plan has to be both permissible to the regulatory fish agencies and provide adequate water that makes the investment possible to the Water		
2	Update Bay-Delta regulatory flow and water quality standards to protect beneficial uses of water. Fully implement these new standards as well as the existing standards.	by June 2, 2014	Initiated	Good	Slow progress toward implementation	Parts of California	SWRCB has initiated the process with CEQA NOP scoping meetings			
3	Continue funding for implementation of the CALFED Ecosystem Restoration Program (ERP), including finalization of the ERP Conservation Strategy. Complete several ecosystem projects including Dutch Slough, [DELETE: Mein's Landing] [ADD:] McCormack-Williamson, and Hill Slough tidal restoration projects and improved habitat in the Yolo Bypass.						DFG funded \$12 million in Prop 84 and Prop 13 funds to 12 projects in the Delta through the 2010/2011 ERP Proposal Solicitation Package (PSP). The latest public draft of the ERP Conservation Strategy was released in July 2011.			

Objective 7: Manage a Sustainable California Delta										
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3	Continue funding for implementation of the CALFED Ecosystem Restoration Program (ERP), including finalization of the ERP Conservation Strategy. Complete several ecosystem projects including Dutch Slough, Mein's Landing and Hill Slough tidal restoration projects and improved habitat in the Yolo Bypass. Note: Should include North Delta Project (McCormack Williamson Tract (MWT). MWT was purchased with CALFED funds.	Ongoing	Planned	Fair	Medium progress toward implementation	Parts of California	Since 2003, DWR involved in evaluating several proposed North Delta actions included in the CALFED ROD. These actions included changes in the North Delta's conveyance facilities to improve Delta water quality, fisheries, and water supply reliability, as well as modifications to improve flood protection and ecosystem health. FESSRO's program to implement North Delta actions is the North Delta Flood Control and Ecosystem Restoration Project (NDFC&ERP). The NDFC&ERP consists of flood control and habitat improvements where the Mokelumne River, Cosumnes River, Dry Creek, and Morrison Creek converge. Flood flows and high water conditions in this area threaten levees, bridges, railways, and roadways that affect human safety and the economy. The project will reduce flooding and provide contiguous aquatic and floodplain habitat along the downstream portion of the Cosumnes River Preserve by modifying levees on McCormack-Williamson Tract and at Grizzly Slough. North Delta EIR was approved and certified in October a USACE Project Feasibility Study in an effort to receive federal funding for the project.n effort to receive federal funding for the project	Delays in project funding, DWR funding now secured; however, federal cost share is uncertain. Delays in federal cost share agreement for the Project Feasibility Study has significantly delayed project implementation.	Note: Should include North Delta Project (McCormack Williamson Tract (MWT). MWT was purchased with CALFED ERP funds for a joint flood improvement/environmental restoration objective. Also, need to include metrics that track planning process achievements as well as implementation.	Acres of habitat protected, acres undergoing planning, and acres of habitat restored (include floodplain, tidal and riparian habitat), acres of habitat with an endowment. Flood stage reduction. Increase in native wildlife populations (TBD).
4	Evaluate and begin construction on Delta gates and barriers that improve water quality, water supply reliability, and ecosystem function.									
5	Develop and implement streamflow recommendations throughout the annual hydrograph for tributaries to the Delta. Direct the Department of Fish and Game to develop streamflow recommendations for tributaries in the Delta watershed, as specified in Public Resources Code Section 10000 – 10005. Direct the State Water Resources Control Board (State Water Boards) to undertake appropriate proceedings to consider and implement the flows.									

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6	Control aquatic invasive species within the Delta. Funding the Aquatic Invasive Management Plan developed by the Department of Fish and Game, a comprehensive effort to prevent new invasions and minimize impacts from established invaders, would aid the restoration of desirable habitat. AB 2443, enrolled September 2012, created a surcharge on recreational boat registration fees to help cover the costs of mussel monitoring, inspection and eradication programs. Funding for water hyacinth treatment currently comes from the Harbors and Watercraft Revolving Fund, which receives revenues from boaters' registration fees and gas taxes.	Ongoing					DFG has developed guidance for mussel inspections. Local lake and reservoir managers conduct boat inspections. A state and federal interagency coordination team was established to coordinate management responses to the threat of further quagga mussel spread in California. The California Department of Boating and Waterways conducts surveys and implements control measures for Brazilian water weed and water hyacinth in the Delta.			
7	Require the State Water Boards and the Department of Fish and Game to immediately expand their evaluation of potential stressors of the aquatic habitat and continue to adopt long-term programs to regulate discharges from irrigated agriculture and urban areas.									

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8	Begin comprehensive monitoring of Delta water quality and fish and wildlife health and by 2012 develop and implement Total Maximum Daily Load programs for the Delta and its tributary areas to eliminate water quality impairments including, but not limited to, reduction of organic and inorganic mercury entering the Delta from tributary watersheds.	By 2010								
	<i>The Delta Ecosystem Must be Protected and Revitalized/ Recommended actions addressed in legislation enacted in 2009</i>									
9	Large-scale habitat restoration. Identify funding and direct restoration of large areas—on the order of 100,000 acres—of interconnected habitats in coordination with flood control planning and implementation within the Delta and adjacent areas.						DWR and DFG's Fish Restoration Program Agreement. signed in October 2010, calls for allocation of \$187.5 million over 10 years to achieve restoration of 8,000 acres of habitat.			
10	Reduce effects of non-project in-Delta diversions. Secure additional funds from the Legislature for the Department of Fish and Game to evaluate the effects of in-Delta diversions on native fishes and to make recommendations to minimize their effects while respecting their water rights.									

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	<i>The State's Water Supply Must be More Reliable/ Recommended actions that have authorization</i>									
1	Near-term water conveyance improvements. Complete the Bay Delta Conservation Plan and associated environmental assessments.	by December 31, 2014	In Progress (mid)	Good	Medium progress toward implementation	Most of California	Draft Plan and Draft EIR/EIS to be released Fall 2012.	The Plan has to be both permissible to the regulatory fish agencies and provide adequate water that makes the investment possible to the Water Contractors.		
2	Water use reductions. Initiate the Governor's objective to reduce per capita urban water usage 20 percent.	by 2020					Legislation that was enacted in November 2009 incorporates into law (Senate Bill X7 7) the goal to achieve a 20 percent reduction in urban per capita water use in California by 2020. Urban water suppliers are required to establish water conservation targets for the years 2015 and 2020.			
3	Surface storage investigations. Complete CALFED surface storage feasibility studies and their environmental assessments.	by Dec 2010 By December 31, 2012		Good	Medium progress toward implementation	Parts of California				
4	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.	Continuous	In Progress (mid)	Excellent	Fast progress toward implementation	Statewide				
	<i>The State's Water Supply Must be More Reliable/ Recommended actions addressed in legislation enacted in 2009</i>									

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5	Long-term water conveyance improvements. Implement conveyance improvements and associated ecosystem restoration projects upon the completion of the BDCP evaluations.	by December 31, 2014	In Progress (mid)	Good	Medium progress toward implementation	Most of California	Draft Plan and Draft EIR/EIS to be released Fall 2012.	The Plan has to be both permissible to the regulatory fish agencies and provide adequate water that makes the investment possible to the Water Contractors.		
6	Expand surface and groundwater storage. Complete analyses of surface storage, groundwater storage, flood control, and improved reservoir operations by 2012 and implement feasible and effective projects.									
7	Water rights accountability. Enact legislation to enhance and expand the State Water Board's water rights administrative accountability. These recommendations are not intended to adversely affect the current water right priority system, including area-of-origin priorities but rather to strengthen the current administrative system. Appropriate enforcement will protect water rights.									
8	Water use reporting. Ensure the sustainability of water supplies by improving water diversion and use reporting, strengthening water rights accountability, and increasing water use efficiency.									

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9	Integrated regional water management. Continue to improve water supply reliability by encouraging regional self-sufficiency, promoting alternative supplies, and by increasing local and regional water storage capacity.	Continuous								
	<i>The Delta is a Unique and Valued Place/ Recommended actions that have authorization</i>									
1	Improve flood protection and emergency response. Immediately increase emergency preparedness and response in the Delta by continuing to stockpile flood response materials. Complete a Delta-wide regional emergency response plan that achieves legally binding regional coordination between local, State, and federal agencies, and by carrying out near-term emergency preparation actions such as those recommended in the Delta Vision Strategic Plan.	by 2010								
2	Strengthen the Delta levee system. Continue to fund and implement levee improvement projects especially in urban areas, while also expanding the levee special projects and subvention programs until a long-term levee strategy is formulated.									

