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Comments of the California Department of Water Resources
To the State Water Resources Control Board
At the October 1, 2008 Public Workshop on
"Development of An Urban Water Conservation Regulatory Program"

California water managers face tremendous challenges today. Over the past few years, Californians have gained a greater understanding of the magnitude and severity of these challenges. Among the most daunting are climate change and its effects on water supply and reliability, vulnerability of the Sacramento-San Joaquin Delta, and environmental water needs that reduce availability of water supplies for other beneficial uses.

Climate change is affecting water supply reliability in several negative ways.[1] Warmer temperatures are increasing evapotranspiration (plant water needs) on farms and landscapes. A warming climate is also causing more precipitation to fall as rain rather than snow, decreasing the size and extent of the Sierra snowpack, California's largest water supply "reservoir."

Climate change is also contributing to the vulnerability of the Sacramento-San Joaquin Delta. Sea level rise puts more pressure on fragile levees. These same levees are growing more vulnerable to failure as we continue to mine the soil behind them through agricultural practices that cause soil oxidation. Increased weather variability predicted to result from climate change may cause higher flood flows, further jeopardizing the integrity of Delta levees.

Finally, the reliability of water supplies for human uses is reduced as we gain a greater understanding of environmental water needs and additional supplies are dedicated to the environment through voluntary action, regulation, or court decisions.

Response to Water Challenges

In 2005 the Department of Water Resources (DWR) published *Water Plan Update 2005*, and it represented a significant departure from previous updates of the California Water Plan.[2] *Water Plan Update 2005*, more than past updates, was a strategic plan for California water management at the state and regional levels. The plan stressed integrated regional water management (IRWM) as an approach that provides flexibility in the face of water challenges, helping water managers maintain reliability even when faced with climate change, a vulnerable Delta, and collapsing ecosystems.

This integrated approach stresses the importance of developing a portfolio of resource management strategies, much as investment advisors stress the importance of a diversified financial portfolio. *Water Plan Update 2005* identified two dozen resource management strategies that might be appropriate for inclusion in an integrated regional water management plan.

This approach to water management -- stressing regional planning and diverse portfolios of actions -- was reinforced in 2006 with the passage of Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006. This

act makes available $1 billion in grant funding for IRWM. The funding is allotted by hydrologic regions of the state, and the resource management strategies described in the Water Plan are eligible for grant funding.[3]

Every resource management strategy described in *Water Plan Update 2005* makes a unique contribution to regional water management. Some are intended to improve water quality, for example, while others contribute to water supply. One resource management strategy stands out because it is expected to make more water available than any other strategy described in the plan: urban water conservation. This strategy alone is expected to free up between 1.2 and 3.1 million acre-feet per year by 2030.

Governor's Conservation Goal

In February 2008 Governor Schwarzenegger acknowledged the critical importance of urban water conservation in addressing our water challenges. In a letter to State Senate leadership, the Governor outlined a seven-point plan to improve conditions and solve problems in the Sacramento-San Joaquin Delta.[4] The first item on the Governor's list was a call for increased water conservation, specifically a 20% reduction in per capita water use by 2020. The Governor directed a team of state agencies including DWR and the State Water Boards to develop a more aggressive conservation plan for California that would enable the state to meet the Governor's goal.

Although state agencies will not recommend a plan to the Governor until early 2009, it is possible to identify the categories of actions that might be recommended. These include legislation to enact conservation targets into law or require additional efficiency measures, regulation to ensure implementation of efficiency measures by water suppliers or water users, incentives such as availability of grant or loan funds, and disincentives such as restricted access to funding. Most likely, a diverse portfolio of new actions will be needed to capture California's full conservation potential.

Current DWR Conservation Activities

Although new actions will be necessary to meet the Governor's conservation target, there are programs under development today that will help us reach the target. DWR is involved in several of these programs including updating the state's Model Water Efficient Landscape Ordinance, improving the availability of information about plant water needs, and ensuring that water suppliers are complying with state conservation laws as a condition of receiving additional state funding.

DWR first developed a Model Water Efficient Landscape Ordinance in 1992. Recently, pursuant to state legislation, DWR has worked to update the ordinance reflecting new technology, improved irrigation equipment, and the urgent need to address our water challenges.[5] The new model ordinance will be completed early in 2009. At that time it will be available to local governments for adoption as a local ordinance governing landscape water use efficiency.

Acknowledging the significant water savings that can be achieved through improved irrigation, DWR is also improving the California Irrigation Management Information System, or CIMIS. This system consists of a network of more than 130 automated weather stations around the state that supply information to a central computer. Using this weather information, the system

calculates plant water needs. Farmers and landscape managers can then use this information to schedule irrigations. System improvements will allow the CIMIS network to communicate with the new generation of irrigation controllers that schedule irrigations automatically according to evapotranspiration, and will allow users to interpolate between CIMIS stations.

