CALIFORNIA

Water Boards

STATE WATER RESOURCES CONTROL BOARD

REGIONAL WATER QUALITY CONTROL BOARDS

Strategic Plan Update 2008-2012

D R A F T

Draft 7/30/08

Vision

A sustainable California made possible by clean water and water availability for both human uses and environmental resource protection.

Mission

To preserve, enhance, and restore the quality of California's water resources, and ensure their proper allocation and efficient use, for the benefit of present and future generations.

California Water Boards' Strategic Plan Update – 2008-2012

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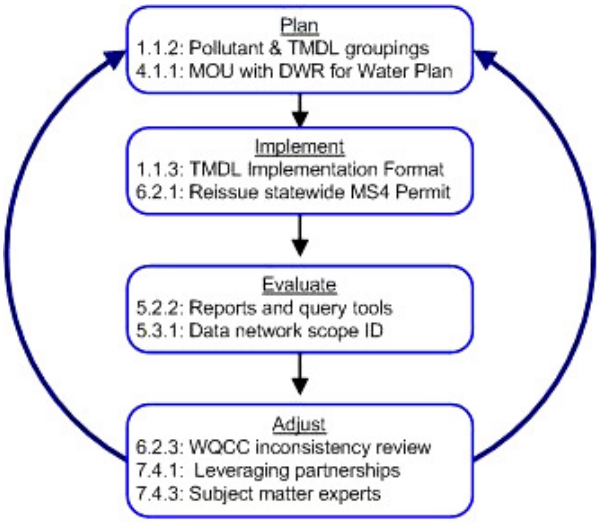
California Water Boards' Strategic Plan Update – 2008-2012

Introduction

The State Water Resources Control Board and the nine Regional Water Quality Control Boards (Water Boards) have broad responsibilities to protect surface and ground water quality and balance competing demands on our water resources through programs that allocate water rights, adjudicate water right disputes, develop statewide and regional water quality control plans, and establish and implement water quality standards. The complexity of the Water Boards' programs is reflected in the sheer number of mandated programs and the regional variation that exists throughout the State. Water Board staff find themselves working on a wide range of concerns, such as the development of standards to protect water bodies, the approval of timber harvest plans, the approval of allowable corrective action reimbursements, and certifying whether or not hydropower plants meet water quality standards as they seek federal re-licensing. At a strategic level, the Water Boards are establishing the future direction for broad program areas through actions such as the Policy for Maintaining Instream Flows in Northern California Coastal Streams, the Strategic Workplan for the San Francisco Bay/Sacramento-San Joaquin Delta, the resolution for Promoting Strategies to Assist Small and/or Disadvantaged Communities with Wastewater Needs, the Water Recycling Policy, and key water-related elements of the Air Resources Board's Climate Change Draft Scoping Plan. These are just a small number of the varied responsibilities of the Water Boards. This Strategic Plan Update 2008-2012 (Update) highlights some key actions that we will be taking in addition to all of our ongoing program responsibilities. The key actions are described throughout the plan and listed in Appendix 1.

Many changes to the environmental regulatory landscape have occurred since publication of the Water Boards' 2001 Strategic Plan. These include the trends described below, as well as particular issues related to those trends (such as the crisis in the Delta and implementation of the California Global Warming Act of 2006). Our ability to respond effectively to these and many other pressing issues is challenged by the fragmented nature of regulatory oversight affecting water resources in general in the State and of the governance structure specifically within the Water Boards.



These actions exemplify our efforts to reduce fragmentation and leverage resources. These are actions that maximize efficiencies, gained through standardizing documents, facilitating consistent implementation, working with others to maximize the benefits from monitoring data and using teams, partners and internal management groups (WQCC, MCC Council of Chairs and roundtables) to continuously adjust and improve our effectiveness .

Actions to address fragmentation of effort are described in this Update (colored green in Appendix 1). This Update institutionalizes processes to continuously evaluate consistency and the effectiveness of program implementation across the Water Boards. Our actions to

consolidate activities within watersheds vertically integrates the planning, implementation, evaluation, and adjustment functions of our water quality programs to eliminate fragmented management approaches. Deploying teams to concentrate on specific areas of needed development or reform horizontally integrates our efforts across the State. The creation of the Bay-Delta, enforcement, wetlands, and water quality data teams further implement this horizontal approach by drawing on similar expertise across the Water Boards to reduce fragmentation of effort. The Water Boards are also committed to continued participation in structural reform efforts to reduce fragmentation in decision-making.

Our success is further challenged by resource constraints. In a State with a land area of 159,000 square miles and water coverage of an additional 7800 square miles, the Water Boards must learn to be more creative in how we deploy our limited resources. If we assume that every person, no matter what their responsibilities, working for the Water Boards is responsible for protecting water quality for a specific geographic area of the State, each person would be responsible for protecting approximately 111 square miles from discharges to both land and water. We emphasize actions in this Update that leverage our resources (colored blue in Appendix 1) internally and externally throughout our environmental and planning priorities, and the organizational strategies to support them.

Most of the actions in the Update will be implemented in a watershed framework, which stakeholders identified as the most effective approach to manage and protect the State's water resources. Healthy watersheds, or drainage basins, that provide clean and plentiful surface water and groundwater, and support healthy riparian and wetland habitat, are essential to support the State's resources and economic future. A watershed approach is hydrologically-focused, recognizes the degree to which groundwater and surface water bodies are connected physically, recognizes the linkages between water quantity and water quality, and requires a comprehensive, long-term approach to water resources management that takes system interactions into account. State efforts alone cannot support a comprehensive watershed protection approach. Success depends on the integration of State, federal, and local programs, most importantly local land use decisions made by local officials, stakeholder involvement, and the actions of millions of individuals, which, when taken together, can make enormous impacts.

Our efforts will be challenged in the coming years by some trends that we can influence, and others that we cannot. Among them are the following:

1. Climate Change – It is widely recognized that changes in temperature and precipitation patterns will impact water availability and quality. Higher air temperatures lead to increases in water demand and changes in hydrologic conditions, resulting in drought and greater threats of wildfires, and reduced snow pack, earlier snowmelt, and a rise in sea level that may cause more seawater intrusion. Higher water temperatures reduce dissolved oxygen levels, which can have an adverse effect on aquatic life. Where river and lake levels fall, there will be less water for dilution of pollutants (i.e.,

reduced assimilative capacity). Increased frequency and intensity of rainfall will produce more pollution and sedimentation due to runoff. In addition, more frequent and intense rainfall may overwhelm pollution control facilities that have been designed to handle sewage and stormwater runoff under assumptions anchored in historical rainfall patterns.

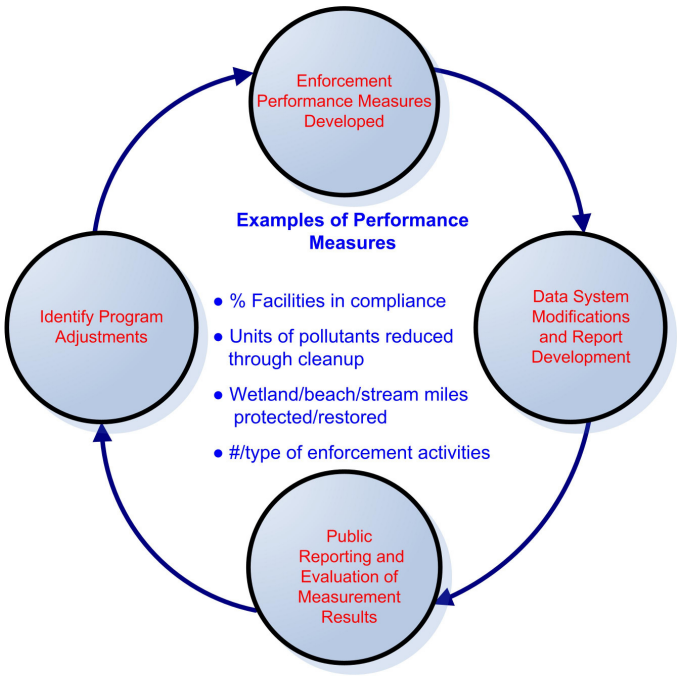
2. Demographic Trends – California continues to experience significant population growth, particularly in the Inland Empire and Central Valley. This growth places greater demands on groundwater supplies, impacts groundwater quality, and creates challenges for dealing with new or increased wastewater discharges, often to environments having limited assimilative capacity. Population growth also drives the need for new infrastructure or the updating of existing infrastructure. This need is particularly critical for small communities with very limited resources.

3. Decentralized Regulatory Framework – Protecting water resources has traditionally been addressed through separate programs and agencies. Many of the responsibilities involved, however, can only be met by examining the entire watershed, including the way that lands are managed and how they affect receiving waters. The absence of a shared watershed approach to decision-making can result in actions, within and among agencies, that do not address priority problems and their causes.

4. Aging Infrastructure – With a significant decline in funding to support the construction of publicly-owned sewage treatment works, many facilities around the State are either failing or cannot provide adequate treatment of domestic and industrial waste streams, let alone the management of non-conventional pollutants that may require advanced treatment levels. The U.S. Environmental Protection Agency's Clean Watersheds Needs Survey 2004 (released in January 2008) estimated California's wastewater infrastructure needs at $18.2 billion. Our aging sewer collection systems will eventually lead to failing sewer lines, reducing the ability of treatment facilities to adequately treat wastes and, more importantly, may result in raw sewage bypassing the treatment processes and/or overflowing the collection lines during peak flow and/or storm events. As water supply concerns increase throughout the State, there will be increased demand for water reuse and recycling to reduce the consumption of fresh water supply for non-domestic use. However, a significant volume of potential recycled water supply will not be available to our communities without improvements to our wastewater infrastructure to provide advanced treatment to wastewater.