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3	Create a Delta National Heritage Area. Achieve federal designation for portions of the Delta as a National Heritage Area and expand the State Recreation Area network in the Delta.	by 2013					The Delta Protection Commission has completed a feasibility study. Bills that would authorize creation of the NHA have been introduced in both houses of Congress.			
4	Develop a Delta economic plan. The Delta Protection Commission is to develop a Delta economic sustainability plan to support increased investment in agriculture, recreation, and tourism.	COMPLETE								REMOVE
	<i>The Delta is a Unique and Valued Place/ Recommended actions addressed in legislation enacted in 2009</i>									
5	Establish a Delta Investment Fund to implement the economic sustainability plan.									
6	Plan for appropriate land uses for at-risk areas in the Delta.	by 2013					The Delta Stewardship Council has included two land use policies aimed at reducing risk in the Draft Delta Plan.			
7	Long-term levee planning. Prepare a comprehensive long-term levee investment strategy that matches the level of protection provided by Delta levees to the uses of land and water enabled by those levees.									
	<i>Strengthen Delta Governance and Provide Reliable Funding/ Recommended actions that have authorization</i>									
1	Complete the Central Valley Flood Protection Plan.	COMPLETE								

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2	Continue existing CALFED programs that support State and federal activities.									
3	Continue a strong and consistent investment in science and engineering important to the Delta through a robust, well-coordinated Delta Science and Engineering Program with transparent oversight and review from a Delta Science and Engineering Board.	2013	planned	good	Medium progress toward implementation	Parts of California	BCPs submitted by DWR and DSC for FY 2013-14			
	<i>Strengthen Delta Governance and Provide Reliable Funding/ Recommended actions addressed in legislation in 2009</i>		Authorized	Poor	No progress/ regressing					
4	Establish the Delta Stewardship Council. The council will be composed of seven voting members, four appointed by the Governor and confirmed by the Senate, one appointed by the Senate Committee on Rules, one appointed by the Speaker of the Assembly, and the Chair of the Delta Protection Commission.	COMPLETE								
5	Enhance the Delta Protection Commission. The mission of the Delta Protection Commission was modified to focus its efforts in the areas of land use and economic development.	COMPLETE								

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6	Establish a Delta Conservancy. The Delta Conservancy will be responsible for implementing ecosystem actions that are consistent with the Delta Plan.	COMPLETE								
7	The Delta Stewardship Council will adopt a Delta Management Plan (Delta Plan) that will be informed by and incorporate information, actions and recommendations from Delta and Suisun planning efforts.	By Jan 1, 2012 By June 2013	In Progress (late)	Excellent	Fast progress toward implementation					

Objective 8: Prepare Prevention, Response, and Recovery Plans										
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	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.	Q3 2012			Slow progress toward implementation	Statewide	ULOP criteria public draft and working group meetings; Assistance with grant applications for hazard mitigation; Building code update; handbook for local communities	Cost, agency resource capability and availability	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
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.	Q3 2012			Slow progress toward implementation	Statewide	ULOP criteria public draft and working group meetings; Assistance with grant applications for hazard mitigation; Building code update; handbook for local communities	Cost, agency resource capability and availability	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
	State government should assist disadvantaged communities located in floodplains to prepare for and recover from flood emergencies.	Q3 2012			Slow progress toward implementation	Statewide	ULOP criteria public draft and working group meetings; Assistance with grant applications for hazard mitigation; Building code update; handbook for local communities	Cost, agency resource capability and availability	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
2	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.	By Dec 2010		Unreportable						
3	DWR will develop a long-term California Drought Contingency Plan (and update it on the same schedule as the California Water Plan) that includes:	By Feb 2010	Completed							
	articulation of a coordinated strategy for preparing for, responding to, and recovery from drought;		Completed	Good	No progress/regressing	Statewide	The Drought Plan was written in 2010 and included in the 2009 Water Plan Update.	Lack of interest during two normal/wet years. Lack of drought staff to implement the Drought Plan.		
	assessment of state drought contingency planning and preparedness;		Completed	Fair	No progress/regressing	Statewide	The Drought Plan included an assessment of the state drought contingency planning and preparedness.	Lack of interest during two normal/wet years. Lack of drought staff to implement the Drought Plan.		
	description of State government's role and responsibilities for drought preparedness;		Completed	Good	No progress/regressing	Statewide	The Drought Plan described a state role, but it has not been implemented since the Plan was written.	Lack of interest during two normal/wet years. Lack of drought staff to implement the Drought Plan.		
	identification of needed improvements for drought monitoring and preparedness;		Completed	Poor	Slow progress toward implementation	Statewide	The Drought Plan recommended state and local monitoring committees to determine baseline conditions and monitor changes during drought. These have not been developed.	Lack of interest during two normal/wet years. Lack of drought staff to implement the Drought Plan.		

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	identification of measures to mitigate the economic, environmental, and social risks and consequences of drought events;		Completed	Poor	No progress/regressing	Statewide	These measures were included in the Drought plan, but have not been acted on since.	Lack of interest during two normal/wet years. Lack of drought staff to implement the Drought Plan.		
	assessment of and adaptation to the impacts of drought under existing and future conditions including climate change;		Completed	Poor	No progress/regressing	Statewide	These measures were included in the Drought plan, but have not been acted on since.	Lack of interest during two normal/wet years. Lack of drought staff to implement the Drought Plan.		
	identification of needed improvements to real-time surface water and groundwater monitoring programs;		Completed	Good	Medium progress toward implementation	Statewide	This has been developed as part of the groundwater monitoring programs mandated by the 2009 water legislation.			
	identification of needed research in drought forecasting; and		Completed	Good	Medium progress toward implementation	Statewide	DWR staff is closely involved in national drought prediction efforts.			
	identification of needed research of the indices and metrics for assessing the levels of drought.		Completed	Poor	No progress/regressing	Statewide	The Drought Plan called for the development of indices, but nothing has been done to pursue this.	Lack of interest during two normal/wet years. Lack of drought staff to implement the Drought Plan.		
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.	Q3 2012	Flood hazard Mitigation		Slow progress toward implementation	Statewide	ULOP criteria public draft and working group meetings; Assistance with grant applications for hazard mitigation; Building code update; handbook for local communities	Cost, agency resource capability and availability	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.
5	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.	By Dec 2010					Climate Change was not incorporated into State Emergency Plan (2009). Incorporated into SMHM Plan (Oct 2010) in section 4.5; led to development of Adaptation Policy Guide released in 2012	Cost, agency resource capability and availability	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.	Issue 3 : Flood Readiness in the Flood Management RMS and Recommendation 3 in the SFMP California's Flood Future Report identify objectives and actions for this objective.

Objective 9: Reduce Energy Consumption of Water Systems and Uses										
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	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.									
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.	SBX7-7 time frame 2020					see the following actions (U1 to U11)	Lack the statewide road map for water-energy policy, report systems and methodology for assessing embedded energy	WETCAT address issues	
U1	CII task Force was established and report was completed	Task Force: April 1, 2010 Report: April 1, 2012	In Progress (late)	Good	Medium progress toward implementation	Statewide	develop alternative best management practices for the CII water sector; a public draft report was released.	no statewide methods to evaluate water-energy and GHG emission related to BMS	WETCAT address issues	
U2	Demand Management Measures		In Progress (early)	Fair	Slow progress toward implementation	Statewide	DWR and the CUWCC have begun discussions in forming the Independent Technical Panel for this action	complexity & resources	support with more resource	

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U3	Urban Technical Methodologies	10/1/2010	Completed	Good		Statewide	Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use was established			
U4	Fourth Target Method	12/31/2010	Completed	Good		Statewide	The Provisional Method 4 for Calculating Urban Water Use Targets has been released			
U5	Process Water Regulations	No date specified	Completed	Good	Fast progress toward implementation		adopt regulations for implementation of the SB X7-7 provisions related to process water			
U6	Urban Report to Legislature	12/31/2016	Initiated	Fair	Medium progress toward implementation	Statewide	About 373 UWMP (2010) have been submitted to DWR	lack policy for requirement of water-energy and climate change in UWMP	Develop policies with requirements of water-energy and Climate change for future UWMP	