Finally, DWR is working with the State Water Boards to implement the provisions of AB 1420, enacted in 2007. This law requires urban water suppliers to implement demand management measures listed in the Water Code as a condition for receiving water management grant or loan funds from the state.[6]

Best Management Practices

Water managers can improve supply reliability for their customers by developing a portfolio of resource management strategies. Similarly, a diverse portfolio of urban water conservation programs will enable California to increase the success of its water conservation efforts. Some conservation will come from new programs or programs currently under development, but significant additional potential exists in more widespread implementation of existing measures that are well-known and require no new technology.

Water Plan Update 2005 is not the only recent publication to cite significant additional potential for urban water conservation. In 2006 the CALFED Bay-Delta Program published the *CALFED Water Use Efficiency Comprehensive Evaluation*, identifying significant additional conservation savings that could be reaped from full implementation of well-known and long-standing conservation measures, the Best Management Practices for Urban Water Conservation, or BMPs.[7] These are defined conservation measures with defined levels of implementation, developed in a consensus process involving urban water suppliers and environmental organizations in the early 1990's. They were intended to be an evolving standard that would be modified, improved, and strengthened as technology and experience allowed.

Significantly, the BMPs were developed in response to proposals by the State Water Resources Control Board to require certain conservation measures. Water suppliers responded by developing a voluntary, flexible process that would hold the potential to achieve even greater conservation savings. The institution set up to administer the process, the California Urban Water Conservation Council (CUWCC) has been an extremely positive and constructive force in water conservation since its inception.

The BMPs were designed to be the "floor" level of conservation for virtually every urban water supplier in California, the minimum acceptable level of effort that a supplier might devote to its conservation programs. Some water suppliers have viewed the BMPs in that way. Unfortunately, other suppliers viewed the BMPs as the level of conservation they needed to implement in order to avoid regulation. They did what was prescribed by the BMPs, and no more. Still others – perhaps the largest group of water suppliers -- achieved only partial implementation.[8]

Today, there is an effort to update the BMPs consistent with the evolving standard that was originally envisioned. There is hope that the updated BMPs will offer greater flexibility and therefore garner greater levels of implementation. However, the disappointing rate of implementation that California has achieved more than seventeen years after agencies first began to commit to the BMPs suggests that something more is needed. A voluntary collaborative approach works well for many water suppliers and for implementation of many measures, and should remain the cornerstone of California conservation programs. However, water suppliers

who have demonstrated a long-standing unwillingness to implement the minimum acceptable level of effort must be held accountable.

Recommendations

California needed to increase its level of conservation in 1991, and devised new practices and new institutions to achieve greater efficiency. Today, our water challenges are far greater, and effective conservation is needed far more. Additional regulatory programs are needed to achieve the conservation that was anticipated in 1991, and may be needed to achieve the Governor's goal of an additional 20% reduction in *per capita* use by 2020.

However, a regulatory approach to water conservation must complement, not replace, the collaborative approach that has been the hallmark of California's efficiency improvements. Further, any regulatory approach must be consistent with concurrent processes including the CUWCC effort to revise and update the BMPs, and the development of a more aggressive conservation plan requested by the Governor.

New regulatory actions can preserve California's collaboration and voluntary conservation implementation if these regulatory actions are properly structured. Two potential approaches to regulatory action could perform in this manner. One alternative would be regulatory action directed narrowly at water suppliers who have failed to meet minimum consensus standards of conservation. The second approach would be regulatory action that would apply broadly while preserving flexibility and accommodating varying regional conservation programs. A carefully-crafted regulatory program could include both approaches while preserving and even strengthening the productive collaborative nature of urban water conservation in California. The Water Boards' evaluation of mandated conservation pricing as part of an urban water conservation regulatory program is consistent with the second of these approaches.

This concludes DWR written comments on the Water Boards' development of an urban water conservation regulatory program. We appreciate the opportunity to comment and look forward to working with the Water Boards to develop a range of new actions to achieve additional urban water conservation in California.

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[1]California Department of Water Resources, *Progress on Incorporating Climate Change into Management of California's Water Resources*, Sacramento, July 2006.
[2] California Department of Water Resources, *California Water Plan Update 2005: A Framework for Action*, Bulletin 160-05, Sacramento, December 2005.
[3] California Public Resources Code, Sections 75026 -- 75028.
[4] Schwarzenegger, Arnold, California State Governor, Letter to California State Senate, February 28, 2008.
[5] California Water Code, Sections 65591 – 65599.
[6] California Water Code, Section 10631.5.
[7] CALFED Bay-Delta Program, *Water Use Efficiency Comprehensive Evaluation*, August 2006.
[8] California Urban Water Conservation Council, *Annual Report, 2006*.