California Environmental Protection Agency

WATER BOARDS' STRATEGIC PLANNING

PROPOSED GOALS: 2008-2012

Water Boards' Vision: A sustainable California made possible by clean water and water availability for both human uses and environmental resource protection.

Water Boards' 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.

Water Boards

DRAFT
October 23, 2007

Foreword

This document is intended to facilitate discussion on the proposed programmatic goals for the Water Boards' Strategic Plan Update.

*The **proposed** goals, objectives, and actions (**proposed** goals) contained in this document were developed based on the input received at all of the various stakeholder forums held to inform the Water Boards on priorities for this strategic planning cycle. This update of the Water Boards' Strategic Plan (Update) is intended to cover the years 2008 – 2012. Beginning in calendar year 2008, the Water Boards will initiate an annual assessment of progress to date under the goals, objectives and actions of this update. This annual assessment will be used to identify any changes necessary to make the plan current and reflect lessons learned.*

The input generated for this Update was extensive, including: a multi-day, statewide stakeholder summit; a comprehensive staff summit; and 10 Regional Public Forums designed to solicit local input and themes. All of this input is summarized in "Water Boards Strategic Planning: Summary of Stakeholder Input" and can be found at http://www.waterboards.ca.gov/strategicplan/2007update.html.

*Using this information, suggested changes are included to modify the Water Boards' Principles and Values. In addition, the overarching goals described in the Water Boards' 2001 Strategic Plan are reflected as our "Desired Conditions" for moving into the future. One of the objectives for this year's update is to recognize the dual importance of both our programmatic and organizational priorities at the Water Boards. The format used for the proposed programmatic priorities in this Update includes a high-level description of each priority while the **proposed** goal reflects what we can realistically accomplish within the existing legal framework and resources. The proposed organizational*

priorities are presented as abbreviated goal statements that are currently undergoing further development.

*Based on future input opportunities, the **proposed** goals will be revised, and specific time schedules and performance measures will be developed, based upon the revised goals.*

The entire content of the Update, upon completion, is listed under the Table of Contents; the specific sections that are included in this discussion document are indicated.

California Water Boards' Strategic Plan Update – 2007

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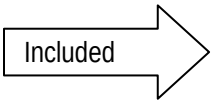
Drafts of the sections indicated by this arrow 

are included in this document.

California Water Boards' Strategic Plan Update - 2007

Mission *[unchanged from 2001 Strategic Plan]*

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.

Vision *[unchanged from 2001 Strategic Plan]*

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

Principles and Values *[new]*

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

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

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

Leadership: We strive to be a national and international leader in innovative approaches to water resource protection, and actively engage in collaborative partnerships to leverage funding, seek mutual solutions, and share information.

Collaboration: We seek mutual solutions, including integrated approaches, to complex water challenges through collaboration, cooperation, and partnerships within the Water Boards and with other agencies, jurisdictions, stakeholders, and 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 awareness and knowledge 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 *[goals from 2001 Strategic Plan]*

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.

Strategic Program Priorities *[new]*

1. Basin Planning
2. Total Maximum Daily Loads (TMDLs)
3. Water Rights
4. Water Use Efficiency
5. Enforcement Program Effectiveness
6. Groundwater Management Strategy

[These sections are addressed on the following pages.]

PROGRAM PRIORITY 1. Basin Planning

Issue Statement

Issue Summary

Regional Water Quality Control Plans (Basin Plans) are the cornerstone of California's regulatory programs to protect water quality. These plans describe: the beneficial uses that each water body supports, including drinking, swimming, fishing, and agricultural irrigation; the water quality objectives to protect those uses; and the actions needed to achieve the objectives, such as waste discharge permits and enforcement actions. The Basin Plans, originally written in the 1970s and partially updated in 1994, currently do not reflect the scope of changes in population, land use, pollution, hydrology, and other pressures that have occurred in the last decade. These pressures affect the quality of the waters that we drink, the ecosystems that the waters support, and natural resources that we rely upon and enjoy. Since the 1994 update, the Basin Plans have been independently and periodically modified to reflect specific changes and local concerns of each region. These Basin Plan amendments have been resource and time intensive, and are constrained to specific, identified needs. They have not provided opportunities for a comprehensive review and update that considers new science, new water quality problems, and new or changed laws.