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U7	Update UWMP Guidebook	No date specified	Completed	Good	Fast progress toward implementation	Statewide	The Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan has been completed			
U8	Standardized Water Use Reporting	No date specified	Initiated	Fair	Slow progress toward implementation	Statewide	DWR is preparing the standardized data reporting form (portal) for review by stakeholders	complexity & resources; no accepted statewide report systems	Develop statewide report systems including energy uses in water sectors using agreed tools and methods	
U9	Statewide Targets for Regional Practices	1/1/2011	Planned	Fair	No progress/regressing	Statewide	DWR propose new statewide targets or review and update existing statewide targets for regional water resources management	no statewide methods to evaluate water-energy and GHG emission	CEC and WETCAT develop tools and protocols	
U10	Quantification of Efficiency of Agricultural Water Use ; Agricultural Water Measurement Regulations; AWMP Guidebook		In Progress	Fair	Medium pr	Statewide	Develop policy , methods and guidance for Efficiency of Agricultural Water Use	no statewide methods to evaluate water-energy and GHG emission for Agricultural Water Use	WETCAT discuss issues	

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U11	promote implementation of regional water resources management practices	No date specified	No Action	Unreportable	No progress/ regressing	Statewide	DWR, in consultation with the board, shall promote implementation of regional water resources management	resources limits	support with more resource & funding	
2	Municipal recycled water may represent a relatively energy efficient water management strategy in some areas of the state.									
	Water agencies should adopt policies 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.	by 2015								

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	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.	Ongoing since 2009. No action to date. The cost of bringing a waste and unreasonable case is very costly and must be done on a case by case basis.					First accurate accounting of recycled water-2009, 669,000 AF; Regional salt and nutrient plans for all basins due in 2014 (2016); \$700,000 in 2012/13 budget from Water Board to DPH for drinking water regulations for recycled water; DPH regulations for groundwater replenishment expected in 2012/13 and for reservoir augmentation soon after. CPUC RW proceeding to determine policy for water IOUs.	No requirement to report RW numbers to anyone; cost of salt/nutrient planning; RW not a priority in all Regions; DPH underfunded and understaffed.	Update the 2009 RW accounting and require on-line reporting by 2015; map opportunities for increase in RW using data salt/nutrient plans and information on WW volumes; DPH regs adopted and implemented by 2014/15; DPH to study the feasibility of direct potable reuse; CPUC rule-making complete for RW. Recommend focusing State Water Board on revising water rights terms to require use of recycled water where feasible.	
	Water and wastewater utilities should collaboratively develop water recycling plans as part of Integrated Regional Water Management plans.	by 2015								

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3	Local agencies and governments should implement cost effective, energy efficiency measures in water system infrastructure projects.		Authorized	Good	Fast progress toward implementation	Statewide	PIER/EPIC Research and Demonstration Projects	PIER is phasing out, the EPIC program is under development	Add Title 24 (Building Efficiency) for behind the meter efficiency opportunities	
	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.						DWR developed ghg reduction plan for SWP. CPUC included water energy in its bridge program for ee.	No accepted statewide (or federal) methodology for determining embedded energy or ghg reduction for funding purposes.	Incorporate energy efficiency and ghg reduction methodology(ies) into all state and federal agency practices by 2015 using agreed-upon tools and protocols.	

Objective 9: Reduce Energy Consumption of Water Systems and Uses										
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	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.		Initiated	Good		Statewide	A number of tools have been developed to measure impact of water system: Water-Energy Sustainability Tool (WEST) model, Water to Air model funded by PIER. Title 24 would be used to measure the impacts of end use conservation.		Include Title 24 protocols	

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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.						State Water Board and Regional Boards adopt and implement stormwater permits that discourage runoff and encourage capture and reuse on site or regionally. Prop 84 funds (amount? By x date> disbursed by DWR and State Board for flood and stormwater projects that contribute to demand for water supply.	Cost of bmps No identified way to quantify at the statewide level the volume of stormwater captured and used	Develop and implement a quantification methodology	

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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.						DWR increased renewable portfolio for SWP Energy Committee of ACWA and ECE began collecting information on renewable energy production by W and WW facilities Resources Agency led organizing of a Bioenergy Task Force and developed a plan for increasing bioenergy use statewide U.S. Department of Energy made it possible to raise feed-in tariff rates at the state level State set new, more aggressive targets for	Barriers Economic incentive low for agencies to produce for the grid	Recommendation for 2013 Update of Water Plan Create a market for small and medium sized agencies to build renewable production beyond their own needs	
	State government should remove impediments to implementing renewable energy projects.									

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6	State government will establish a public goods charge for funding investments in Integrated Regional Water Management strategies that will help mitigate and adapt to climate change.		No Action	Poor	No progress/ regressing	Statewide				

Objective 10: Improve Data & Analysis for Decision-making										
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or trackable?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
	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.	on going	Initiated	Poor	Slow progress toward implementation	Statewide	Water Plan leading efforts to support planning under an uncertain future and includes efforts to identify strategic improvements to data and analytical tools. Federal and regional activities not identified.			
1	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 integrated water management objectives. Based on program needs the strategic plan should:	unknown	No Action							
	establish standards and protocols to ensure the widest utility and efficient use of resources,									
	identify the optimal location of monitoring stations,									
	prioritize long-term improvements in the monitoring network, and									
	ensure long-term maintenance and accessibility to water management information.									
2	DWR will participate with the National Oceanic and Atmospheric Administration and Scripps Institute of Oceanography in implementing the Hydrometeorological Test Bed program which enhances off-shore and land measurements of weather variables.	May-14	In Progress (mid)	Excellent	Fast progress toward implementation	Most of California	Installation of GPS-Met, Soil Moisture, Snow Level Radar and Atmospheric River Observatories to facilitate monitoring and forecasting of extreme precipitation events in California	No significant barriers or constraints	Installed sites reporting data to NWS. Work continues to get data into CDEC	Completion of Installation and development of O&M agreements
3	State government should establish an interim range of sea level rise projections for short-term planning purposes for local, regional, and statewide projects and activities.	Oct-10	Completed	Excellent	Fast progress toward implementation	Parts of California	The Coastal and Oceans Subgroup of the Governor's Climate Action Team ("CO-CAT") issued interim sea level rise guidance in 2010, and DWR has incorporated that guidance into its programs, in particular, the IRWM grant program.	No significant barriers or constraints	Revise interim CO-CAT guidance based upon NRC panel findings	Revision of CO-CAT guidance completed
	The Natural Resources Agency, in coordination with other State agencies, will 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.	Jun-12	Completed	Good	Fast progress toward implementation	Parts of California	DWR is project manager, co-funded by SWRCB, CEC, OPC, and CalTrans. The States of Oregon and Washington are also funding partners, as are three federal agencies (NOAA, USACE, USGS). The NRC convened a Committee on Sea Level Rise in California, Oregon, and Washington at the request of ten state and federal agencies. The		Guidance completed, so remove objective for CWP Update 2013. Could consider a new objective that integrates the NRC study with the State's interim guidance to account for latest scientific understanding of SLR. OPC says this is where they are headed.	N/A