5. Education – Over time, water management has become increasingly technical and complex. Some of the State's biggest water quality problems come from pollutants generated from everyday community activities. Public awareness of water management issues and their complexities can encourage changes in people's behaviors to improve and protect water quality. Conducting outreach and building partnerships to promote grass roots efforts towards cleaner water will increase public awareness.

Considering these trends and challenges, this Update is designed to support functioning, sustainable watersheds where progress can be measured through our basic environmental goals of healthy surface waters and groundwaters, and increasing reliance upon sustainable water supplies. Crafting performance measures is difficult, but is already well underway. For example, our water quality enforcement team has already developed performance measures that will be refined over time. This Update continues the transition of Water Boards to becoming a performance-based organization where clear objectives, specific measurable goals, and targets for improved performance are established.



This diagram represents the classic ongoing business cycle of plan, implement, evaluate and adjust. Using this example for water quality enforcement, we can describe how the Water Boards are: 1) identifying the most important water quality problems, and developing measurable targets and measurement systems; 2) integrating these measurement systems into work processes; 3) evaluating and reporting progress; and 4) adjusting targets as necessary.

Organizational Overview

Together, the State Water Resources Control Board (State Water Board) and the Regional Water Quality Control Boards (Regional Water Boards) are responsible for ensuring the protection of California's water resources. In recognition that California's water pollution problems are regional and are influenced by factors such as climate, topography, geology, hydrology, population, and municipal, recreational, agricultural, and industrial development, all of which vary from region to region, the nine Regional Water Boards are based on watersheds, or hydrologic areas. They are: (1) North Coast, (2) San Francisco Bay, (3) Central Coast, (4) Los Angeles, (5) Central Valley, (6) Lahontan, (7) Colorado River Basin, (8) Santa Ana, and (9) San Diego. Each Regional Water Board has nine part-time members, representing water supply, irrigated agriculture, industry, and municipal and county government for that region. Regional Water Board members are appointed to four-year terms by the Governor and must be confirmed by the Senate. Collectively, the Regional Water Boards have over 900 staff members located in 12 regional and satellite offices throughout the State.

Each Regional Water Board is charged with conducting activities and making critical water quality decisions for the protection of the waters within its region. These activities include developing water quality control plans (basin plans) for their watersheds that establish water quality standards and implementation strategies, issuing waste discharge requirements (permits) based on the basin plans and State Water Board plans and policies, monitoring water quality, determining compliance with requirements, and taking appropriate enforcement actions against violators.

The Regional Water Boards work in coordination with the State Water Board, whose office is located in the State's capitol. The State Water Board has five full-time salaried members, each filling a specialty position. Like the Regional Water Board members, each State Water Board member is appointed to a four-year term by the Governor and must be confirmed by the Senate. The State Water Board ensures the protection of water quality by setting statewide policy, coordinating and supporting Regional Water Board efforts, and reviewing petitions that contest Regional Water Board actions. The State Water Board is also solely responsible for administering water rights. Today, the State Water Board, with nearly 700 staff members, is organized into divisions and offices that address water quality, water rights, enforcement, financial assistance, administrative support, and various other functions that support the State and Regional Water Boards.

Where water quality issues cross Regional Water Board boundaries or have significant statewide application, the State Water Board may develop and adopt water quality control plans (such as the Ocean Plan) and general permits. The State Water Board devotes its resources primarily to the development and adoption of statewide policies, plans, and standards; approval of regional basin plans; issuance of general permits; administration of financial assistance programs (such as for water pollution control or cleanup), enforcement, and the allocation of water rights and adjudication of water right disputes. The joint authority of water allocation and water quality protection enables the State Water Board to comprehensively address protection of California's waters, while

the Regional Water Boards serve as the frontline for State and federal water pollution control efforts.

The State Water Board works in coordination with the Regional Water Boards to protect water quality, focusing on several major areas such as: stormwater, wastewater treatment, water quality monitoring, wetlands protection, ocean protection, environmental education, environmental justice, contaminated sites cleanup, low-impact development, and enforcement. This Update establishes priority areas of focus for the organizations of the State and Regional Water Boards over the next five years.

Vision

A sustainable California made possible by clean water and water availability for both human uses and environmental resource protection.

Mission

To preserve, enhance, and restore the quality of California's water resources, and ensure their proper allocation and efficient use, for the benefit of present and future generations.

Principles and Values

Protection: We conduct analyses, make decisions, and take actions that ensure the protection, restoration, and enhancement of the public trust resources and beneficial uses of California's waters.

Sustainability: We commit to enhancing and encouraging sustainability within the administration of Water Board programs and activities by promoting water management strategies such as low impact development, considering the impacts of climate change in our decision-making, and coordinating with governmental, non-profit, and private industry and business partners to further strategies for sustainability.

Integrity: We strive to earn the trust and respect of those we serve through commitment to truth, transparency, accountability, sound science in decision-making, fairness, and environmental justice.

Professionalism: We provide training and professional development opportunities for our staff and Board Members, support a work environment in which a highly capable staff can be innovative, and actively recruit, hire, and retain employees that further the Water Boards' mission.

Leadership: We strive to be a national and international leader in innovative approaches to water resource protection.

Collaboration: We share information, leverage funding, and seek mutual solutions, including integrated approaches, to complex water challenges through collaboration, cooperation, data-sharing, and partnerships within the Water Boards and with tribes, other agencies and jurisdictions, stakeholders, and other members of the public.

Service: We serve the public as a whole through timely, efficient, and results-oriented regulatory approaches and processes, and providing assistance and support, including education and outreach.

Education/Outreach: We promote knowledge and awareness of the value of water resources, the importance of water rights and water quality protection, public engagement in the protection of water resources, and an understanding of the mission of the Water Boards.

Desired Conditions

The Water Boards' and Board organizations are effective, efficient, innovative, responsive, and transparent.

Surface waters are protected for drinking, fishing, swimming, and supporting healthy ecosystems and other beneficial uses, and groundwater is protected for drinking and other beneficial uses.

Water resources are fairly and equitably used and allocated consistent with public trust responsibilities, consideration of water quality and quantity, and the protection of beneficial uses.

The Water Boards, other agencies, organizations, stakeholders, and the public understand and contribute to each other's water resource protection efforts through collaboration, education, and outreach.

Water quality is comprehensively monitored to plan, carry out, and evaluate protection and restoration efforts.

ENVIRONMENTAL PRIORITIES

The Water Boards' environmental priorities focus on strategies for achieving environmental outcomes associated with protecting the State's surface waters and groundwaters, and promoting sustainable water supplies. While the three environmental priorities are presented separately, we recognize the interrelationships between groundwaters and surface waters, and between water quality and quantity, and endeavor to address these priorities within a watershed framework. We also recognize that the goals, objectives, and actions presented may only partially achieve our environmental priorities due to the long-term and evolving nature of issues and programs. We will review these goals, objectives, and actions, and revise them as appropriate, in future updates of the Strategic Plan.

PRIORITY 1. PROTECT AND RESTORE SURFACE WATER QUALITY

> Implement strategies to fully support the beneficial uses for all 2006-listed water bodies by 2030.

Issue Statement

Issue Summary

The surface waters of the State, which include streams, lakes, wetlands, and the ocean, support beneficial uses such as municipal supply for drinking, agricultural supply for crop irrigation, habitat for aquatic life and wildlife, and recreation. For a surface water body to support one or more beneficial uses, the water must be of sufficient quantity and meet established quality standards for pollutants. Pollutants can be from a single, discrete source (point source), such as a pipe or culvert, or be carried in diffuse runoff that covers a wide area (non-point source). Under the federal Clean Water Act (CWA), the Water Boards are required to identify water bodies that do not meet water quality standards and bring them into compliance. For these impaired waters, which the Water Boards identify on a CWA Section 303(d) list, the Water Boards must establish and implement a Total Maximum Daily Load (TMDL)[1]. A TMDL specifies the pollutant loading that a water body can receive and still meet water quality standards, allocates the pollutant loading that may be contributed by each source, and identifies strategies to return the impaired water body to compliance with standards. Compliance may be achieved by implementing the TMDL through existing Water Board regulatory programs, or by alternative strategies such as modifying inappropriate or outdated standards, or certifying local remediation programs.

Water bodies may be impaired from various sources. For example, discharges from municipal and industrial facilities can impact water bodies, but compared to other sources, pollution from these point source discharges have been largely controlled. Discharges from agricultural lands, including irrigation return flow, flows from tile drains,

[1] See Appendix 3 for a status summary of TMDLs (July 2007).

and storm water runoff, can affect water quality by transporting pollutants, including pesticides, sediment, nutrients, salts, pathogens, and heavy metals, from cultivated fields into surface waters. Groundwaters, in turn, have been affected by pesticide, nitrate, and salt contamination. Stormwater flows over urban landscapes, as well as dry-weather flows from urban areas, also constitute a significant source of pollutants that contribute to water quality degradation in the State. These flows carry pollutants downstream, which often end up on the beaches and in coastal waters. For example, thermoplastic resin pellets (commonly called "nurdles"), a relatively recent industrial pollutant, are a significant source of beach and ocean pollution, and are ingested by marine life.

Some water body impairments are due entirely or in part to a lack of adequate flows. The State Water Board's water rights system allows water to be diverted from a water source and be put to beneficial, non-wasteful, and reasonable use. Before issuing a water right, the State Water Board must find that "unappropriated" (unclaimed) water is available to supply the applicant, considering the water flows needed to remain in the stream (instream flows) for the protection of other beneficial uses, including municipal supply, agricultural supply, and fish and wildlife habitat. Water right permits and licenses include terms that not only limit how much and during which season water can be diverted, but also require minimum flows to bypass the point of diversion to protect fish and wildlife habitat. A significant challenge for the State in ensuring that water is fairly and equitably allocated and used is that existing claimed water rights, in combination with current permitted water appropriations, amount to at least five times California's average annual surface water supply[2]. Given that disparity, the problem facing the State is how to equitably balance the needs of water rights holders and instream flow requirements.