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

Because the Basin Plans contain the beneficial uses and objectives for protection of water bodies and are the key basis for our regulatory actions, outdated and inadequate plan information has led to the current pattern of excessively long permit negotiations, appeals, remands, and litigation. Among the high priority issues in which critical information is needed is the development of appropriate guidance on both effluent-dominated and agriculturally-dominated water bodies. Inadequate Basin Plans also result in delays in major needed regulatory activities, timely issuance of permits, and achievement of water quality objectives, as well as possible inconsistent or inequitable application of regulatory approaches.

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 that more fully considers land use planning, stormwater permits, agricultural waivers, grazing, water quality certification of fill and dredged material discharges, wetlands and riparian habitat restoration, and other significant water quality issues. With a consideration of these factors, as appropriate, several key areas in need of update in Basin Plans can be identified, including:

- Incorporating ongoing changes in state and federal laws
- Reevaluating and refining designated uses, where needed
- Establishing biological objectives and designate tiered aquatic life uses
- Establishing numeric objectives for groundwater

- Revising numeric objectives to ensure appropriate limits are used in developing permits
- Addressing emerging pollutants
- Long-term salt management plans for protection of surface groundwater
- 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 address issues of outdated and inconsistently formatted Basin Plans, we will initiate a collaborative, interest-based process to bring all of the Basin Plans up-to-date in a format that is clear, useful to all users, and allows for more efficient future amendments. We will work collaboratively with stakeholders to address water quality issues of mutual concern.

Basin Planning -- Goal, Objectives, and Actions

Goal: All Basin Plans are up-to-date and consistently organized to provide a clear structure that identifies beneficial uses, water quality objectives, and related information. The Plans are presented in a format that is understandable and readily accessible to the public, dischargers, and other interested parties.

Objective: Organize and conduct a collaborative, interest-based process to synthesize and assess statewide and regional needs for a statewide Basin Plan update.

Action: Immediately initiate planning to convene a stakeholder group in early 2008 that will provide input and advice on defining the scope and approach for a Basin Plan update.

Objective: Using the collaborative, interest-based stakeholder process, develop a single Basin Plan format to guide future updates statewide so that each plan is consistently organized, understandable, paper- and web-based, and provides a clear point of entry for both the public and dischargers.

Action: Use stakeholder group input and advice to develop a *statewide format* for the Basin Plans that will synthesize statewide and regional needs, and allow easy incorporation of new amendments.

Action: Use stakeholder group input and advice to develop a *user's guide* to the Basin Plans to provide Water Board staff, dischargers, and the public with an accessible guide to navigating the Basin Plans.

Action: Use stakeholder group input and advice to prepare a *regulatory compendium* to the Basin Plans to assist Water Board staff, dischargers, and public in locating the State's water quality regulations.

Objective: Achieve near-term priority Basin Plan update needs by collaborating in third-party initiated processes that incorporate Water Board requirements and stakeholder interests.

Action: 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, as required under the federal Clean Water Act.

PROGRAM PRIORITY 2. Total Maximum Daily Loads (TMDLs)

Issue Statement

Issue Summary

The Water Boards face complex challenges in improving water quality in specific water bodies around the State. For a water body to support one or more uses, such as drinking, recreation, or aquatic life, the water must first meet certain quality standards. The Clean Water Act requires that we identify water quality trends and prepare a prioritized list of waters bodies that are not attaining water quality standards. For those impaired waters, we must establish and implement Total Maximum Daily Loads (TMDLs) to bring these water bodies into compliance with standards. A TMDL is a determination of the amount of a pollutant that a water body can receive and still meet water quality standards, along with an allocation (distribution) of portions of that amount to the sources responsible for producing the pollutant. The pollutants can come from a single, discrete source (point source), such as a pipe or culvert, or be so diffuse and cover such a wide area that no single, localized source of the pollutant can be identified (non-point source). Overall, there are five steps involved in producing a TMDL: (1) water body assessment; (2) stakeholder involvement; (3) allocation development; (4) implementation plan development; and (5) Basin Plan amendment.