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	Based upon guidance from the NRC, DWR in collaboration with other State agencies should develop long-range sea level rise scenarios and response strategies to be included in California Water Plan Update 2013.	Dec-12	In Progress (early)	Excellent	Fast progress toward implementation	Parts of California	Development of scenarios/response strategies has been delayed due to delay in NRC study. Adaptation strategies were included in the California Climate Adaptation Strategy (2009) and will be revised (based upon the NRC report) in its 2012 Update, which can be referenced in CWP Update 2013. In October 2011, DWR reinstated an external expert panel, the Climate Change Technical Advisory Group (CCTAG). The CCTAG will advise on climate change impacts and adaptation strategies to advise the CWP Update, the IRWM Program, various flood management activities. The CCTAG has reviewed the NRC study, and recommended a suite of climate scenarios for CWP Update 2013.	Recommendations for CWP 2013 Climate Scenarios have been taken into consideration for the Managing an Uncertain Future report.	Since objective is specific to providing input to CWP Update 2013, then not applicable as an objective for progress of items identified in CWP Update 2013.	Revised coastal adaptation strategy
	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).	2013	In Progress (mid)	Good	Medium progress toward implementation	Statewide	The CCTAG did provide scenario recommendations to the Future Scenarios 2013 workteam. The CCTAG will be assisting DWR's Climate Change Framework Workgroup by recommending a suite of climate scenarios for DWR planning activities, on climate model outputs, hydrology model projections, streamflow, and drought/flood considerations for Department-wide projects and programs.	As identified in the Project Charter, constraints include the availability of DWR individual planning project funding, state budget deficit actions affecting CCTAG staff support, availability of downscaled climate data, and advisory member engagement and availability since the CCTAG is organized by voluntary membership. Another additional constraint could be the CWP Update 2013 scope limitations for use by the Water Evaluation and Planning (WEAP) System Model.	The CCTAG will be advising the DWR Climate Change Framework Workgroup on these issues, and Water Plan will receive specific guidance from the expert panel going forward. 2013 recommendations are already complete, so keeping the CCTAG going would facilitate future Water Plans.	Each water plan will include drought and wet future climate scenarios. The metric here might be how many groups utilize those factors in their water management activities. SLR estimates will come from the NRC report released 2012, so the metric may be to find how many groups use those figures in their SLR planning.
4	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:									
	State agencies should identify focused research needs to provide guidance on activities to reduce California's vulnerability to climate change.	2011	Completed	Excellent	Medium progress toward implementation	Statewide	DWR and SWRCB have identified climate change research needs. CEC's PIER program has also identified and funded water-related climate change research. DWR has also funded paleohydrology studies of the Klamath, Sacramento, and San Joaquin River basins.	Defunding of the CEC's PIER program; limited funding left in Prop. 84	State climate change research program needs sustainable funding source and must include climate adaptation.	Number of studies funded and completed.
	The University of California should establish a system-wide Climate Change Adaptation Research Center.	None	No Action	Poor	No progress/regressing	Statewide	No action	No initiative on this action by UC, or by the State Legislature (for funding).	Remove from Update 2013	N/A
	State government should also explore partnerships with the federal government, other Western states, and research institutions on climate change adaptation.	ongoing	Initiated	good	Medium progress toward implementation	statewide	DWR and other State agencies actively participate in the California Landscape Conservation Cooperative, which is a science-management partnership to address climate change and other environmental stressors at a landscape scale; WSWC observing system for extreme precipitation, NIDIS California drought pilot, NOAA MOA	Major cuts in NOAA research budget in FY 12 & 13	An inventory of existing efforts should be developed to avoid duplication and allow for increased coordination and leveraging of resources.	N/A

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5	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.									
6	DWR will adopt Shared Vision Planning (SVP) in the California Water Plan to achieve better integration and consistency with other planning activities, to obtain consensus on quantitative deliverables, to build a common conceptual understanding of the water management system, and to improve transparency of Water Plan information. SVP integrates tried-and-true planning principles, systems modeling, and collaboration into a practical forum for making water resources management decisions.	on going	Initiated	Poor	Slow progress toward implementation	Statewide				
7	DWR will implement pilot studies in different areas of the state to explore how information can be more effectively integrated among local, regional, and statewide water planning and management activities. The initial focus of this effort will be to improve how information produced for urban water management plans can be used to more effectively support Integrated Regional Water Management plans and the California Water Plan while streamlining reporting requirements.	On going	Initiated	Poor	No progress/regressing	Statewide				
8	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 and 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.	Begin by 2012	Initiated	Fair	Slow progress toward implementation	Statewide	The initial planning and scoping has been completed. Other State agencies have been engaged. A stakeholder group has been identified and has been informed about our plans. We have begun the business requirement and uses and analysis and are initiating the IT development phase.	Key constraints include IT infrastructure variability and availability. Development of IT infrastructure and architecture. Resource limitations. Data format variability. Local political sensitivities to data collection and uses.		
9	DWR should participate in a pilot project to test the H2O, 2.0 Initiative—Adaptive Management for Water Storage and Flood Control Program. This program would establish a network of monitoring stations, use satellite imagery, and generate real-time data to inform water resource and flood management decisions.									
10	In 2008, DWR completed the Integrated Water Resources Information System as a working prototype of the Water Planning Information Exchange (Water PIE). IWRIS facilitates sharing data and networking existing databases and Web sites, 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.									
	DWR will have an implementation and funding plan for Water PIE describing the long-term technical approach and strategy for increasing the number of linked partners.	By 2013	Initiated	Fair	Slow progress toward implementation					

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11	DWR will initiate a pilot project to develop a common schematic of California's water management system. Development of a common schematic will allow better integration with other analytical tools and models and sources of information on water quality, ecosystem functions, flood management, climate change and other parts of integrated water management.	By 2013	Initiated	Poor	Slow progress toward implementation					
12	DWR will convene a workshop of the Statewide Water Analysis Network 12 (SWAN) to provide advice on prioritizing technical improvements for Water Plan Update 2013, particularly to quantify future scenarios and evaluate regional water management strategies.	In 2010	Completed	Good	Fast progress toward implementation	Statewide	DWR held several workshops through 2012 including: SWAN workshop - August 2010 SWAN Workshop - May 2011 Scenarios workshop - August 2011 Land use focus group - January 2012 and June 2012 Regional outreach - January 2012			

Objective 11: Invest in New Water Technology										
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	Identify and fund applied research and pilot studies on emerging water technology to make them attainable and more cost effective.									
1	State government will work with California research and academic institutions to identify, prioritize, and begin funding applied research projects as part of a broad and diverse scientific agenda to fill gaps in knowledge about California's water resources.	Summer 2011- Summer 2013 and on-going	In Progress (mid)	Excellent	Medium progress toward implementation	Statewide	CWP Update 2013 Water Technology Caucus activities and deliverables: Survey existing & emerging technologies, inventory of existing & emerging technologies, inventory of institutions working on water technology initiatives, compile case studies, identify data needs & gaps, draft text and recommendations, prioritize a portfolio of future research, technology initiatives and pilot projects that would advance more cost-effective implementation of resource management strategies, compile performance metrics and sustainability indicators, identify communication strategies, include a Water Technology Innovation Roadmap in CWP Update 2013.	Cost, Funding, Outreach & Education, time and energy for collaboration	Encourage Integrated Water Management (IWM), regional partnerships, partnerships with academic and research institutions, project tracking, implementation tracking, progress tracking, incentives, outreach and education, and collaboration.	implementation tracking, magnitude of water affected (%), NOTE: Identifying future reporting metrics is part of the Water Technology Caucus work plan.
2	State government will invest in pilot projects to help local agencies and governments and regional partnerships implement promising water technologies— to improve water use efficiency, water recycling and reuse, water supplies and quality, water and wastewater treatment, storm water capture and reuse, desalination, and others—more cost effectively with knowledge and experience specific to each region.	Summer 2011- Summer 2013 and on-going	In Progress (mid)	Excellent	Medium progress toward implementation	Statewide	CWP Update 2013 Water Technology Caucus activities and deliverables: Survey existing & emerging technologies, inventory of existing & emerging technologies, inventory of institutions working on water technology initiatives, compile case studies, identify data needs & gaps, draft text and recommendations, prioritize a portfolio of future research, technology initiatives and pilot projects that would advance more cost-effective implementation of resource management strategies, compile performance metrics and sustainability indicators, identify communication strategies, include a Water Technology Innovation Roadmap in CWP Update 2013.	Cost, Funding, Outreach & Education, time and energy for collaboration	Encourage Integrated Water Management (IWM), regional partnerships, partnerships with academic and research institutions, project tracking, implementation tracking, progress tracking, incentives, outreach and education, and collaboration.	implementation tracking, magnitude of water affected (%), NOTE: Identifying future reporting metrics is part of the Water Technology Caucus work plan.