Why this issue is so critical to the Water Boards and to our stakeholders

As California's population continues to grow and climate change impacts continue to occur, greater demands will be made on the available water supply, and threats to water quality from known and emerging pollutants will increase, potentially causing further impairments to the waters and their uses. When waters are impaired, the State is deprived of critical water supplies that it needs to support its growing population and vital economy. Shortages of water that supports all of its beneficial uses can have broad effects on a wide variety of stakeholders. Implementing a TMDL, which considers all sources and causes of impairment, and allocates responsibility for taking corrective measures, can have far reaching effects on a watershed and the involved stakeholders.

Water quality impairments are especially critical as droughts and expected increases in climate change impacts further limit water supplies. Changes in hydrology, such as reduced snow pack and earlier snowmelt, result in less natural water storage, and more difficulties managing reservoirs and reservoir releases to maintain river temperatures that are cool enough for anadromous fish. Moreover, lower groundwater tables

[2] See Appendix 4 for information on distribution of surface water rights by authorized diversion amount (June 2007).

resulting from less recharge and/or more extractions can reduce or eliminate base flow in creeks, severely affecting aquatic habitat. The condition of California's fish populations reveals the need for action. Currently, 34 fish species are listed as threatened or endangered in California, including coastal and Central Valley runs of steelhead, spring-run and winter-run Central Valley Chinook salmon, a central coast population of coho salmon, Delta smelt, three species from the Colorado River, and several species from the Klamath Basin and southern deserts. Consequently, to ensure a reliable water supply and adequate aquatic habitat, California must manage water in ways that protect water supply, and protect and restore the environment.

Long-range approaches to managing the problem

Ideally, all pollutants in a watershed would be addressed in a single TMDL and program of implementation. With this approach, a single process within an integrated watershed approach would inform the regulated community of their load reduction responsibilities for all pollutants at one time, and more effectively restore impaired water bodies.

Where significant pollutant load reductions may not be adequate to achieve water quality standards because the water flows are too low (i.e., there is insufficient assimilative capacity), impairment may be best addressed by considering how much water is available. The nexus between water supply and water quality must be recognized when managing water and controlling pollution. For example, water right terms that provide additional stream flows for fish and wildlife usually improve water quality. Likewise, projects that detain stormwater and non-point source runoff help protect stream water quality, but also decrease local stream flows. Achievement of instream flow requirements will require implementation and enforcement.

The State Water Board strives to use a collaborative watershed management approach to satisfy competing environmental, land use, and water use interests by taking advantage of opportunities within a watershed, such as joint development of local solutions to watershed-specific problems, cost sharing, and coordination of diversions. For example, instead of the State Water Board and other regulatory agencies establishing and enforcing stream flow standards through regulation of individual diversions, water users could agree to collectively manage their diversion schedules so that needed stream flows are maintained at particular points in a stream. They could also share costs associated with developing data and monitoring programs, and work together on projects to improve habitat at the most significant locations in the watershed. Extensive use of such approaches using coordination and collaboration, however, is currently beyond the Water Boards' resources.

To enhance successful surface water protection and restoration efforts, every water quality and water right violation should be met with a meaningful response from the Water Boards and all significant violations should be addressed by formal enforcement action. Appropriate enforcement discourages violation of laws and instills public confidence. Within the Water Boards' regulatory framework, enforcement actions not only help to protect public health and the environment, but also help to create an "even

playing field", ensuring that the regulated community and other water users who comply with the law are not placed at a competitive disadvantage by those who do not.

What the Water Boards can realistically do in the next five years

The complex nature of TMDL development and limited staff resources currently prevent the Water Boards from implementing a single TMDL solution. In addition, with TMDL adoptions already addressing one-third of the 2002 Section 303(d) listings (a listing is defined as a water body-pollutant pair, and therefore, a water body may have more than one listing), and efforts underway to address the remaining listings (updated in a 2006 list), a new challenge is vigorous TMDL implementation. While the science behind each pollutant may be unique, and the collection and evaluation of data to arrive at allocations for a myriad of sources is very complex, an integrated approach to TMDL implementation may be much more manageable. The Water Boards will continue to achieve economies of scale and scope by developing master implementation plans that accommodate a wide range of strategies for reducing loads (similar plans have already been developed in some regions). Development of these plans will be based on concepts that include implementation measures common to many TMDLs, methods to address multiple pollutants in a single watershed, and template components that can be used to address closely linked pollutants across multiple watersheds. Additionally, the Water Boards will improve coordination and integration of TMDL implementation with other regulatory programs, such as the NPDES[3]-wastewater, NPDES-stormwater, and site cleanup programs. Continuing to enhance more timely and effective use of our regulatory programs may result in a significant improvement in water quality, potentially eliminating the need to develop a TMDL. The Water Boards will target priority watersheds for TMDL adoption and implementation, taking into consideration court directives regarding TMDL development for specific water bodies.

Among the State's priority watersheds is the Klamath Basin, which has several water bodies that are impaired due to problems with temperature, dissolved oxygen, nutrients, sediment, and/or pH. These water bodies were added to the 303(d) list based not only on water quality data specific to the water bodies, but also information on the status of the fisheries in these watersheds. Given that these waters cross state boundaries, the North Coast Regional Water Board and Oregon's Department of Environmental Quality, with the support of the U.S. Environmental Protection Agency (USEPA) Regions 9 and 10, have agreed to jointly develop TMDLs.

There are numerous existing and potential impacts to beneficial uses of water in the San Francisco Bay-Sacramento/San Joaquin Delta (Bay-Delta) that require action. Many of these actions are being, or will be, implemented by the Water Boards. For example, the Water Boards have authority over water pollution and water project operational requirements, which are known to impact fish and other aquatic organisms in the Bay-Delta. To better address the implementation of coordinated activities in the Bay-Delta, the State Water Board adopted Resolution 2007-0079 on December 4, 2007;

[3] NPDES - National Pollutant Discharge Elimination System (federal permitting program delegated to the State under the Clean Water Act).

similar resolutions were adopted by the San Francisco Bay and Central Valley regional water boards. In those resolutions, the Water Boards committed to ensure the protection of beneficial uses of water, and to the equitable administration of water rights in the Bay-Delta and its tributaries. In coordination with existing Bay-Delta planning efforts, the Water Boards will ensure that impairments to beneficial uses are identified and comprehensively addressed while balancing the need for water quality and water supply reliability.

The Water Boards are major contributors to improved beach and ocean water quality through the Clean Beaches Initiative and implementation of stronger rules in the Ocean Plan for areas of special biological significance. On multi-jurisdictional priorities, such as reduction and prevention of ocean trash, and low impact development (LID) to reduce stormwater pollution, the Water Boards will use their permitting and enforcement authority in cooperation with other agencies and organizations, including the Ocean Protection Council. For example, AB 258 requires all plastic product manufacturers to use best management practices, such as proper storage and clean-up procedures to prevent pellet (nurdle) spillage. The State Water Board will be responsible for increased regulation and monitoring of companies that handle and use nurdles. Over the next five years, the Water Boards' ocean and coastal goals will be to eliminate summer (dry weather) beach closures and postings, set in motion actions to reduce wet weather beach postings, and reduce coastal debris and trash tonnage.

Methods of reducing or mitigating stormwater/urban runoff need refinement to promote infrastructures that sustain water quality protection. The Central Coast Regional Water Board is leading our efforts to establish a center that will provide interdisciplinary technical expertise in support of low impact and other sustainable development techniques. Impediments associated with implementation of LID and other sustainable development techniques will be evaluated in collaboration with the State Water Board's Stormwater Advisory Task Force, the California Stormwater Quality Association, and others. In addition, the Water Boards will develop a statewide stormwater monitoring strategy that includes posting data on the Internet.

To assess and address environmental impacts that result from agricultural discharges, the Regional Water Boards are using proactive solutions, such as a pilot project that assigns roles for implementing the waivers to County Agricultural Commissioners. A Memorandum of Understanding signed by staff from the State Water Board, the Central Valley Regional Water Board, the Department of Pesticide Regulation, and County Agricultural Commissioners describes these roles. In addition, the Central Coast, Los Angeles, and San Diego regional water boards have used a comprehensive public outreach and education approach.

In instances where actions to control point and nonpoint sources of pollution fail to result in achieving water quality standards due to insufficient assimilative capacity of the water body, the State Water Board will consider whether it is in the public interest to exercise its water right authority to augment stream flows. The Water Boards may also consider

if it is appropriate to conduct a use attainability analysis to determine if any water quality standard (specifically, a designated beneficial use of a water body) should be revised.

All of these approaches, combined with a focus on enforcement activities aimed at protecting and restoring surface waters, will maximize the effectiveness of available resources.

Priority 1. Protect and Restore Surface Water Quality – Goal, Objectives, and Actions

Goal 1. Implement strategies to fully support the beneficial uses for all 2006-listed water bodies by 2030.

Objective 1.1. Implement a statewide strategy to efficiently prepare, adopt, and implement 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.

Action 1.1.1. The Bay-Delta and Klamath watersheds are recognized priorities and will continue to be a major focus of Water Boards and other agencies. In addition to these watersheds, identify and document priority watersheds by December 2008**,** based on water issues of highest importance or concern and consistent with the State Water Board's impaired waters listing policy priorities and focus resources to comprehensively address all impairment constituents in individual priority watersheds.

Action 1.1.2. Identify and document by March 2009 the pollutant groupings or TMDL groupings, such as litter or trash, that can be developed and implemented on a watershed, regional, or statewide basis.

Action 1.1.3. Develop a standard, comprehensive TMDL implementation plan format (e.g., for groups of related pollutants), with stakeholder involvement, by April 2009 that simplifies overlapping strategies for multiple pollutants and can be easily modified to incorporate additional implementation elements as new TMDLs are adopted.