The challenge faced by the Water Boards with respect to TMDLs is enormous. On June 27, 2007, the USEPA issued its final decision regarding California's 2006 list of impaired water bodies. The final list contains 2,240 water body/pollutant combinations (one water body can be listed for one or multiple pollutants), an increase of 357 in the number of listings compared to the 2002 list. As of July 1, 2007, the Water Boards had developed 134 TMDL projects addressing 553 water body listings at a cost of $75.7 million. We are actively working on 226 TMDL projects, leaving 109 more to be started (each project addresses one or more listing). An approved TMDL contains an implementation plan describing the actions that each Regional Water Board and all affected dischargers will take to meet this standard.

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

Having impaired waters in the State means we do not have our desired condition that all California waters support their beneficial uses. With today's headlines and concerns about water shortages and drought, the additional problem of water quality impairment complicates the search for solutions because it means that less high-quality water is available for use.

Implementing a TMDL can affect multiple stakeholders, and have far reaching economic and environmental consequences in a watershed. A TMDL must consider all sources and causes of impairment. Allocating responsibility for corrective measures, regardless of sources or cause, is essential to attain water quality standards. TMDLs are not self-implementing; each typically requires that multiple Water Board regulatory programs work in coordination to fully achieve the goal of a TMDL. With 134 TMDLs completed and ongoing efforts to develop the remaining 335 identified projects, the new challenge is effective TMDL implementation.

Long-range approaches to managing the problem

In any watershed, the water quality reflects to some degree all activities, anthropogenic (man-made) and naturally occurring, throughout the system. Ideally, all pollutants in a watershed would be addressed in a single TMDL process and program of implementation. In that case, every discharger would then know what their individual responsibilities and expectations are for restoring polluted water bodies within the watershed. In some cases, even the most scientifically rigorous TMDL is not sufficient to meet water quality standards. Ultimately, we want to look at water availability and the water rights process as additional tools to address water quality problems. The strategic program priority for "Water Rights" partly addresses this issue.

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

Developing TMDLs is a complex scientific and regulatory task. A given watershed may require multiple TMDLs that address a multitude of pollutants from different sources. The complex nature of TMDL development and limited staff resources prevent the Water Boards from implementing the single TMDL solution. That is partly because the science behind each pollutant may be very unique, and the collection and evaluation of the data to arrive at allocations for a myriad of sources very complex. There are cases, however, in which a watershed-wide approach can be taken to individual or closely linked groups of pollutants, and the Water Boards will explore those opportunities. Also promising for greater efficiency is the fact that approaches to implementation of individual TMDLs may have many common characteristics. The Water Boards will look at achieving economies of scale and scope by developing master implementation plans that can accommodate a wide range of load reduction strategies that affect many, if not all, of the pollutants in a watershed. This approach, combined with other elements of a revised TMDL implementation strategy, will maximize the effectiveness of available TMDL resources.

TMDLs -- Goal, Objectives, and Actions

Goal: All Water Boards efficiently and effectively develop and implement TMDLs on a watershed basis using a consistent statewide approach to reduce cost inefficiencies associated with the adoption of overlapping implementation plans.

Objective: Expand the use of regional/watershed-wide TMDLs for identified pollutants or pollutant groups.

Action: Identify pollutants or groups of pollutants for which implementation plans can be developed on a regional or statewide basis.

Objective: Adopt a "master" implementation plan for each watershed that addresses pollutants that may have overlapping implementation strategies, where feasible, and can be revised to include additional implementation elements for new TMDLs that are adopted in the future.

Action: Identify successful implementation plans that can be used as models to create a standard, comprehensive plan format.

Objective: Develop a statewide TMDL implementation strategy based on expansion and improvement of current efficiencies and approaches.

Action: Identify implementation strategies with broad application that can be applied through policies and permits to restore water quality, which may eliminate the need to develop a TMDL.

Action: Identify the water bodies where full TMDL implementation will not achieve water quality objectives without flow augmentation and refer these specific cases for consideration by the State Water Board.

Action: Systematically and consistently measure the effectiveness of TMDL implementation actions in improving water quality and restoring beneficial uses.

Action: Improve communication with the public, discharger communities, and Legislature to increase transparency and clarify roles in successful TMDL implementation.