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3	The California Energy Commission through its PIER Program (Public Interest Energy Research) will conduct research and demonstration projects that explore ways to reduce the energy intensity of the water use cycle and to better manage the energy demand of water systems.	2010-2011	Completed	Excellent	Medium progress toward implementation	Statewide	PIER's Industrial, Agriculture and Water (IAW) research program, Emerging Technology Demonstration Program (ETDG II), Technical Assistance for the Research and Development Division	Cost, Funding (Funding expired in 2011, Funding authorized in Dec. 2011 for Electric Program Investment Charge (EPIC))	Note: CEC to provide input in Nov.	energy use for water sectors, implementation tracking, kW saved, \$ saved

Objective 12. Improve Tribal Water-										
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1	Everyone involved in the California Water Plan should share information with California Native American Tribes about how Tribal water issues intersect with water law, planning, and management in California. Intersections include, among other things, water rights, human life and health, fisheries management, waterdiversions, water storage and conveyance, flood management, water use efficiency, desalination and climate change.			Poor	Slow progress toward implementation	Statewide	Everyone – is no one, everybody, anybody and only if you feel like it	State agencies are not always good at sharing information. State agencies don't always know how to deal with Tribes. Not getting info to right people within the Tribes.	Agencies need to develop better ways of sharing information with Tribes.	List of ways agencies have distributed information to Tribes.
				Poor	Slow progress toward implementation	Parts of California		Passive requirement – mandates are preferable.	If input from tribes is valued and relevant to implementation to the water, perhaps wording could be changed from "should" to shall.	Check list or documentation or tribal content.
					Slow progress toward implementation	Parts of California		Communication	Counties and municipalities don't invite State agencies or Tribes to the planning table.	Penalize counties financially when they don't use the Plan.
					Slow progress toward implementation	Parts of California		See purple NOTE on last page.	See *	
2	Everyone involved in the Water Plan should share information with California Native American Tribes about how the water planning, management, and projects of State, local, and federal governments, as well as water purveyors, impact and affect California Native American Tribes.			Poor	Slow progress toward implementation	Most of California		Same as #1 above. Agencies are not always willing to share. Agencies may not be aware that Tribes will be impacted	Information to all Tribes. Indian representative from DWR to Tribes.	List of which activities affect/impact which Tribes or say all Tribes affected.
				Poor	Slow progress toward implementation	Parts of California		Passive requirement – mandates are preferable.		
				Poor	Slow progress toward implementation	Parts of California		Information to all Tribes. Indian representative		

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3	Everyone involved in the Water Plan should share information with California Native American Tribes about State funding that is available for water projects, how California Native American Tribes can apply for the funding, what obstacles they may face in accessing these funds, and how they can influence future funding programs.			Poor	Slow progress toward implementation	Most of California		State agencies are not always good at sharing information. State agencies don't always know how to deal with Tribes. Not getting info to right people within the Tribes.	Educate Tribes on what funding is available.	List of Tribes who have received State funding & through which programs.
				Poor	Slow progress toward implementation	Parts of California		Passive requirement – mandates are preferable.		
				Poor	Slow progress toward implementation	Parts of California		CA Tribal representative in DWR to contact Tribes with information		
4	California Native American Tribes should use the Water Plan as a stepping stone to ensure their representation and genuine participation in water planning processes throughout California, including those linking water to public health, housing, economic development, and environmental justice.			Poor	Slow progress toward implementation	Most of California	Like stepping on a snake, a mushy, slimy, stepping stone.	Not all Tribes participate in Water Plan. Proximity of Tribe to Water Plan meeting. Lack of Tribal staff to attend meeting. Lack of funding to travel.	Public agencies should follow the recommendation above, but tribes have sovereignty and may choose or not to follow should, may or shall!	List of Tribes who participated in 2009. List of Tribes participating in 2013 (i.e. new Tribes). List of Tribes participating in other mediums or planning meetings or caucuses.
				Poor	Slow progress toward implementation	Parts of California		Some Tribes don't have moneys to send representative to Tribal AC meetings.		
				Poor	No progress/regressing	None. Too new. Wait and see Tribal Water Summit				

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5	California Native American Tribes should build a foundation of knowledge and relationships for developing their own long-term water management plans, as well as participating genuinely in regional and local water planning, including Integrated Regional Water Management plans.	On-going	Needed	Good	Slow progress toward implementation	Parts of California	BIA has funding available to develop Water Management Plans. Colusa participates in NSV IRWM as a member of the Technical Advisory Committee.	Funding and staff to perform duties.	Examples of Water Management Plans or develop some recommended criteria for Tribes to follow and develop their own plans. DWR can initiate contact/introduction of Tribes to IRWM group & let Tribes and IRWM groups know that Tribes are eligible for funding.	List of Tribes who participated in 2009. List of Tribes participating in 2013 (i.e. new Tribes). List of Tribes participating in other mediums or planning meetings or caucuses.
				Poor	Slow progress toward implementation	Most of California	Loaded comment.	Money's need to ensure a person to hold for Tribe, some to stay on top state local, regional affairs.	Public agencies should follow the recommendation above, but tribes have sovereignty and may	
				Poor to good	No progress/regressing	Parts of California				
				Good		Parts of California				
				Very good to poor						
6	California Native American Tribes should shape the content of the Water Plan through a variety of mechanisms, particularly the review of regional reports, resource management strategies, and other materials, and through Tribal and public meetings.		Needed	Poor	Slow progress toward implementation	Regional	The July 2012 TAC meeting initiated this however there was low Tribal attendance & little input from the Southern CA Tribes. Some Regional Reports are good like North Coast other are poor like Sac River. Need to expand content of poor ones.	Tribes willing to participate and provide input.	g was a step in a the right	tributed or reviewed or comm
				Poor	Slow progress toward implementation	Most of California	Doesn't ensure a positive outcome.	ow to use what is in these		
				Good	Slow progress toward implementation	Most of California				
				Poor	No progress/regressing	Not happening yet				
				Excellent						

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7	California Native American Tribes should build working relationships and partnerships with relevant State, local and, federal governments, and water purveyors that are based on mutual respect, fairness, honesty, responsibility, and mutual trust.	On-going	Needed	Good	Slow progress toward implementation	Parts of California	IRWM meetings, IRWM outreach DWR regional meetings.	Government to Government Consultation. Lack of agency staff training in dealing with Tribes. Agencies don't know how to deal with Tribes. Agencies need to be willing to establish working relationships. Tribes could initiate meetings too.	Include State Agency or Local Agency contacts or Tribal liaisons within each agency within the regional reports or somewhere in the water plan. Tribes could always initiate the process by building the relationship with the agency or setup meetings.	It would be tough to track which agencies are meeting with specific Tribes. Maybe just make an acknowledgement of which agencies are meeting with Tribes & how many Tribes are participating in meetings without including specific names of Tribes. Wouldn't want this to turn into something where agencies are just checking a box off if a Tribe attended/participated.
				Poor	Slow progress toward implementation	Parts of California	Very slow progress!	Have resource to hold relations.		
				Good	Slow progress toward implementation					
				Poor Excellent	Slow progress toward implementation					
8	California Native American Tribes should educate State, local, and federal governments, and water purveyor executives and planners about the historical and ongoing relationships between California Native American Tribes and water, especially cultural and religious practices, including fishing.	On-going		Good	Slow progress toward implementation	Parts of California	They don't listen – history starts after 1850.	This may be tough since Tribes may not want to share this info or if they do, they may want to share it on an individual basis w/an agency or multiple agencies. May be more efficient if state agency gave training about Tribal importance of water & have speakers talk generally about the subject.	DWR or State Agency could initiate the process or ask for people/Tribes to volunteer to speak at training for agency staff personnel.	Track trainings or # of meetings agencies have had w/Tribes. May be hard to track and wouldn't want it to turn into a check off the box kind of thing.
				Good	Slow progress toward implementation	Parts of California		With water summit and planning summit with local, state & federal leaders.		
				Poor	Slow progress toward implementation					
				Fair	Slow progress toward implementation					

Objective 12. Improve Tribal Water-										
No.	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
9	California Native American Tribes should propose and clarify how DWR works with California Native American Tribes in State water planning efforts.	On-going		Poor	Slow progress toward implementation	Statewide.	Unknown.	Need input from all Tribes.	DWR could have an outreach meeting to discuss this or discuss at Tribal AC meeting.	Report on meeting and what was suggested.
				Good	Slow progress toward implementation	Most of California	Not clear what you want?	Difficult to obtain.		
				Good Good	Medium progress toward implementation	Parts of California Most of California				
10	California Native American Tribes should build a foundation of knowledge and relationships for hosting a Tribal Water Summit in 2009 that includes the highest level of decision-makers from State, local, and federal governments, and water purveyors.			Excellent (done Nov. 2009)	Slow progress toward implementation	Statewide	Water Summit was held on Nov. 2009.	Completed.	Track outcome of 2013 Update. Have Agency and Tribal leaders attend the Summit. Need an outcome or resolution.	Proceedings in Update 2013 just like Update 2009 had.
				Good Poor Dial!		Parts of California				
11	DWR will place proceedings of this summit in the Water Plan's Volume 4, the Reference Guide.			Fair	Fast progress toward implementation	Statewide	Proceedings included in 2009 Water Plan Update.	Need to hold a functional/productive Water Summit in 2013. Material could be included in other sections of the Water Plan not just hidden in the Appendix (i.e. back of the report).	May want to hold Tribal Water Summit earlier in the planning process (as opposed to a few months before DRAFT goes out) to incorporate more material & outcomes from the Tribal Water Summit within the Water Plan	Incorporate into Update 2013.
				Yes		Statewide				
				Good						
				Good	Slow progress toward implementation	Parts of California		Much of this is really unknown – evidence of agenda based science is becoming more evident.	Don't assume climate change is impacted by anthropogenic sources or can be mitigated by action changes.	