Action 1.1.4. Where point source and non-point source actions are not sufficient to meet water quality standards because of inadequate assimilative capacity, the State Water Board will consider whether it is in the public interest to amend water right permits to augment stream flows, or the Water Boards will consider if it is more appropriate to conduct a use attainability analysis and consider revising water quality standards consistent with that analysis.

Action 1.1.5. By January 2009, identify, document, and begin implementation of strategies with broad application that can be applied through policies and permits to restore water quality, and that may eliminate the need to develop a TMDL.

Objective 1.2. Manage urban runoff volume to reduce pollutant loadings, reduce wet weather beach postings 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.

Action 1.2.1. Develop and adopt incentives and standard requirements, beginning with the general construction permit by December 2008, and water quality certifications by December 2009, that encourage or require local jurisdictions to implement LID/Green Infrastructure techniques that promote the infiltration, capture, and treatment of stormwater for reuse.

Action 1.2.2. Establish a Low-Impact Development Center in the Central Coast Region by July 2009 to develop, deliver, and adapt (as needed) LID information, and to provide expertise that can be tailored to the needs of site-specific projects in the Central Coast Region. The LID Center will assist the Water Boards in identifying impediments to stormwater reuse and will be a pilot for longer range expansion of centers throughout the State.

Action 1.2.3. Collaborate with the State Water Board's Stormwater Advisory Task Force, the California Stormwater Quality Association, and other interested stakeholders to identify, prioritize for action, and begin to address by December 2010 impediments associated with the implementation of LID and stormwater reuse techniques. This includes working with the Department of Public Health and others to clarify existing regulations for stormwater reuse. If new regulations or guidance will take substantial time to develop, in the interim, clarify administratively what rules or practices local public health departments and Regional Water Boards should follow to facilitate stormwater reuse consistent with public health protection.

Action 1.2.4. By 2010, update and standardize coastal municipal storm water permits to reduce wet weather beach postings and, for beaches visited by more than 50,000 people annually, eliminate summertime beach closures and postings due to dry-weather runoff.

Action 1.2.5. Develop a statewide stormwater monitoring strategy by July 2009 that aims to collect data on all stormwater program elements (municipal, industrial, and construction) to inform regulatory decisions by making all the data and information available on the Internet. This strategy could be modeled after the Southern California Stormwater Monitoring Coalition, led by the Southern California Coastal Water Research Project (SCCWRP).

Objective 1.3. Take appropriate enforcement actions and innovative approaches as needed to protect and restore all surface waters.

Action 1.3.1. Reduce the backlog of facilities that are subject to mandatory minimum penalties by 50 percent by December 2009.

Action 1.3.2. The Water Boards will work collaboratively to pilot enforcement programs and other innovative approaches to protect and restore surface water quality, initially focusing on facilitating compliance with the regulatory program requirements for irrigated agriculture.

Action 1.3.3. The Water Boards will pilot enforcement programs and other innovative approaches to protect and restore coastal and ocean water quality by

implementing the "nurdles" pollution prevention law (AB 258) and strengthening enforcement response to spills and illegal discharges.

Action 1.3.4. The State Water Board will adopt by December 2008 an updated Water Quality Enforcement Policy that includes factors for ranking enforcement priorities, metrics to measure enforcement effectiveness, and processes whereby the State Water Board will exercise its water quality enforcement authority.

PRIORITY 2. PROTECT AND RESTORE GROUNDWATER QUALITY

Improve and protect groundwater quality in high use basins by 2030.

Issue Statement

Issue Summary

Saltwater intrusion and discharges of waste have impacted or impaired the water quality and beneficial uses of many groundwater basins throughout the State, making their use for drinking water or for additional storage and supply, a particular challenge. Polluted groundwater may require treatment to render it safe for consumption.

The Water Boards have implemented legislative mandates to protect groundwater quality that includes four elements: (1) prevention of petroleum releases from underground storage tanks through prescriptive containment standards; (2) remediation at sites where discharges of waste threaten water quality; (3) permitting of ongoing discharges of waste, at facilities such as landfills and municipal wastewater treatment plants; and (4) monitoring of groundwater at regulated sites (permitted or remediation) and statewide to assess ambient groundwater quality. Despite these efforts, groundwater quality is poor in many areas due to diffuse sources and urban, agricultural, and industrial activities. Intensive land use generates large quantities of waste, including salt and nutrient loads. Some of these wastes are intentionally discharged and some are incidentally discharged. These wastes can and do degrade groundwater quality.

Why this issue is so critical to the Water Boards and to our stakeholders

There is increasing reliance on groundwater to meet the water supply demands of a growing population. Concerns regarding the long-term viability of the Delta for drinking water supply, increased attention to restoring habitat, water bodies ecologically impacted by water diversions, and current growth projections have all contributed to the increased importance and reliance on groundwater for drinking and other beneficial uses. The threat of climate change and prolonged droughts forecast the need for additional groundwater storage to capture precipitation runoff. Wastes from intensive land use, such as urbanization and agriculture, will continue to degrade groundwater unless current management practices are improved through a comprehensive approach that takes into account the relationship between land use and potential impacts to water resources. Groundwater basins with intensive land use tend to have the highest groundwater use. Protecting and remediating groundwater quality in high use groundwater basins is one of the Water Boards' highest priorities.

Long-range approaches to managing the problem

There are a number of tools for improving groundwater quality. Degradation of groundwater quality can be prevented, or at least minimized, by improving, expanding,

and enforcing existing regulatory programs, including prevention, permitting, and remediation. Improved land use practices, where local government possesses all the authority and latitude, will be needed to prevent and remediate degradation. In addition, a significant gap remains to be filled where known groundwater degradation exists (other than for petroleum-related contamination) and yet there is no one person or business that can be identified as responsible for cleanup. In order for these "orphan" sites to be addressed, a funding mechanism to pay for investigation and cleanup must be identified. Furthermore, education programs have a role in preventing and slowing groundwater degradation.

Comprehensive groundwater management, coupled with sustainable land use practices that maximize natural recharge and regulate controllable discharges, can prevent or slow the rate of groundwater degradation due to intensive land use. Comprehensive salt management plans for those groundwater basins where increasing salinity threatens beneficial uses must be developed. However, considering the long-term buildup of pollutants (e.g., decades of application of agricultural fertilizers and imported irrigation water containing salts), wellhead treatment, coupled with brine disposal plans, may be needed as an element of a basin's management where groundwater is used for drinking water supply.

Groundwater management generally requires that legally-formed entities subject to regulation be assigned responsibility for management of the resource. The duties of these entities would be to ensure that extraction, inflow, pollutant input, and pollutant output are managed to result in a sustainable situation that protects beneficial uses. To carry out these duties, groundwater management entities would need to rely on a comprehensive data management system.

What the Water Boards can realistically do in the next five years

The Water Boards will continue to improve their regulatory programs regarding dischargers, both point and non-point, to ensure pollutant discharge rates are protective of groundwater quality, and enhance their capability to link water quality and pollutant loading to specific land use activities and physical conditions. Improvements will also be made to the Water Boards' funding programs to more directly demonstrate the relationship of reimbursement funding for cleanups, including cleanup of groundwater, to environmental progress.

The Water Boards intend to target restoration of groundwater resources that are currently used, or that may be used in the future, as sources of drinking water whenever such restorations are practicable and attainable. By working with the Department of Public Health, Department of Water Resources, and other agencies, the Water Boards will be able to identify communities that rely on groundwater contaminated by anthropogenic sources as their drinking water source, and take appropriate regulatory or enforcement action against responsible parties. Working with these agencies, the Water Boards will address improperly destroyed, abandoned, or sealed wells in these communities that may serve as potential pathways for contaminants to reach

groundwater. Moreover, the Water Boards will expedite funding for the development of Integrated Regional Water Management (IRWM) Plans for these communities.

The Department of Water Resources' Bulletin 118 – 2003 Update summarizes approaches and tools available for local groundwater management, as do the provisions for groundwater management plans in Water Code Section 10750 et seq. The Water Boards can provide leadership to encourage local management of groundwater resources by developing regional strategies to protect groundwater basins, integrating and sharing water quality information with local agencies, and building awareness of important groundwater protection concepts that consider surface water alternatives. For example, the Water Boards will work with the Department of Water Resources to direct funding for the development of IRWM Plans to protect high-use groundwater basins. Where necessary and appropriate, the Water Boards will take enforcement actions to support local groundwater management activities.

Priority 2. Protect and Restore Groundwater Quality – Goal, Objectives, and Actions

Goal 2. Improve and protect groundwater quality in high use basins by 2030.

Objective 2.1. Implement an integrated groundwater protection approach by 2012 to improve and protect groundwater in high-use basins that (a) evaluates and regulates activities that impact or have the potential to impact beneficial uses; (b) recognizes the effects of groundwater and surface water interactions on groundwater quality and quantity; and (c) encourages and facilitates local management of groundwater resources.

Action 2.1.1. The State Water Board will prepare and post a map by September 2008 that identifies high-use groundwater basins and will work with the Interagency Task Force and Public Advisory Committee (established pursuant to the Ground Water Monitoring Act of 2001, AB 599) to display available groundwater quality information for these high-use basins.

Action 2.1.2. The Water Boards will encourage local entities to initiate the development of regional strategies to protect high-use groundwater basins and will work with the Department of Water Resources to direct funding for the development of Integrated Regional Water Management Plans to assist in these efforts.

Action 2.1.3. Where a decline in groundwater quality is due to unregulated discharges, the Regional Water Boards will regulate those discharges to protect groundwater quality.

Action 2.1.4. The State Water Board will establish a list of high-use basins experiencing a decline in groundwater quality and for which no regional protection strategies are in place, and will work to obtain the necessary resources to impose limits on extractions to improve groundwater quality.