PROGRAM PRIORITY 3. Water Rights

Issue Statement

Issue Summary

As California's population continues to grow, greater demands will be made on the available water supply. To ensure that water is put to the best possible uses while serving the public interest and the environment, the State has had a water rights system in place for many decades. A water right allows water to be diverted from a source and put to beneficial, non-wasteful use. Before issuing a water right, the State Water Board must find that "unappropriated" (unclaimed) water is available to supply the applicant. In making that finding, the State Water Board must take into account, whenever it is in the public interest, the water flows needed to remain in the stream for the protection of other beneficial uses, including 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 used and allocated is the fact that existing claimed water rights in combination with current permitted water appropriations amount to about five times the available water supply. Given that disparity, the problem is how to balance equitably the needs of off-stream water rights holders and instream flow requirements.

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

Differences in rainfall and temperature and stream flow needs for fish and wildlife, navigation, and other public trust uses affect water supply reliability for other water users. The water available for these uses will also be affected by global climate change. Warmer air temperatures lead to increases in water demand and possible changes in future hydrologic conditions, including increased water temperatures, reduced Sierra snowpack, earlier snowmelt, and a rise in sea level. Changes in snowpack and 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 fishes. 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, 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, California must manage water in ways that protect and restore the environment.

Long-range approaches to managing the problem

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 cost sharing and coordination of diversions. By participating in a collaborative approach, water users could jointly develop local physical solutions to their watershed-specific problems. For example, instead of the State Water Board and other regulatory agencies attempting to establish

and enforce stream flow standards through regulation of individual diversions for new applications or in the context of enforcement actions, 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 could work together on projects to improve habitat at the most significant locations in the watershed. Extensive use of this individual watershed approach using coordination and collaboration, however, is currently beyond the State Water Board's resources.

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

Funding limitations impose significant constraints. The law currently requires the California Department of Fish and Game (DFG) to conduct flow studies on priority streams and to recommend minimum stream flow requirements to the State Water Board. The State Water Board is directed to consider the recommended stream flows when it acts on a water right application. The Division of Water Rights collects filing fees on behalf of the DFG to fund the Department's work on instream flow requirements. However, the funding for this purpose has diminished over time as a result of a reduction in the number of water right applications, and, therefore, minimum stream flows have not yet been developed in many parts of California. To address that problem, Governor Schwarzenegger signed Assembly Bill 2121 in 2004 (Water Code Section 1259.4, referred to as "North Coast Instream Flow Policy"). The legislation requires the State Water Board to adopt principles and guidelines for maintaining stream flows in California's central coast streams in the counties of Marin, Napa, Sonoma, Mendocino, and southern Humboldt. Currently, there are over 250 applications to appropriate water in these central coast streams. The State Water Board will work with the Regional Water Boards and the DFG to develop 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.

Water Rights -- Goal, Objective, and Actions

Goal: In administering water rights, the Water Boards will ensure that adequate flows are available for the protection of fish and wildlife habitat while meeting the need for diversions of water for other uses.

Objective: Prioritize California water bodies for developing and implementing standards for minimum stream flows needed to remain in the source for protection of fish and wildlife habitat.

Action: The State and Regional Water Boards will work with the DFG to develop a preliminary list of priority California streams for minimum stream flow standards development. The development of the list will take into consideration the streams affected by the North Coast Instream Flow Policy.

Action: The State and Regional Water Boards will work with the DFG to develop three minimum stream flow proposals that will be brought before the State Water Board for consideration and possible implementation.

Action: For priority streams where minimum flows have been developed and are not being met, determine whether actions are necessary to protect the public trust by preventing waste or unreasonable uses or methods of diversion.

PROGRAM PRIORITY 4. Water Use Efficiency

Issue Statement

Issue Summary

As California's population continues to grow and climate change impacts occur, demand and competition for the State's limited water supplies will increase. Over the past 50 years, we have met much of our 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 municipal wastewater. As we move into the future, we must broaden our definition of efficient water use to include efforts to treat and use urban stormwater. 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. 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 for conservation by urban and agricultural consumers. Based on projections of the 2002 Recycled Water Task Force, as reflected in the State Water Plan Update of 2005, California has the potential to recycle an additional 1,400,000 to 1,670,000 acre-feet per year of water beyond 2002 by the year 2030. This is about twenty-three percent of the available municipal wastewater. Most of our efforts to date have relied upon voluntary participation. However, it is important to recognize that the Water Code does contain tremendous tools to compel greater conservation and recycling through various permits.