Objective 12. Improve Tribal Water-											
No.	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts	Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)
12	Indigenous communities should be involved in climate change adaptation actions that will directly impact their people, waterways, cultural resources, or lands.			Poor	No progress/regressing	None			Getting information to ask Tribes, then knowing what to do with it.	Track it by "region" participation? Seek out targeted Tribal representatives? Work with Tribal colleges – outreach through EPA RTOC as a start.	
				Good					Notification/reaching tribes with the info. Finding an easy way for them to provide the info.		
13	The Tribal Communication Committee, Tribal Summit Planning Team, or an equivalent Tribal forum should advise the 2013 Water Plan Steering Committee on ways to implement these related actions and the recommendations from the 2009 Tribal Water Summit, and should assist in the preparation of subsequent Tribal water summits.			Good	Slow progress toward implementation		Statewide	This is some of what TAC has been doing. Don't think any other group has addressed this.	Outcomes not being met. Funding for subsequent TWS. Water Plan may not have resources to implement.	Create a matrix to track this or have updated matrix on TWS webpage.	Need matrix like this one to track which recommendations have been implemented/addressed & when they are what was done. Status of the recommendations.
				Good	Slow progress toward implementation		Parts of California		Getting all Tribes to understand what means to each Tribe.		

Options:	Status:	Trend:	Area:
No Action	Poor	No progress/regressing	Parts of California
Authorized	Fair	Slow progress toward implementation	Most of California
Initiated	Good	Medium progress toward implementation	Statewide
Planned	Excellent	Fast progress toward implementation	
In Progress (early)		Unreportable	
In Progress (mid)	Unreportable		
In Progress (late)			

Objective 12. Improve Tribal Water-										
No.	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)	Future Reporting Metrics (to help craft Update 2013 strategic objectives and associated actions)

Completed

Objective 13: Ensure Equitable Distribution of Benefits									
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are the key barriers or constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable,
	Increase the participation of small and disadvantaged communities in State processes and programs to achieve fair and equitable distribution of benefits. Consider mitigation of impacts from the implementation of State government programs and policies to provide safe drinking water and wastewater treatment to all California communities and to ensure that these programs and policies address the most critical public health threats in disadvantaged communities.			Poor				Too often DACs lack the technical expertise necessary to apply for funding. There needs to be technical assistance for the small communities to be able to participate in state programs.	
	Increase disadvantaged community participation in planning.								
1	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.	On-going		Poor	Slow progress toward implementation	Statewide	DWR has funded 5 DAC pilot projects around the state, which are important first steps, but has not funded adequate technical assistance, outreach, planning grant or implementation grant funding to DACs. See other concerns listed in DAC IRWMP letter on barriers to DAC participation in IRWM planning efforts. Other agencies and programs have more actively funded technical assistance and DAC funding programs, but funding for DAC participation in planning through these processes has been extremely limited, and as a result there has not been effective and adequate planning efforts to address DAC water needs overall in virtually every region.	1) Governance: Lack of DAC representation within IRWMs, 2) Lack of technical assistance with project application preparation, combined with cost-prohibitive application and scoring requirements from DWR in the application guidelines, has resulted in most DAC projects not being included in implementation applications, 3) DWR's overall guidance undermines any incentive or leverage to effectively integrate DACs into the IRWMs, 4) Lack of effective outreach to DACs, time-consuming processes with often hostile or overly technical environments, and lack of experienced and perceived benefits to DACs has resulted in a continued marginalization of DACs in IRWMs, 5) IRWMs often exacerbate local power dynamics that perpetuate drinking water and other local water challenges for DACs, 6) Even when a DAC project is awarded, DWR's delayed reimbursement process makes the implementation extremely difficult for small DACs.	This is too broad and should be broken out over different agencies and programs to better evaluate how each program is achieving this goal. Also incorporate specific metrics - see next box.
							The Enchanted Heights Sewer project in the City of Perris is a good example of a coordinated effort. The City of Perris with two other local agencies partnered with CDPH and the SWRCB to build a \$15 million sewer project where the residents were directly involved in the project. This project can be used as a template for other communities.	Too often DACs lack the technical expertise necessary to apply for funding. There needs to be technical assistance for the small communities to be able to participate in state programs.	Encourage more agencies to partner with DACs to build much needed infrastructure. Encouragement can be in the form of bonus points if a proposed project includes DACs and has a direct benefit to DACs.

Objective 13: Ensure Equitable Distribution of Benefits									
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are the key barriers or constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable,
2	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.	On-going		Poor	Slow progress toward implementation	Statewide	The Governor's Drinking Water Stakeholder Group is a recent effort that has been developed to focus on a limited scope of DAC water issues and regions of the state. Although an important first step, it is not clear what ultimate changes will take place, and the model in	A DAC steering committee of EJ advocates should be formed to provide input to state agencies. This steering committee could provide input on the resources needed by DACs to resolve their problems. A technical assistance program need to	Break out different programs and evaluate independently to better understand progress. Include measurable metrics.
				Poor	Slow progress toward implementation	Statewide	The outreach needs to be meaningful and must be documented so it can be verified. Too often, it is a checkmark which is not verified. Technical assistance must be provided to DACs so they can apply for funding.	Effective inclusion of DACs in IRWMs is not adequately encouraged by DWR staff communications and scoring criteria, and many local IRWM groups see DACs as more competition for limited funding or a check box, rather than	Break out different programs and evaluate independently to better understand progress. Include measurable metrics.
Increase disadvantaged community access to funding.							OWOW 2.0 in the Santa Ana Watershed has a DAC/Tribal Pillar which includes the DACs/Tribes in the planning process	Most IRWMP consultants are not familiar with the DACs and do not have adequate staffing to interact with the DAC residents.	More training is needed to ensure that the agencies know how to interact with the residents of the DACs.
3	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.	On-going		Poor	Slow progress toward implementation	Statewide	The Governor's Drinking Water Stakeholder Group is a recent effort that has been developed to focus on a limited scope of DAC water issues and regions of the state. Although an important first step, it is not clear what ultimate changes will take place, and the model in that group has not just been limited to include DAC and EJ advocates, but also agricultural commodity groups and other water agencies that do not necessarily understand DAC issues and often have conflicting interests.	A DAC steering committee of EJ advocates should be formed to provide input to state agencies. This steering committee could provide input on the resources needed by DACs to resolve their problems. A technical assistance program need to be developed so that the resources, etc can be accessed by DACs.	Break out different programs and evaluate independently to better understand progress. Include measurable metrics.
							This is an important step. A DAC steering committee of EJ advocates should be formed to provide input to state agencies. CalEPA used to have such a program. This steering committee could provide input on the resources needed by DACs to resolve their problems. A technical assistance program need to be developed so that the resources, etc can be accessed by DACs.		
4	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.	On-going		Poor	Slow progress toward implementation	Statewide	The State Board and CDPH's drinking water programs have technical assistance programs and a list of stakeholdersthat includes significant DAC/EJ representatives for the DW SRF and CWSRF. Still, more regular review and input from DAC/EJ stakeholders is necessary to improve the effectiveness of the technical assistance programs for these agencies. DWR has no such program focused on DACs, nor have they solicited input from a DAC/EJ stakeholder group on development of a technical assistance program for DACs. Regional DWR offices also have not adequately developed technical assistance programs with local/regional DAC / EJ representatives. There have been 5 DAC pilot projects funded, which are in progress, which will hopefully provide some additional input and models into addressing DAC needs through IRWMs, although it is unclear how well these will address overall DAC/EJ technical assistance needs.	There is not regular review or requested input from DAC / EJ representatives in technical assistance program development or performance. When DAC and EJ groups provide input or inquiry into available technical assistance, resources are not readily made available and messages are often communicated that needs cannot be met.	Break out different programs and evaluate independently to better understand progress. Include measurable metrics.