Objective 2.2. Identify strategies to ensure that communities that rely on groundwater contaminated by anthropogenic sources will have a reliable drinking water supply, which may include surface water replacement.

Action 2.2.1. By December 2008, in collaboration with the Department of Public Health, identify these communities.

Action 2.2.2. By September 2009, in collaboration with the Department of Water Resources and other involved agencies, identify and take action to address improperly destroyed, improperly abandoned, or improperly sealed wells in these communities that may serve as potential pathways for contaminants to reach groundwater.

Action 2.2.3. Upon identification of sources contributing to the contamination of groundwater relied on by these communities, take appropriate regulatory or enforcement action.

Action 2.2.4. The Water Boards will collaborate with the Department of Water Resources to expedite funding for the development of Integrated Regional Water Management Plans for these communities.

Objective 2.3. Ensure the viability of high quality groundwater basins, where appropriate, through waste discharge requirements (WDRs) and the clean-up of contamination.

Action 2.3.1. Issue new or revised WDRs to high priority facilities, based on threat to groundwater quality and complexity of facility, as necessary to protect groundwater quality.

Action 2.3.2. Coordinate with the Department of Toxic Substances Control, as appropriate, to focus on enforcement actions, investigations, and clean-up efforts to remediate contamination plumes that impact or have the potential to impact drinking water sources.

PRIORITY 3. PROMOTE SUSTAINABLE LOCAL WATER SUPPLIES

Increase sustainable local water supplies available for meeting existing and future beneficial uses by 1,725,000 acre-feet per year, in excess of 2002 levels, by 2015, and ensure adequate flows for fish and wildlife habitat.

Issue Statement

Issue Summary

Demand and competition for California's limited water supplies will increase as our population continues to grow and climate change impacts occur. Over the past 50 years, California has met much of its increasing water needs primarily through a network of water storage and conveyance facilities, groundwater development, and more recently, by emphasizing the gains to be achieved through water use efficiency. Efficiency has traditionally embraced several strategies, including water conservation and recycling of treated wastewater. It now also includes consideration of the capture and reuse of stormwater and dry weather flows. Efficiently managing our water is the critical purpose of an integrated watershed management approach that leverages actions among and between water supply and water quality, flood protection and stormwater management, wastewater and recycled water, and watershed management and habitat protection and restoration interests.

To ensure that present and future generations have sufficient water when and where it is needed, the Water Boards have encouraged water use efficiency practices by: (1) providing funding in the form of grants and loans; (2) conducting, advocating for, and funding research; and (3) supporting the updating of best management practices (BMPs) for conservation by urban and agricultural consumers. Most efforts to date have relied upon voluntary participation. Based on projections of the 2002 Recycled Water Task Force, and reflected in the California Water Plan Update 2005 (2005 Water Plan), prepared by the Department of Water Resources, the State has the potential to recycle an additional 1,400,000 to 1,670,000 acre-feet per year of water beyond 2002 levels by the year 2030 (the 2002 recycled water deliveries were 525,000 acre-feet per year). This is about 23 percent of the available municipal wastewater. Additionally, the 2005 Water Plan estimated that by the year 2030, the State has the potential to save an additional 1,200,000 to 2,100,000 acre-feet per year of water through urban water conservation (2002 water conservation numbers are not available as water conservation is measured relative to demand). The 2005 Water Plan estimated that 2030 statewide water demand will be zero to 4,000,000 acre-feet more than it is now. Recycling and conservation can, therefore, be significant contributors to future needs.

Why this issue is so critical to the Water Boards and to our stakeholders

Despite the many positive efforts made to date by State and federal agencies to promote and fund water use efficiency projects, the State is struggling to meet its goals defined in the 2005 Water Plan. For recycled water alone, we will likely not meet the 2010 goal of 1,000,000 acre-feet per year of recycled water use. Stakeholders are

concerned about how increasing wastewater recycling can occur without significant costs. There is also broad-based skepticism about the State's ability to manage our water supply and reliability needs while maintaining our commitment of environmental stewardship. Innovative approaches like low impact development and stormwater reuse can help to address this skepticism by simultaneously improving water quality and water supply, enhancing neighborhood amenity, and providing downstream flood control benefits. These innovative approaches can reduce the financial burden on local government of complying with increasingly stringent water quality regulations.

Long-range approaches to managing the problem

As we move into the future, we must broaden our definition of efficient water use to include innovative measures that will address the changes in occurrence and quality of water expected to be brought on by increasing population and climate change. Technology for harvesting previously untapped sources will have a role as costs become more comparable to present supplies and efficiency measures. The implementation of a comprehensive water use efficiency strategy would leverage the authorities and expertise of all agencies with responsibility for water management in California. This strategy must include clarification of water recycling rules and practices, such as the requirements of the Department of Public Health, to facilitate stormwater reuse. A continuum of incentives could be developed to maximize water efficiencies, with clear triggers signaling a transition from voluntary to mandatory provisions and measures.

We should prioritize and target available funding, and quantify gaps between needs and available funding (it is estimated that $300 million annually in grants and low-interest loans would be necessary to achieve the additional 1,400,000 to 1,670,000 acre-feet per year of recycled water potential by the year 2030). As our water imbalance grows, traditional water supply augmentation projects will become more expensive and less tenable, and recycled water projects will become more economical and practical.

Achieving California's recycled water potential will require greater public acceptance and confidence that the use of recycled water is safe for irrigation of edible crops and, with treatment, for drinking water. In many instances, recycled wastewater is a lower risk in terms of pathogens than irrigation water from current surface sources (the former is treated, disinfected, and monitored, while the latter may not have any of those safeguards). The Water Boards should lead and coordinate water quality research and data improvement efforts designed to expand the efficient use of water while preserving its quality, such as identifying effective technologies and practices for addressing emerging chemicals of concern, salinity management, virus removal, microbiological safety of water used on edible crops, and other environmental concerns. In addition, the Water Boards should address the economics and effective marketing of recycled water.

What the Water Boards can realistically do in the next five years

Achieving sustainable water supplies is a multi-faceted, multi-organizational endeavor, and the Water Boards have continuing opportunities to work with others to encourage, support, and require water conservation, water recycling, and stormwater and dry weather runoff reuse efforts. This includes developing innovative incentives, streamlining permits, and applying little used regulatory authorities. We believe a 725,000 acre-feet per year increase in recycling and a 1,000,000 acre-feet per year increase in conservation, in excess of 2002 levels, is achievable by 2015. The potential water supply and associated treatment costs for stormwater and dry weather flows are unknown at this time, but the Water Boards will work with others to gather that information for the 2010 annual review and update of this Strategic Plan.

Partnerships must be reinvigorated within the water supply and wastewater communities to advance water use efficiency such as recycling and conservation efforts. We will engage the municipal and agricultural supply communities, State and federal water management agencies, and wastewater dischargers to move forward conservation and recycling efforts, and the use of stormwater and dry weather flows. These efforts will be consistent with other water use efficiency activities in the State, such as those outlined in the Air Resources Board's Climate Change Draft Scoping Plan (June 2008), developed pursuant to the California Global Warming Solutions Act of 2006 (AB 32), and the State Water Board's Strategic Workplan for Activities in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (June 2008). Where appropriate, the Water Boards will apply regulatory pressures through wastewater and water right permits to motivate progress in these areas.

When the State Water Board acts on a water right application, it must consider the minimum stream flow requirements recommended by the Department of Fish and Game, which has the authority to conduct flow studies on priority streams. Because minimum stream flows have not yet been developed in many parts of the State, Governor Schwarzenegger signed Assembly Bill 2121 in 2004 (Water Code Section 1259.4), referred to as "North Coast Instream Flow Policy". This policy requires the State Water Board to adopt principles and guidelines for maintaining stream flows in north coast streams in the counties of Marin, Napa, Sonoma, Mendocino, and southern Humboldt. Currently, there are over 250 pending applications to appropriate water in these counties. The State Water Board will work with the Regional Water Boards, the Department of Fish and Game, and other watershed partners to initiate the development of minimum stream flow standards for priority water bodies. The principles and guidelines, along with estimates of water availability, will enable the State Water Board to determine whether to grant new permits for water rights.

Priority 3. Promote Sustainable Local Water Supplies – Goal, Objectives, and Actions

Goal 3. Increase sustainable local water supplies available for meeting existing and future beneficial uses by 1,725,000 acre-feet per year, in excess of 2002 levels, by 2015, and ensure adequate flows for fish and wildlife habitat.

Objective 3.1. Promote implementation of best management practices (BMPs), 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.

Action 3.1.1. Work with the State and federal water management agencies, California Urban Water Conservation Council, Agricultural Water Management Council, and other stakeholders to assess and update urban BMPs and efficient water management practices for agriculture, as appropriate.

Action 3.1.2. Work with the Department of Water Resources to ensure effective implementation by urban water suppliers of water demand management measures required as a condition for receiving financial assistance, and to take action, where appropriate, to limit waste and unreasonable use of water.

Action 3.1.3. Validate water conservation plans and actions required by the terms of water right permits or licenses issued by the State Water Board.

Objective 3.2. Increase the acceptance and promote the use of recycled water and the reuse of stormwater 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.

Action 3.2.1. Use existing regulatory authorities to require the development and implementation of water recycling plans by wastewater management agencies working with water supply agencies, where the recycling of treated effluent is not maximized at wastewater treatment plants located in areas of imported water supply. Prioritize implementation of the plans for those plants that discharge to water bodies from which the water is not easily recovered.

Action 3.2.2. Work with industrial dischargers, stormwater agencies, the Department of Water Resources, water suppliers, and other stakeholders to develop a stormwater reuse target by September 2009 that takes into account data regarding stormwater flows, locations, and timing. This target will be used to update the goal for increasing sustainable water supplies in the 2010 update of this Strategic Plan.

Action 3.2.3. Revise funding criteria, where allowable, to ensure that grant and loan projects funded by the Water Boards support activities that enhance water reuse, water recycling, and groundwater recharge.