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

Despite the many positive efforts made to date by state and federal funding agencies to promote and fund water use efficiency projects, California is struggling to meet its goals as defined in the State Water Plan. For recycled water alone, we will likely not meet the established 2010 goal of 1,000,000 acre-feet per year of recycled water use. Stakeholders are concerned about how we are going to take advantage of recycling opportunities for stormwater, one of the largest contributors to non-point source pollution, and how increasing municipal wastewater recycling can occur without adverse economic impacts. 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.

Long-term approaches to managing the problem

The implementation of a comprehensive water use efficiency strategy would leverage the authorities and expertise of all agencies with responsibility for water management in the State. One step is to prioritize and target available funding. (It is estimated that $300 million annually in grants and low interest loans will 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.) In addition, a continuum of incentives could be developed to maximize water efficiencies, with clear triggers signaling a transition from voluntary to mandatory conditions.

Achieving our recycled water potential also requires greater public acceptance and confidence that the use of recycled water is safe for such purposes as indirect potable reuse and irrigation of edible crops. The Water Boards should continue to facilitate the coordination of water quality data statewide. In addition, we should lead and coordinate research efforts designed to identify effective technologies and practices for addressing emerging chemicals of concern, salinity management, virus removal, microbiological safety of water used on edible crops, environmental concerns, economics and effective marketing methods of recycled water.

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

Methods of reducing or mitigating storm water runoff provide opportunities to reintroduce the runoff into a usable water supply or recover, treat, and deliver it directly to meet a water demand. The Central Coast Regional Water Board is leading our efforts to establish an institute that will provide interdisciplinary technical expertise in support of low-impact and other sustainable development techniques. The institute will leverage ties to promote education and leverage funding for research and implementation. The Water Boards can also impose methods of storm water management that will augment water supply in conjunction with other water use efficiency methods. Similarly, we can use our permit authority to compel municipal waste water treatment plants to tie in water recycling as a part of their management of wastewater to meet discharge standards. An untapped feature of the State's water rights law includes conservation mandates that can also be implemented and enforced through water rights permits.

Water Use Efficiency -- Goal, Objectives, and Actions

Goal: Increase the water supply available to meet water demands due to population growth and impacts associated with climate change by augmenting water recycling and water conservation and implementing stormwater management practices.

Objective: Increase water recycling, focusing on flows that would otherwise be discharged to irrecoverable water bodies.

Action: Require the development of Water Recycling Plans for Waste Water Treatment Plants and prioritize implementation for those plants that discharge effluent to irrecoverable water bodies.

Objective: Control urban runoff volume and reduce pollutant loadings to receiving waters by reducing, capturing, treating and reusing urban runoff and non-point source flows.

Action: Develop and require standard urban runoff reduction measures, including infiltration, low-impact development techniques, capture, treatment and use of stormwater, and appropriate monitoring requirements to be incorporated into urban stormwater permits.

Action: Facilitate the establishment of a Low-Impact Development Institute which will provide expertise that can be tailored to the needs of California's watersheds and communities. The Institute pilot project will be established in the Central Coast region to take advantage of unique coastal resources and expertise.

Objective: In collaboration with others, promote implementation of best management practices for water conservation.

Action: Work with the CALFED agencies, California Urban Water Conservation Council (CUWCC), Agricultural Water Management Council (AWMC), and stakeholders to assess and update urban best management practices (BMPs) and efficient water management practices (EWMPs) for agriculture, as appropriate.

Action: 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.

PROGRAM PRIORITY 5. Enforcement Program Effectiveness

Issue Statement

Issue Summary

A critical piece of the Water Boards' regulatory program is enforcement. An effective enforcement program can prevent pollution from occurring, promote prompt cleanup and correction of existing pollution problems, protect downstream water users and the environment, and ensure that water is allocated to protect all beneficial uses. The State Water Boards' programs seek to ensure and measure compliance through an integrated system of actions. These actions include: compliance assistance, inspections, discharger monitoring report reviews, investigations of complaints, formal and informal enforcement actions, coordination with other law enforcement agencies, and monitoring and reporting the effectiveness of the State and Regional Boards' actions. Two aspects of the enforcement effort require ongoing attention. One is the issue of consistency in enforcement decisions and actions across the state. This issue relates to the degree of flexibility that regional boards should exercise in responding to local needs and conditions. The other is the lack of data that would allow objective evaluation of the effectiveness of our enforcement program.