Objective 13: Ensure Equitable Distribution of Benefits									
#	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend	On-going Efforts Area	Description of Activities (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are the key barriers or constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable,
	Collect and maintain data on environmental justice and disadvantaged communities.						This is an important first step in ensuring that there is data on EJ and DAC communities		
5	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 impact disadvantaged communities and vulnerable populations.	On-going					There needs to be more inter-agency coordination on monitoring and regulatory programs. Currently there does not seem to be much coordination among the various agencies. Perhaps a Task Force can be initiated by DWR outreach to DACs in the state and see what needs they have so to make agency coordination more integrated.		
				Poor	No progress/regressing	Statewide	DWR does not have adequate or readily available or accessible data on DAC needs, including groundwater water quality, drink water challenges, wastewater challenges, water affordability, water accessibility, etc. To our knowledge there is no effort on behalf of DWR to collect, manage or access any such data, nor are there efforts to actively integrate databases from other agencies, such as the State Water Board and CDPH, into	DWR has not prioritized or even included DAC and vulnerable community data and monitoring needs into its programs. Where it has made any attempt to even identify DACs, such as identification of DAC areas within IRWM regions, those maps have been so inadequate that they have both masked DACs in need, and undermined the importance of identification and engagement	Break out different programs and evaluate independently to better understand progress. Include measurable metrics.
	Develop Water Plan goals and objectives, in coordination with Integrated Regional Water Management partnerships, to resolve water-related public health issues in disadvantaged communities.						Currently there is little coordination with watershed management plans and DWR to identify and address public health issues in DACs. This collaboration can increase funding opportunities for DACs		
6	The Water Plan should include goals and objectives to ensure that all Californians have access to safe drinking water.	On-going					The DAC caucus is currently addressing this issue.		

No.	Related Actions/Sub-Actions	Time Frame	New Programs	On-going Efforts Status	On-going Efforts Trend
1	<p>Everyone involved in the California Water Plan should share information with California Native American Tribes about how Tribal water issues intersect with water law, planning, and management in California. Intersections include, among other things, water rights, human life and health, fisheries management, water diversions, water storage and conveyance, flood management, water use efficiency, desalination and climate change.</p>			Poor	Slow
				Poor	Slow
					Slow
					Slow

				Poor	Slow
				Poor	Slow
2	Everyone involved in the Water Plan should share information with California Native American Tribes about how the water planning, management, and projects of State, local, and federal governments, as well as water purveyors, impact and affect California Native American Tribes.			Poor	Slow
3	Everyone involved in the Water Plan should share information with California Native American Tribes about State funding that is available for water projects, how California Native American Tribes can apply for the funding, what obstacles they may face in accessing these funds, and how they can influence future funding programs.			Poor	Slow
				Poor	Slow
				Poor	Slow

4	California Native American Tribes should use the Water Plan as a stepping stone to ensure their representation and genuine participation in water planning processes throughout California, including those linking water to public health, housing, economic development, and environmental justice.			Poor	Slow
				Poor	Slow
				Poor	None
5	California Native American Tribes should build a foundation of knowledge and relationships for developing their own long-term water management plans, as well as participating genuinely in regional and local water planning, including Integrated Regional Water Management plans.	On-going	Needed	Colusa = good (Do/done both).	Slow
				Poor	Slow
				Poor to good	None
				Good	
Very good to poor					
6	California Native American Tribes should shape the content of the Water Plan through a variety of mechanisms, particularly the review of regional reports, resource management strategies, and other materials, and through Tribal and public meetings.		Needed	Poor	Slow
				Poor	Slow
				Good	Slow
				Poor	None
Excellent					

7	California Native American Tribes should build working relationships and partnerships with relevant State, local and, federal governments, and water purveyors that are based on mutual respect, fairness, honesty, responsibility, and mutual trust.	On-going	Needed	Colusa – good.	Slow
				Poor	Slow
				Good	Slow
				Poor	Slow
Excellent					
8	California Native American Tribes should educate State, local, and federal governments, and water purveyor executives and planners about the historical and ongoing relationships between California Native American Tribes and water, especially cultural and religious practices, including fishing.	On-going		Good	Slow
				Good	Slow
				Poor	Slow
				Should fair	
9	California Native American Tribes should propose and clarify how DWR works with California Native American Tribes in State water	On-going		Poor (not done as far as I know)	Slow
				Good	Slow
				Good	Medium
				Good	
10	California Native American Tribes should build a foundation of knowledge and relationships for hosting a Tribal Water Summit in 2009 that includes the			Excellent (done Nov. 2009)	Slow
				Good	
				Poor	
				Did!	
11	DWR will place proceedings of this summit in the Water Plan’s Volume 4, the			Fair	Yes
				Yes	
				Good	

12	Indigenous communities should be involved in climate change adaptation actions that will directly impact their people, waterways, cultural resources, or lands.			Good	Slow
				Poor	None
				We are!	
13	The Tribal Communication Committee, Tribal Summit Planning Team, or an equivalent Tribal forum should advise the 2013			Good	Slow
				Good	
				Yes	Slow

Options:	Status:	Trend:
No Action	Poor	No progress/regressing
Authorized	Fair	Slow progress toward implementation
Initiated	Good	Medium progress toward implementation
Planned	Excellent	Fast progress toward implementation
In Progress (early)		Unreportable
In Progress (mid)	Unreportable	
In Progress (late)		
Completed		

On-going Efforts Area	Description of Activities Federal, State, regional, local (What has been initiated, completed, implemented, in pursuit of this objective?)	Barriers or Constraints (What are some key constraints to achieving this objective?)	Recommendations for Update 2013 Objectives and Actions (How can this recommendation be more relevant, implementable, specific, and/or track able?)
Statewide	Everyone – is no one, everybody, anybody and only if you feel like it	State agencies are not always good at sharing information. State agencies don't always know how to deal with Tribes. Not getting info to right people within the Tribes.	Agencies need to develop better ways of sharing information with Tribes.
Most State		Passive requirement – mandates are preferable.	If input from tribes is valued and relevant to implementation to the water, perhaps wording could be changed from "should" to <u>shall</u> .
Part of State		Communication	Counties and municipalities don't invite State agencies or Tribes to the planning table.
Part of State		See purple NOTE on last page.	See *

Most State		Same as #1 above. Agencies are not always willing to share. Agencies may not be aware that Tribes will be impacted	Information to all Tribes. Indian representative from DWR to Tribes.
Part of State		Passive requirement – mandates are preferable.	
Part of State		Indian representative from DWR to Tribes.	
Most State		State agencies are not always good at sharing information. State agencies don't always know how to deal with Tribes. Not getting info to right people within the Tribes.	. Educate Tribes on what funding is available.
Part of State		Passive requirement – mandates are preferable.	
Some agencies (i.e. State Water Resources Control Board)		CA Tribal representative in DWR to contact Tribes with information	

Most State	Like stepping on a snake, a mushy, slimy, stepping stone.	Not all Tribes participate in Water Plan. Proximity of Tribe to Water Plan meeting. Lack of Tribal staff to attend meeting. Lack of funding to travel.	Public agencies should follow the recommendation above, but tribes have sovereignty and may choose or not to follow should, may or shall!
Part of State		Some Tribes don't have moneys to send representative to Tribal AC meetings.	
None. Too new. Wait and see Tribal Water Summit			
Regional	BIA has funding available to develop Water Management Plans. Colusa participates in NSV IRWM as a member of the Technical Advisory Committee.	Funding and staff to perform duties.	Examples of Water Management Plans or develop some recommended criteria for Tribes to follow and develop their own plans. DWR can initiate contact/introduction of Tribes to IRWM group & let Tribes and IRWM groups know that Tribes are eligible for funding.
Most State	Loaded comment.	Money's need to ensure a person to hold for Tribe, some to stay on top state	Public agencies should follow the recommendation above,
Part of State			
Part of State			
Regional	The July 2012 TAC meeting initiated this however there was low Tribal attendance & little input from the Southern CA Tribes. Some Regional Reports are good like North Coast other are poor like Sac River. Need to expand content of poor ones.	Tribes willing to participate and provide input.	g was a step in a the right
Most State	Doesn't ensure a positive outcome.	How to use what is in these	
Most of State			
Not happening yet			