Objective 3.3. 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.

Action 3.3.1. The State Water Board will work with the Department of Fish and Game and other watershed partners to (a) develop by September 2008 a preliminary list of priority California streams for minimum stream flow standards development (taking into consideration the streams affected by the North Coast Instream Flow Policy), and (b) initiate the development of one minimum stream flow proposal that will be brought before the State Water Board for consideration by December 2010 and up to two additional proposals by 2012.

Action 3.3.2. For priority streams where minimum flow standards have been developed and are not being met, determine by December 2012 what State Water Board-mandated actions (such as conservation, recycling, and limiting amount of water diverted) are necessary to protect the public trust by preventing waste or unreasonable uses or methods of diversion.

PLANNING PRIORITY

The Water Boards' planning priority focuses on establishing and improving planning procedures and documents that form the basis of our regulatory framework, and guide our efforts in achieving our mission.

PRIORITY 4. WATER QUALITY PLANNING

> 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.

Issue Statement

Issue Summary

California's Water Code declares the ***California Water Plan*** (Water Plan), prepared and updated by the Department of Water Resources, as the master plan to guide the orderly and coordinated control, protection, conservation, development, management and efficient utilization of the water resources of the State. Water management activities will often have unavoidable environmental consequences, and the link between water supply management and water quality are inseparable.

Water supply and use are inherently linked to water quality. Various water management actions, such as transfers, water use efficiency, water recycling, conjunctive use of aquifers, storage and conveyance, Delta operations, land fallowing, and hydroelectric power, potentially have water quality impacts. Alternatively, degraded water quality can limit, or make very expensive, some water supply uses or options because the water must be pretreated. Furthermore, water managers increasingly recognize that the quality of various water supplies needs to be matched with its eventual use and potential treatment. (From the California Water Plan Update 2005).

Regional Water Quality Control Plans (Basin Plans), and the statewide water quality control plans and policies, such as the Ocean Plan and the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, are the cornerstone of California's regulatory programs and are part of the Water Plan. They contain the regulations to protect water quality. These plans describe the beneficial uses that each water body supports, including drinking, swimming, fishing, protection of aquatic life, and agricultural irrigation, among others. The Basin Plans contain the water quality objectives, policies, and programs of implementation for the protection of surface and ground waters, and are the key basis for our regulatory actions.

The Basin Plans and statewide plans are reviewed on a three-year cycle, known as the triennial review process (required by the federal Clean Water Act), where current effectiveness, new science, new water quality problems, and new or changed laws are considered. Based on regional priorities, the Basin Plans are amended to reflect specific changes and local concerns. However, because these amendments are resource and time intensive, what can be addressed is generally constrained to the highest priority needs.

Why this issue is so critical to the Water Boards and to our stakeholders

The Basin Plans, originally written in the 1970s, and periodically updated, currently do not fully reflect the Water Boards' fast-growing body of knowledge and evolving regulatory approaches to regional and statewide concerns such as stormwater, non-point sources (e.g., irrigated agriculture), and biological integrity. In addition, they generally do not consider the impacts of climate change, which will further complicate groundwater-surface water interactions. Basin Plans that clarify regulatory approaches, and the application of regulations to different water body types and situations, may reduce or eliminate excessively long permit discussions, appeals, remands, and litigation. The last coordinated update of the Basin Plans occurred in the mid-1990s.

Beyond their uses for regulatory program implementation, it is unclear how the Basin Plans and statewide plans inform the water supply strategies in the Water Plan. Water quality must be fully integrated into any decision-making process regarding current and future water supply decisions.

Long-range approaches to managing the problem

To better address the existing and emerging challenges of water quality control, we envision a comprehensive, statewide update of the Basin Plans contained in a "California Water Quality Plan" (Water Quality Plan) that fully addresses the priorities for each region including:

- Incorporating the most up-to-date changes in State and federal laws
- Reviewing and updating beneficial uses, and designating tiered aquatic life uses
- Establishing biological objectives
- Establishing numeric objectives for groundwater
- Evaluating numeric objectives to ensure appropriate limits are used in permits
- Developing long-term salt management plans for protection of surface and groundwater
- Addressing emerging pollutants
- Addressing potential effects of climate change
- Using watershed, stream, and wetland restoration, low impact development, and "green" stormwater projects as practical means to achieve objectives and protect beneficial uses

What the Water Boards can realistically do in the next five years

To readily identify statewide and regional water quality protection requirements in considering water supply issues, and to better inform water quality considerations about water supply issues, the State Water Board will collaborate with the Department of Water Resources, who is responsible for updating the Water Plan, to integrate the Basin Plans and other statewide water quality control plans and policies into a comprehensive Water Quality Plan. The Water Quality Plan will comprise a key element of the Water Plan. To address Basin Plan specific issues outlined above, the Water Boards will work to update all of the Basin Plans and the Ocean Plan in a format that is clear, user-friendly, and that allows for more efficient future amendments. The Water Boards will collaborate with stakeholder groups on developing Basin Plan formats, a Basin Plan user's guide, and regulatory compendium, and providing advice to define how future Basin Plan updates should proceed. The Water Boards will also coordinate regional triennial reviews, and work collaboratively with stakeholders as part of the triennial review process to ensure that updated Basin Plans address water quality issues of mutual concern.

Priority 4. Water Quality Planning – Goal, Objectives, and Actions

Goal. 4. Comprehensively address water quality protection and restoration, and the relationship between water supply and water quality, and describe the connections between water quality, water quantity, and climate change, throughout California's water planning processes.

Objective 4.1. 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.

Action 4.1.1. Develop a Memorandum of Understanding with the Department of Water Resources by December 2009 to establish the coordination necessary for the development and incorporation of the California Water Quality Plan into the California Water Plan, which will identify the State's integrated priorities for water quality and water supply.

Objective 4.2. Basin Plans are consistently organized by 2012, and updated by 2015, 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 statewide plans and policies such as the California Ocean Plan.

Action 4.2.1. Convene a statewide stakeholder group by October 2008 to (a) assess statewide and regional needs for a statewide Basin Plan and Ocean Plan update, and (b) provide input and advice on the timing (related to the California Water Plan Update cycle), scope, and approach for future Basin Plan

updates. Each Regional Water Board shall determine the need to convene a group of local interests as an element of this process.

Action 4.2.2. Use stakeholder group input and advice to develop a statewide Basin Plan format to guide future updates so that each plan is consistently organized, understandable, and both paper- and web-based.

Action 4.2.3. Use stakeholder group input and advice to develop a paper- and web-based user's guide and regulatory compendium to the Basin Plans to assist Water Board staff, the regulated community, and the public in navigating the Basin Plans and locating the State's water quality regulations.

Objective 4.3. Achieve near-term priority Basin Plan amendment needs 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 process initiated with funding assistance from stakeholders.

Action 4.3.1. Work with external stakeholders to identify and prioritize opportunities to provide resources to address basin planning issues of mutual concern determined through the regular triennial review process to update the Basin Plans.

ADVANCING ORGANIZATIONAL PERFORMANCE

The Water Boards' success in achieving our environmental and planning priorities described in this Update will depend on successful implementation of our organizational strategies for improving transparency, accountability, consistency, and workforce capacity. These strategies are interrelated and linked to successfully addressing our environmental and planning priorities.

TRANSPARENCY AND ACCOUNTABILITY

Improving transparency and accountability will ensure that Water Board goals and actions are clear and accessible by demonstrating and explaining results achieved and by enhancing and improving accessibility of data and information. By providing information on our programs, processes, and environmental results, transparency and accountability are enhanced – accountability for progress towards meeting our mission and goals, for how we spend our limited resources, and for what we do and do not do with those resources.

Making this information available in a publicly-accessible manner builds public confidence in both the decision-makers and the science behind the decisions. It translates to timely delivery of information. Data that is accessible and functional can also enhance the delivery of government services, and lead to greater public interest and involvement. Within most agencies, organizational divisions lead to isolation of functions and data. Online availability of information allows an organization to pull its data together, thus breaking down or integrating internal "silos".

Why this issue is so critical to the Water Boards and to our stakeholders

The mandates affecting water quality and water allocation continue to grow. Implementation of new requirements often results in the redirection of resources away from core programs. This leaves little time or ability to evaluate our ongoing programs and improve them as changes in science and technology occur. Many stakeholders and our own staff are frustrated with processes that seem overly time-consuming or repetitive, and may not achieve the desired results in today's environment. The complexity of regulation has challenged our traditional regional approach to setting and implementing standards with many stakeholders requesting greater consistency in process and application of requirements.

Impacts to our water quality and water supply resulting from changes in land use, changes in climate, population growth, and other trends has led to the expectation that the Water Boards will collaborate with other agencies to present a comprehensive picture of the health of our watersheds. Much of the information provided by the Water Boards has been developed to fulfill specific statutory requirements or gathered in conjunction with a special project and is not comprehensive, routinely updated, or available in an easily accessible or searchable format. While the Water Boards have been acknowledged for their data collection efforts, such as the Surface Water Ambient Monitoring Program (SWAMP) and the Groundwater Ambient Monitoring & Assessment

(GAMA) program, there is considerable concern that the necessary steps to integrate and coordinate existing information (on groundwater in particular) has not progressed. The lack of linkages between various types and sources of data also means that the information cannot be compared or easily understood and results in redundant, incomplete data systems that are difficult to maintain and update. Improvements to the Water Boards' California Integrated Water Quality System (CIWQS) database are intended to address many of these issues.

In addition, our surface water (SWAMP) and groundwater (GAMA) monitoring programs are not sustainably or adequately funded. SWAMP is currently budgeted at around $12 million per year. Our peer-reviewed estimate of an adequate program to evaluate changes in surface water quality statewide is around $40 million per year. The GAMA program, although currently fully funded, is funded with bond money and once those funds are exhausted there is no ongoing funding source. Consequently, actions that reduce fragmentation and leverage outside resources are critically important to support and improve our water quality evaluative function.