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

Enforcement not only protects the public health and the environment, but also creates an "even playing field," ensuring that dischargers and water users who comply with the law are not placed at a competitive disadvantage by those who do not. Consistency in enforcement of the State's water quality laws has been named by stakeholders and the Legislature as one of the most important issues facing the Water Boards. The lack of data demonstrating compliance with and enforcement of water quality standards has been a key criticism of our programs. Without information on the scope and effectiveness of our compliance and enforcement efforts, resources cannot be targeted to the area of greatest need and more importantly specific, "high profile" cases are perceived as the "norm."

Long-range approaches to managing the problem

Successful enforcement discourages violation of the law. To maximize the deterrent effect of enforcement and instill public confidence, every violation should be met with some form of response from the Water Board. The approach for the response should be consistent from region to region. Standard responses for the type, frequency and severity of violations will need to be consistently implemented and the staffing levels to support a comprehensive enforcement program will need to be increased. The remedies imposed by formal enforcement actions, including penalties, should be consistently imposed across the regions and be sufficiently high so as to have a meaningful deterrent effect. The data that the Water Boards tracks on both compliance and enforcement efforts should inform the Water Boards whether and/or how enforcement strategies are having an impact on noncompliance and give the Water Boards a measure by which to tailor enforcement strategies, enforcement targets, and the use of enforcement tools to obtain successful and long-term enforcement outcomes.

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

Based upon our current structure and resource constraints, our commitment to enforcement must first be demonstrated by giving the public and those we regulate the information they need to monitor our progress and become proactive stewards of the environment. Second, careful prioritizing of our efforts will enable us to make better use of limited State resources and focus on areas of greatest environmental need. Third, the Water Boards can take steps to ensure we are consistent in how we prioritize and consider appropriate enforcement actions, with an emphasis on deterrence of future non-compliance.

Enforcement Program Effectiveness -- Goal, Objectives, and Actions

Goal: The Water Boards' will increase the consistency and deterrence value of our enforcement efforts.

Objective: Improve the accountability of the Water Boards' enforcement programs.

Action: Measure and report enforcement responses to all significant violations.

Action: Measure and report recovery of economic benefit in all penalty actions, with a goal of liability assessments in excess of 100% of the economic benefit obtained from noncompliance.

Action: Establish and post on our website a statewide significant non-compliance report for water quality.

Objective: Measure the effectiveness of our compliance and enforcement programs.

Action: Develop meaningful performance measures which will assess the impacts of our compliance and enforcement efforts on the environment as well as each permitted facility's overall operational performance.

Action: Develop an annual web-based report on our enforcement activities that tracks performance measures, reports enforcement accomplishments in the past year, and adjusts enforcement priorities for the coming year.

Objective: Establish a more consistent approach to enforcement.

Action: Establish a clear, consistent approach to prioritization of enforcement targets statewide, based on the threats and adverse impacts to beneficial uses.

Action: Revise the Water Quality Enforcement Policy to ensure the Water Boards are consistent in the factors we consider in determining an appropriate enforcement response, and that we consistently provide a deterrent to future non-compliance.

PROGRAM PRIORITY 6. Groundwater Management Strategy

Issue Statement

Issue Summary

Saltwater intrusion, land subsidence, and groundwater pollution have impacted or impaired portions of many groundwater basins throughout the State, making their use for drinking water or for additional storage and supply a significant challenge. Groundwater pollution, in particular, has resulted from discharges of agricultural, municipal, and industrial contaminants and requires treatment to render water safe for consumption.

The State Water Board has implemented a set of legislatively mandated programs to protect groundwater quality which include four elements: (1) prevention of release of hazardous substances through prescriptive containment standards at waste disposal sites; (2) cleanup of sites where hazardous substances have been released; (3) permitting programs for ongoing discharges to groundwater from facilities such as municipal wastewater treatment plants; and (4) focused ambient groundwater monitoring, as well as monitoring at permitted facilities and cleanup sites, to assess regional groundwater quality. Despite these programs, groundwater quality is poor in many areas because of the impact of intensive land use activities, principally for urban and agricultural uses. Intensive human activities always bring large salt and nutrient loads into an area. Some of these loads are intentionally applied to the soil and some are incidentally discharged, but in the end they cause groundwater degradation. Additionally, urban and agricultural chemical use results in a small fraction of these chemicals ending up in the groundwater, either through carelessness or intentional, unlawful discharge.