Part of State	IRWM meetings, IRWM outreach DWR regional meetings.	Government to Government Consultation. Lack of agency staff training in dealing with Tribes. Agencies don't know how to deal with Tribes. Agencies need to be willing to establish working relationships. Tribes could initiate meetings too.	Include State Agency or Local Agency contacts or Tribal liaisons within each agency within the regional reports or somewhere in the water plan. Tribes could always initiate the process by building the relationship with the agency or setup meetings.
Part of State	Very slow progress!	Have resource to hold relations.	
Part of State	They don't listen – history starts after 1850.	This may be tough since Tribes may not want to share this info or if they do, they may want to share it on an individual basis w/an agency or multiple agencies. May be more efficient if state agency gave training about Tribal importance of water & have speakers talk generally about the subject.	DWR or State Agency could initiate the process or ask for people/Tribes to volunteer to speak at training for agency staff personnel.
Part of State			With water summit and planning summit with local, state & federal
Statewide.	Unknown.	Need input from all Tribes.	DWR could have an outreach meeting to discuss this or discuss at Tribal AC meeting.
Most of state	Not clear what you want?	Difficult to obtain.	
Part of State			
Most of State			
Statewide	Water Summit was held on Nov. 2009.	Completed.	Track outcome of 2013 Update. Have Agency and Tribal leaders attend the Summit. Need an outcome or resolution.
Part of State			
Statewide	Proceedings included in 2009 Water Plan Update.	Need to hold a functional/productive Water Summit in 2013.	May want to hold Tribal Water Summit earlier in the planning process (as
Yes			

Part of State		Much of this is really unknown – evidence of agenda based science is becoming more evident.	Don't assume climate change is impacted by anthropogenic sources or can be mitigated by action changes.
None		Getting information to ask Tribes, then knowing what to do with it.	Track it by "region" participation? Seek out targeted Tribal representatives? Work with Tribal colleges – outreach through EPA RTOC as a start.
		Notification/reaching tribes with the info. Finding an easy way for them to provide the info.	
Statewide	This is some of what TAC has been doing. Don't think any other group has addressed this.	Outcomes not being met. Funding for subsequent	Create a matrix to track this or have updated matrix on TWS webpage.
Part of State		Getting all Tribes to understand what means to each Tribe.	

Area:

Parts of California

Most of California

Statewide

<p>Future Reporting Metrics</p> <p>(to help craft Update 2013 strategic objectives and associated actions)</p>
<p>List of ways agencies have distributed information to Tribes.</p>
<p>Check list or documentation or tribal content.</p>
<p>Penalize counties financially when they don't use the Plan.</p>

List of which activities affect/impact which Tribes or say all Tribes affected.

List of Tribes who have received State funding & through which programs.

List of Tribes who participated in 2009. List of Tribes participating in 2013 (i.e. new Tribes). List of Tribes participating in other mediums or planning meetings or caucuses.

List of Tribes who participated in 2009. List of Tribes participating in 2013 (i.e. new Tribes). List of Tribes participating in other mediums or planning meetings or caucuses.

Contributed or reviewed or comm

It would be tough to track which agencies are meeting with specific Tribes. Maybe just make an acknowledgement of which agencies are meeting with Tribes & how many Tribes are participating in meetings without including specific names of Tribes. Wouldn't want this to turn into something where agencies are just checking a box off if a Tribe attended/participated.

Track trainings or # of meetings agencies have had w/Tribes. May be hard to track and wouldn't want it to turn into a check off the box kind of thing.

Report on meeting and what was suggested.

Proceedings in Update 2013 just like Update 2009 had.

Summit deliverables outcomes.

Incorporate into Update 2013.

Need matrix like this one to track which recommendations have been implemented/addressed & when they are what was done.

Appendix B

Additional Scorecards/Reports for Thirteen Objectives from California Water Plan Update 2009

Additional Scorecards/Reports for Thirteen Objectives from California Water Plan Update 2009

Objective 1: IRWM

a. Climate Change and Integrated Water Management in California: A Preliminary Assessment of Regional Approaches

http://www.water.ca.gov/climatechange/docs/IRWM_CCReport_Final_June2012_EConrad_UCBerkeley.pdf (See pages 10-12.)

b. California's Integrated Regional Water Management: Setting the Foundation for Regional Integrated Planning

<http://www.awra.org/committees/AWRA-Case-Studies-IWRM.pdf> (See pages 17-24.)

Objective 2: Water Efficiency

a. P.O.W.E.R (Public Officials for Water and Environmental Reform) Conservation Scorecard

<http://www.cawaterpolicy.us/scorecard.php>

b. American Society of Civil Engineers: 2012 Report Card for California's Infrastructure

<http://www.infrastructurereportcard.org/a/#p/state-facts/california>

Objective 3: Management of Multiple Supplies

a. California Urban Water Agencies' Water Supply Reliability Report

http://www.cuwa.org/pubs/CUWA_WaterSupplyReliability.pdf

b. Pipe Dreams: Water Supply Pipeline Projects in the West (Natural Resources Defense Council)

<http://www.nrdc.org/water/management/files/Water-Pipelines-report.pdf>

Objective 4: Water Quality

a. State Clean Water Act Status Report

http://scorecard.goodguide.com/env-releases/water/cwa-state.tcl?fips_state_code=06#ranking

b. Ecological Condition Assessments of California's Perennial Wadeable Streams: Highlights from the Surface Water Ambient Monitoring Program's Perennial Streams Assessment (PSA) (2000-2007)

http://www.swrcb.ca.gov/water_issues/programs/swamp/docs/reports/psa_smmry_rpt.pdf

c. Heal the Bay: Beach Report Card

<http://brc.healthebay.org/>

d. California Water Quality Monitoring Council, Data Management Workgroup, 2012 Progress Report
http://www.waterboards.ca.gov/mywaterquality/monitoring_council/meetings/2013mar/data2012.pdf

Objective 5: Environmental Stewardship

a. The Bay Institute Ecological Scorecards
<http://www.bay.org/publications/%C2%ADecological-scorecards>

Objective 6: Integrated Flood Management

- a. California's Flood Future Highlights (Executive Summary)
http://www.water.ca.gov/sfmp/resources/PRD_Highlights_View3-20-13.pdf
- b. Regional Skew for California, and Flood Frequency for Selected Sites in the Sacramento-San Joaquin River Basin, Based on Data through Water Year 2006
<http://pubs.usgs.gov/sir/2010/5260/>
- c. Methods for Determining Magnitude and Frequency of Floods in California, Based on Data through Water Year 2006
<http://pubs.usgs.gov/sir/2012/5113/>

Objective 7: Manage the California Delta

- a. The Bay Delta Ecological Scorecard Conceptual Approach and example Indicators
<http://www.bay.org/assets/SCPoster.pdf>
- b. The Delta Vision Foundation: This appendix describes the status and progress of the 85 actions recommended in the *Delta Vision Strategic Plan*
http://www.deltavisionfoundation.org/pdfs/Appendix_B_Actions_Status_by_Element_6-4-12.pdf

Objective 8: Prevention, Response, and Recovery Plans

- a. Methods for Determining Magnitude and Frequency of Floods in California, Based on Data through Water Year 2006
<http://pubs.usgs.gov/sir/2012/5113/>
- b. State Emergency Plan
<http://www.calema.ca.gov/PlanningandPreparedness/Documents/SEP%207-01-09%20covrev.pdf>

Objective 9: Energy Consumption of Water Systems

a. California's Water — Energy Relationship

<http://www.energy.ca.gov/2005publications/CEC-700-2005-011/CEC-700-2005-011-SF.PDF>

b. Energy Down the Drain: The Hidden Costs of California's Water Supply

<http://www.nrdc.org/water/conservation/edrain/contents.asp>

c. Water-Energy Connection

<http://www.epa.gov/region9/waterinfrastructure/waterenergy.html>

Objective 10: Data & Analysis for Decision-making

a. Managing California's Water, From Conflict to Reconciliation

http://www.ppic.org/content/pubs/report/r_211ehr.pdf

b. Managing an Uncertain Future: Climate Change Adaptation Strategies for California's Water

http://www.scc.ca.gov/webmaster/ftp/pdf/climate_change/water_strategies.pdf

c. California Water Myths

http://www.ppic.org/content/pubs/report/R_1209EHR.pdf

Objective 11: Water Technology

The Objective 9 reports are applicable to this one.

Objective 12: Tribal Relations/Management

The Objective 13 reports are applicable to this one.

Objective 13: Distribution of Benefits

a. California Communities Environmental Health Screening Tool

<http://oehha.ca.gov/ej/pdf/042313CalEnviroScreen1.pdf>

b. Thirsty for Justice: A People's Blueprint for California Water

http://www.ejcw.org/our_work/blueprint.html