Long-range approaches to managing the problem

The Water Boards are working towards a results-based regulatory system that promotes efficiency and effectiveness, organizational and environmental results, and transparency and accountability. Collaboration with the public, regulated and scientific communities, and other stakeholders to establish specific and realistic goals will assist us in directing our efforts towards those activities that demonstrate the most benefit for California's water resources. This includes identifying programs that are no longer effective or beneficial.

The data that is developed by our programs should be accessible and seamlessly displayed in a comprehensive water quality data network that allows regulators, the regulated community, and the public the ability to examine the health of any watershed in the State, identify data gaps, and download data sets for further use or analysis. The process established by Senate Bill 1070 (Kehoe, 2006), which establishes a California Water Quality Monitoring Council, is an excellent approach to resolving problems associated with surface water data availability and use over the long term. The Ground Water Monitoring Act of 2001, which created a groundwater assessment program, needs to be reinvigorated in order to achieve integration of data to provide a comprehensive baseline of groundwater quality and use for each groundwater basin/sub-basin in the State. The ability to network and integrate all State water quality information into a comprehensive data set will go a long way towards improving transparency and accountability, as well as providing a basis for decisions and policies.

What the Water Boards can realistically do in the next five years

Because the Water Boards do not have the resources to address all problems, we must set priorities to identify where we will focus our attention. We will establish and use measures of environmental and Water Board performance, along with adequate data and data systems, to track and report progress in meeting our goals and targets,

manage and evaluate our programs and activities, and improve efficiencies in work processes.

For example, the current water right application process is long and subject to delays, due in part to the process required by existing law. The combination of a difficult process, inadequate information, and delays on the part of the applicants has resulted in a large backlog of unprocessed applications for water rights. The State Water Board will conduct a comprehensive evaluation of process and timelines that will help to improve water right application processing. In addition, while each Water Board region is unique, there are aspects of waste discharge requirements (permits) and the permit issuance process that can be standardized or streamlined to increase effectiveness and efficiency. The Water Boards will make improvements in permitting processes (e.g., NPDES permits) that will help to minimize permit challenges, result in clearer and more concise permits, facilitate data entry and extraction into CIWQS, and allow for better detection of violations and timely enforcement.

To better assess the effectiveness of the Underground Storage Tank (UST) program in cleaning up contamination that may impact groundwater, the State Water Board will develop and implement an approach to link UST reimbursements with measurable environmental results. The UST Cleanup Fund, administered by the State Water Board, provides a means for petroleum UST owners and operators to meet the federal and State requirements. The Fund also assists a large number of small businesses and individuals by providing reimbursement for eligible expenses associated with the cleanup of leaking petroleum USTs.

The Water Boards will work to enhance its water quality monitoring and data systems through work with the California Water Quality Monitoring Council and advancement of the Groundwater Quality Monitoring Act of 2001. Additionally, the Water Boards will continue to implement the CIWQS' Review Panel's recommendations, provided in July 2007, which will mark a significant milestone in the Water Boards' ability to manage its core regulatory program data. Improving the relationships between the Water Boards' data systems, and making them available in a more accessible and functional format, will enhance routine reporting of programs and performance.

Transparency and Accountability – Goal, Objectives, and Actions

Goal 5. Improve transparency and accountability by ensuring that Water Board goals and actions are clear and accessible, by demonstrating and explaining results achieved with respect to the goals and resources available, by enhancing and improving accessibility of data and information, and by encouraging the creation of organizations or cooperative agreements that advance this goal, such as establishment of a statewide water data institute.

Objective 5.1. Improve the current Water Board systems, programs, functions, and core business processes to enhance effective and consistent implementation of

Water Board plans and policies, and State and federal laws and regulations, and to reduce processing time and costs.

Action 5.1.1. Prepare by December 2008 a documented inventory of Water Board programs and functions, including where and how resources are assigned, to establish a baseline for determining changes that are needed to improve effectiveness and efficiency, beginning with the enforcement program. Post this information to the State Water Board's website.

Action 5.1.2. Link existing workplans to the development of performance-based plans by 2010 that include goals and priorities, measures with targets, demonstration of results, and methods for the evaluation of strategies, beginning with the enforcement program. Post this information to the State Water Board's website.

Action 5.1.3. Evaluate, reengineer, and implement improvements to Water Board processes, beginning with (a) a comprehensive evaluation of process and timelines by December 2008 as a first step in streamlining water right application processing, and (b) the formats and processes of our NPDES and other permitting programs by December 2009, resulting in permits that allow for readily identified violations and prompt enforcement actions.

Action 5.1.4. Develop and begin to implement by September 2009 an approach to link Underground Storage Tank reimbursements with measurable environmental progress to improve the effectiveness of the Underground Storage Tank program in cleaning up contamination that may impact groundwater.

Action 5.1.5. Develop a plan to implement an organization and program review process at the State Water Board by November 2008, including criteria for selection of programs to review, for the purpose of evaluating each Regional Water Board's and the State Water Board's performance with respect to statewide consistency, efficiency, and effectiveness, and the appropriate implementation of laws and policies. Complete two reviews by September 2009 for discussion and consideration by the State Water Board.

Objective 5.2. Enhance the Water Boards' water quality data systems, and the accessibility of water body and facility data and information on the Internet, by December 2009.

Action 5.2.1. Implement all of the Review Panel's recommendations for CIWQS, and prioritize the development of quality assurance/quality control (QA/QC) systems by September 2008 to improve data quality and ensure accurate data entry associated with the Water Boards' regulatory programs.

Action 5.2.2. Advance implementation of the Groundwater Quality Monitoring Act of 2001 (AB 599, Liu) by December 2008 through the development of online public reports and query tools, and increased coordination of monitoring and data-sharing by multiple agencies involved in groundwater management.

Action 5.2.3. Use on-line mapping technology to present all relevant Water Board data by December 2009.

Objective 5.3. Develop recommendations for a publicly-accessible, statewide network to comprehensively display all water quality data used for planning and decision-making purposes within the State by January 2010, as described in SB 1070 (Kehoe, 2006).

Action 5.3.1. Work with the California Water Quality Monitoring Council to determine the scope and content of the data network by June 2009.

Objective 5.4. Create a portal by July 2009 for the public on the State Water Board's home page to access web-based water quality information for surface, ground, and coastal waters, and a web-based water quality report card, that will communicate to the public the quality of the State's waters, the performance of the Water Boards in protecting those waters, and other Water Board-related issues that affect the public.

Action 5.4.1. Considering stakeholder input, develop annual web-based reports on the effectiveness of Water Board programs, beginning with a report on compliance and enforcement activities by January 2009, which track performance measures that are established in performance plans, and allows the Water Boards to adjust priorities and strategies for the coming year.

CONSISTENCY

The Water Boards have traditionally operated in a dynamic environment and our organization has allowed regional variation within a coordinated framework. Enhancing consistency across the Water Boards will ensure that our processes are effective, efficient, and predictable, and promote fair and equitable application of the laws, regulations, policies, and procedures.

Over the years, some Water Board stakeholders have expressed frustration with a lack of consistency among the Boards. For example, stakeholders and the Legislature have named consistency in enforcement of the State's water quality laws as one of the most important issues facing the Water Boards. The public participation process and storm water regulation are two additional high priority areas identified by stakeholders. Such concerns have led to recommendations intended to "fix" the problem, including legislative proposals. The Water Quality Coordinating Committee (WQCC), a leadership body of the Water Boards, has discussed the consistency issue at some length. As part of that discussion, the WQCC made the following findings in the fall of 2006:

- Stakeholders engaged with more than one region have reported that some decisions are inconsistent
- Regional Water Boards exist because some variation is expected and needed to respond to different geography and local conditions
- Consistency in application of law and policy is valuable
- On questions of law and overarching policy, the State Water Board should provide guidance and build a basic policy framework from which the regions can appropriately tailor action
- Water Boards are committed to developing procedures and policies to minimize inappropriate inconsistency

<u>Why this issue is so critical to the Water Boards and to our stakeholders</u>

California's diverse geography, landscape, population, social, cultural, and economic context prevent a "one size fits all" approach to managing natural resources. At the same time, consistency can help to ensure that stakeholders receive equitable treatment, and that they understand and work towards common water quality and water rights goals, and that outcomes can be evaluated in meaningful ways. Nearly all stakeholders embrace the importance of some variation to address unique regional/local needs yet want the benefits of consistent interpretation and enforcement of laws, regulations, and policies. Finding this balance is the challenge.

<u>Long-range approaches to managing the problem</u>

Long-range approaches mirror those of the five-year goal (below), just on an expanded scale. They include effective communication of program direction and functional procedures so they may be applied consistently, a method of continuously assessing

core functions so that approaches to consistency are adaptive and remain effective, and a process to monitor outcomes.

What the Water Boards can realistically do in the next five years

In the next five years, the Water Boards will target areas where consistency has been raised as a concern, initiate actions to achieve warranted consistency, and ensure that these improvements are implemented. Actions will be taken to address external and internal input regarding inappropriate inconsistencies in the areas of enforcement, storm water, and public participation. The next level of action will be targeted toward achieving a consistent approach to handle issues arising from regulated facilities that fall within two or more Regional Water Board's jurisdictions. Finally, the Water Boards commit to ongoing review and input to maintain a focus on consistency as an area of continuous interest.

Consistency – Goal, Objectives, and Actions

Goal 6. Enhance consistency across the Water Boards, on an ongoing basis, to ensure our processes are effective, efficient, and predictable, and to promote fair and equitable application of laws, regulations, policies, and procedures.

Objective 6.1. Target consistency improvements in process and policy for Water Board enforcement activities to promote compliance.