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

Increased reliance on groundwater for drinking and other beneficial uses will be necessary to meet California's future water supply needs. Global warming and the threat of prolonged droughts forecast the need for additional groundwater storage to capture precipitation runoff. It is broadly recognized that restoration of polluted groundwater aquifers will be a challenge at best. Continuation of intensive land uses, such as urbanization and agriculture, which result in discharges to land, will result in degradation of groundwater in the long term even with the most effective management practices. Protecting the remaining critical groundwater aquifers, therefore, is one of the most important challenges facing us in ensuring both water supply and public health.

Long-range approaches to managing the problem

The State can slow the rate of groundwater degradation by mandating and enforcing nutrient application rates in agricultural areas. However, this approach would be very resource intensive and would need extensive funding and legislative support. Similar requirements in an urban setting are problematic because of the large numbers of

individuals involved. Education programs may also be effective in slowing groundwater degradation.

In the long term, the solution to the problem of groundwater degradation due to intensive land uses is comprehensive groundwater management with wellhead treatment as an element of that management. Groundwater management generally requires that an entity be assigned responsibility for management of the resource. The duties of this entity would be to ensure that extractions, inflows, pollutant inputs, and pollutant outputs result in a sustainable situation that protects beneficial uses. These responsibilities must be based on a comprehensive data system that recognizes the influences on both surface and groundwater, and that collects and makes available all groundwater data maintained by State agencies and others, as appropriate.

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

In addition to the four program elements that are the cornerstone of the Water Board's current efforts, in its Bulletin 118 2003 update, the California Department of Water Resources (DWR) identified individual groundwater basins and sub-basins throughout the State that serve, or could serve, as sources of high quality drinking water. Bulletin 118 also summarizes approaches and tools available for local groundwater management. Within this framework, the State and Regional Water Boards can play an important leadership role through encouraging, facilitating, and promoting local management of groundwater resources, sharing water quality information with local agencies, and building awareness of important groundwater protection concepts. Additionally, the Water Boards can leverage the work of the California Water Quality Monitoring Council to integrate groundwater data with surface water data and develop comprehensive recommendations for meeting the State's groundwater needs.

Groundwater Management Strategy -- Goal, Objective, and Actions

Goal: Promote development of local/regional groundwater management strategies that recognize land use and potential climate change effects on groundwater quality and supply. Encourage and facilitate conjunctive management of groundwater and surface water resources to optimize water use and storage, and protect drinking water, agricultural needs, and other beneficial uses for future generations.

Objective: Encourage and facilitate the formation of local entities to develop groundwater management plans pursuant to DWR recommendations, particularly for higher priority basins and recharge areas.

Action: The State and Regional Water Boards will develop a process that the Regional Boards will use to prioritize groundwater basins based on current use, overall groundwater quality, and degree of basin and recharge area management by local entities.

Action: For higher priority basins and recharge areas, Regional Boards will (1) evaluate and regulate activities that impact or have the potential to impact beneficial uses, (2) recognize the effects of groundwater and surface water

interactions on groundwater quality and quantity, and (3) engage local entities in developing a plan for the management of this resource. This approach must be data driven and will necessitate the integration of both ground and surface water data in the State's network for water quality information being overseen by the California Water Quality Monitoring Council.

Action: For higher priority basins and recharge areas that continue to see a decline in water quality, and where no local/regional groundwater management strategy has been implemented, the Regional Boards shall request that the State Board initiate groundwater adjudications, in accordance with Water Code Section 2100, to protect the quality of the groundwater.

Strategic Organizational Priorities *[new]*

Proposed Goals

1. Become a performance-based organization that can demonstrate measurable improvements towards preserving the State's water resources including the supply and quality of surface and groundwaters for beneficial uses.

2. Enhance consistency across the regions where appropriate; encourage innovation for new solutions where possible and share results.

3. Promote transparency, accountability and good science through enhanced data tools and information.

4. Implement a Workforce Plan that builds greater organizational workforce capacity, enables employees to achieve a higher level of performance and provides sustained employee dedication to the mission of the Water Boards.

5. Encourage opportunities for collaboration with state and local agencies and other stakeholder interest groups to leverage partnerships, promote public awareness, facilitate research, enhance project and program financial assistance and improve regulatory assistance.