Action 6.1.1. Adopt and implement by October 2008 revisions to the Water Quality Enforcement Policy to, at a minimum, ensure consistent enforcement response, assessment of penalties for all Class 1 violations, and assessment of liability in excess of the economic gain obtained as a result of non-compliance. The policy will also establish a clear, consistent statewide approach to the prioritization of enforcement targets, based on threats and adverse impacts to beneficial uses, including the identification of Class I violations.

Action 6.1.2. Develop uniform hearing procedures for contested enforcement matters, and templates for enforcement activities, including but not limited to subpoenas, administrative discovery, and investigation reports, by October 2008.

Action 6.1.3. Complete re-organization/re-direction of staff to separate enforcement personnel from permitting personnel by December 2009, and instill internal processes for review of draft waste discharge requirement (WDRs) and draft WDR waivers for enforceability beginning in September 2008.

Objective 6.2. Target consistency improvements in program delivery identified through past input, and solicit input to identify consistency issues as they arise.

Action 6.2.1. Reissue the statewide storm water permit for Phase II municipal separate storm sewer systems (MS4s) by July 2009 that updates the baseline for consistency in the municipal storm water permitting program (the permit should provide a consistent approach for issues that have been raised regarding the Phase I MS4s, including hydromodification and the use of numeric benchmarks,

action limits, or effluent limitations). As appropriate, solutions developed in reissuing the Phase II permit should be used in Phase I permits around the State in subsequent years. Phase II MS4s serve a population of 100,000 or less that are located in an urbanized area.

Action 6.2.2. Implement by July 2009 public participation policies, procedures, or guidelines, as appropriate, to improve Water Board procedures for adopting policies and regulatory actions.

Action 6.2.3. The State and Regional Water Boards will establish as a standing item at its biannual WQCC meetings the identification and prioritization of areas of inconsistency to be addressed, including where statewide policy is needed.

Action 6.2.4. Establish a pilot program for interagency agreements between Regional Water Boards when more than one Regional Water Board has jurisdiction over a regulated facility to ensure effective and equitable actions.

Action 6.2.5. Initiate a triennial review of the State Water Board's "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (Resolution No. 68-16), beginning with the solicitation of public comments by October 2008 on the need for revisions to the policy and its implementation methodology. The triennial review process will assist the State Water Board in evaluating whether and the extent to which the policy or implementation guidance should be revised.

WORKFORCE CAPACITY

Ensuring that the Water Boards have access to sufficient resources, information, and expertise, including employees with appropriate knowledge and skills, is necessary to effectively and efficiently carry out the Water Boards' mission. Building workforce capacity is about assessing the employee resources needed to meet the Water Boards' current and future program requirements, and taking the actions to meet these needs. It is estimated that 36 percent of Water Boards' rank-and-file employees, and over 60 percent of the managers, are eligible to retire. Filling these positions, especially as limited compensation levels are faced, will be challenging. The actions that will need to be taken to meet the workforce needs are: (1) recruiting to fill important vacancies; (2) growing leadership capacity and promoting individual development and advancement; (3) providing direction and guidance for allocating staffing resources; (4) providing a clear rationale for linking expenditures for training, career counseling, and recruiting efforts to resource needs; and (5) maintaining or improving a diversified workforce. It is important to recognize that all government agencies, not just the Water Boards, have had an increasingly difficult time attracting and retaining employees.

In addition to recruitment and training, the Water Boards are challenged in making important historical and scientific information available in support of the day-to-day work. With our numerous programs and mandates, the retirement of even a single employee can result in the loss of a tremendous amount of critical information.

Why this issue is so critical to the Water Boards and to our stakeholders

The expectations of and the demand for what the Water Boards do is increasing as the State's population continues to grow and greater pressures on the quality and quantity of the State's water supply are felt. Based on a recently prepared workforce report for the Water Boards, it is certain that as the demand for services grows, the agency will encounter increased competition for prospective and current employees, and experience an increasing number of employees retiring, which may result in a massive "brain drain". Of importance to the regulated community, turnover in both key rank-and-file staff and management positions can lead to longer processing times, incomplete technical reviews, and redundant approvals. All of these concerns contribute to apprehension about the Water Boards' ability to fulfill future critical mandates and be in a position to lead efforts to address emerging issues.

Long-range approaches to managing the problem

The Water Boards' focus will be on developing people with the capacity to fill leadership positions in the organization. This can be done by growing the leadership arm of the Water Boards' Training Academy, encouraging individual advancement, and providing increased opportunities for employees to accept new challenges. The existing classification systems within State service, especially in the environmental specialties, should be updated to address overlapping job responsibilities with uneven compensation and to create career paths that do not just move up a specialized ladder, but across the organization. Many prospective employees are unaware of what the Water Boards do, how much of an impact the agency has on water resources, and the

high profile nature of water. Increasing the Water Boards' presence and reputation, and resurrecting our leadership role in water quality, will help boost recruitment efforts and attract a larger pool of qualified applicants.

What the Water Boards can realistically do in the next five years

While the State classification structure is influenced by much more than the Water Boards, employee skills can be developed through job experiences and assignments in the near-term. The Water Boards will broaden candidate pools of future leaders by defining core competencies (e.g., stream science, NPDES permit writing, etc.), and developing the courses and information needed for staff to manage the issues facing the organization.

The Water Boards will improve the accessibility of scientific and non-scientific information for employees to help ensure that they have the resources needed to effectively and efficiently perform their job duties. Opportunities for cross-program sharing of people and information will be encouraged for staff located throughout the State. A system will be set in place for employees to request help from regional and subject matter experts for guidance and consultation on work-related issues as they arise. Furthermore, the Water Boards will maximize the full potential of new and existing program roundtables and teams (e.g., Bay-Delta, Data Quality Team, Enforcement Coordinators, etc.) to increase program consistency and productivity, and collaborate on resolving overlapping issues across the programs, such as building the water quality-water rights nexus.

Recruitment will be an ongoing need for the Water Boards. It is imperative that the organization is able to continuously recruit qualified candidates to backfill vacancies that occur, whether from retirement or expected turnover. By establishing and utilizing a comprehensive recruitment plan, the Water Boards will be able to attract the most suitable applicants possible. The recruitment plan will include partnering with California's university systems that offer relevant programs that meet the needs of the Water Boards.

The Water Boards can also benefit from collaborative partnerships with other governmental (federal, State, or local) and non-governmental agencies that perform related functions to leverage resources and information available to support program implementation and decision-making. For example, the Water Boards have had some success in leveraging inspection resources by working with Agriculture Commissioners, local building and grading inspectors, and wastewater treatment plant pre-treatment inspectors. The organization will use this type of collaborative effort to investigate the connections between water quality, water quantity, and climate change as it pertains to the coast from central California up to the Oregon border. Collaboration of this magnitude can lead to better decision-making, improved results and efficiencies, and the leveraging of assets for increasing field presence or obtaining water-related technical and regional information.

Workforce Capacity -- Goal, Objectives, and Actions

Goal 7. Ensure that the Water Boards have access to information and expertise, including employees with appropriate knowledge and skills, needed to effectively and efficiently carry out the Water Boards' mission.

Objective 7.1. Enhance professional development opportunities for Water Board employees to increase their knowledge, skills, and expertise.

Action 7.1.1. Through the Water Boards' Training Academy, and in consultation with potential partners, assess training needs by December 2008 (including future critical scientific competencies such as stream science and climate science), and develop and deliver courses and core curricula to meet those needs, beginning with enforcement and stormwater regulation by March 2009.

Action 7.1.2. Develop a rotational program for both rank-and-file and supervisory/managerial classifications that fosters inter-program and inter-government collaboration by June 2009.

Objective 7.2. Expand recruitment efforts of qualified professionals to fill vacancies in the Water Boards' workforce.

Action 7.2.1. Establish a recruitment plan by June 2008 to guide the recruitment efforts for attracting the most qualified prospective employees possible, including the development and delivery of a training program for State and Regional Water Board recruiters by December 2008.

Action 7.2.2. Create strategic partnerships by December 2009 with the State's university systems that offer degree and certificate programs applicable to the work of the Water Boards.

Objective 7.3. Ensure information, including scientific research and developing science related to emerging pollutants, is easily accessible by staff to achieve optimal job performance.

Action 7.3.1. Prepare an inventory of completed and ongoing Water Board and Water Board-funded research by June 2008, and use this information to establish a research agenda by December 2008 to identify, prioritize, and guide the funding of future research needs (funded research will be conducted by the Water Boards, our partners, and other research entities).

Action 7.3.2. Establish an electronic repository by December 2008 for the sharing of best practices, models, templates, plans, polices, research, and other information.

Objective 7.4. Leverage resources and expertise through innovative approaches and teams across Water Board programs and regions, and through partnerships with governmental and non-governmental organizations, to enhance existing workforce capacity and field presence, and provide information to help target Water Board efforts.

Action 7.4.1. Develop partnerships with other agencies that have environmental inspection and regulatory enforcement authority to address threats to water

quality. This effort will expand on previous successes in some regions involving local building, grading, and agricultural inspectors, and will include new efforts, such as a pilot enforcement program, in collaboration with the Department of Fish and Game, focused on stormwater concerns in the Los Angeles region by December 2008.

Action 7.4.2. Build a collaborative partnership of federal, State, and local interests to examine the connections between water quality, water quantity, and climate change on the coast from central California to the Oregon border, and to pilot approaches that could be expanded for regional or statewide application.

Action 7.4.3. Establish a mechanism by October 2008 to identify, and make available to any Water Board organization, regional and subject matter experts that will consult with and assist staff.

Action 7.4.4. Identify and use existing or new staff teams to integrate and enhance the effectiveness of Water Board efforts across regions and programs. Teams created to date include the Bay-Delta Team, Water Quality Data Team, Enforcement Coordination Team, and the Wetlands Policy Development Team. A water rights/water quality integrated decision-making team will be created by December 2011.