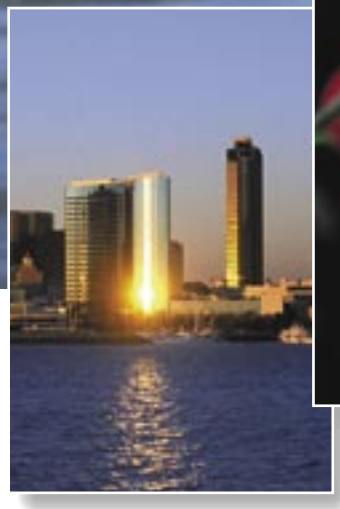
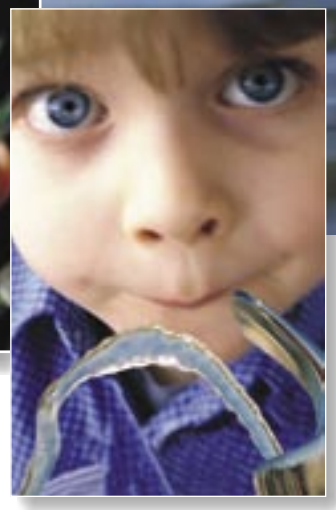
Association
of California
Water Agencies

No Time To Waste

A Blueprint for California Water





Association
of California
Water Agencies
Since 1910
Leadership
Advocacy
Information

BLUEPRINT

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ACWA's mission is to assist its members in promoting the development, management and reasonable beneficial use of good quality water at the lowest practical cost in an environmentally balanced manner.

May 2005

Association of California Water Agencies

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Executive Director
Steve Hall

ACWA is a statewide non-profit association whose 440 public agency members are responsible for about 90% of the water deliveries in California.

The Association of California Water Agencies

(ACWA) set out to develop this Blueprint with three purposes in mind.

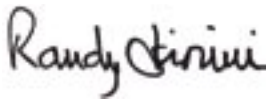
The first was to bring together the diverse voices within the water community to identify our biggest challenges and agree on actions needed to resolve them. The second was to collectively put together a forward-looking action plan for meeting California's future water needs. The third was to create a policy-oriented document that would encourage leaders at the state and federal level to re-engage in water issues and also provide a roadmap for investing in our water future.

We believe this Blueprint achieves those goals. As the local public agencies responsible for delivering water to Californians throughout the state, ACWA's 440-plus members have a unique perspective on our state's changing water needs and how best to address them. The recommendations set forth in this document reflect the on-the-ground experiences and insight of individual water agencies – each with its own view of the state of our water resources, local priorities and future demands.

As work progressed on our Blueprint, developments inside and outside the state Capitol made it clear our effort was well timed. Frank discussions are under way about the need for all types of infrastructure including water facilities. The debate is raising very real policy issues that must be addressed openly and earnestly to ensure our water supply system remains viable for future generations.

Our hope is that the ACWA Blueprint will help frame the discussion and decision-making required to provide all Californians with adequate, reliable supplies of high quality water, a healthy environment and a strong economy for decades to come.

E.G. "Jerry" Gladbach
ACWA President



Randy Fiorini
ACWA Vice President

FOREWORD

Vision without action is merely a dream.
Action without vision just passes time.
Vision with action can change the world.

– Joel A. Barker
Author, Teacher, Management/Leadership Expert

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EXECUTIVE SUMMARY

California has been well served by its water supply system, but it has been more than 30 years since improvements were made on the scale required to keep pace with the state's growing population and changing water needs.

That dynamic must end. Without significant new investments in our statewide infrastructure starting now, it will be increasingly difficult and expensive for California to support both a healthy environment and a strong economy in future years.

ACWA has called together local water leaders from throughout the state to craft an action plan for meeting California's diverse water supply needs in the coming decades. This Blueprint is the result of that effort. It includes a list of actions, summarized below, that collectively will take us a long way toward meeting that goal.

California cannot just conserve its way or transfer its way or build its way to a secure water future. Indeed, it will take a diverse mix of programs and projects that incorporate infrastructure improvements, water use efficiency, water recycling, desalination, voluntary water transfers and a variety of other sound water management techniques to provide the level of flexibility and reliability required. ACWA's Blueprint is built on that mix of strategies, and draws on years of planning and study at the federal, state and local levels. It complements ongoing local initiatives and promotes regional solutions that will play an increasingly critical role in our future.

ACWA calls on policy leaders and lawmakers at all levels to embrace this Blueprint and begin taking action today to address California's water future.

Summary of Action Plan

I Improve the existing Delta water conveyance system to increase flexibility and enhance water supply, water quality, levee stability and environmental protection in the near term.

Aerial View of Sacramento-San Joaquin River Delta.

The Sacramento-San Joaquin River Delta is the single most important link in California's water supply system. Two of the state's largest water projects – the State Water Project (SWP) and federal Central Valley Project (CVP) – convey water through the Delta to more than 22 million Californians and 7 million acres of highly productive farmland. Improvements to the existing conveyance system are needed to increase flexibility and enhance water supply, water quality, levee stability and environmental protection in the near term.

A coordinated set of actions known as the Delta Improvements Package has been developed through the CALFED Bay-Delta Program to achieve those goals in a balanced manner. The package includes an expansion of permitted pumping capacity in the Delta to provide flexibility to move pumping from fish-sensitive, drier periods to less sensitive wetter periods. It also includes actions to protect levees, enhance ecosystem health and improve water quality for in-Delta water users as well as others who rely on the Delta for their water supply. ACWA recommends that state and federal agencies complete environmental reviews now under way, vigorously defend against litigation challenging the actions and implement the Delta Improvements Package in a timely way.

II Evaluate long-term threats to the Delta levee and conveyance system and pursue actions to reduce risks to the state's water supply and the environment.

Beyond the immediate need for the improvements described above, the Delta faces threats to its long-term viability as a water supply source and as an ecosystem. Risks posed by levee instability, land subsidence, major flood events, rising sea levels and earthquakes together make the Delta increasingly vulnerable as a long-term water conveyance system and could imperil the water supply for much of the state. In addition to urging implementation of the Delta Improvements Package, ACWA strongly recommends that the Governor appoint a Blue Ribbon Commission to evaluate the Delta's long-term vulnerability and recommend actions by December 2006 to reduce risks to the state's water supply, agricultural resources and the environment. Our elected leaders and policy makers must begin addressing these risks now before a major disruption takes place and we have little choice but to act on an emergency basis.

III Ensure delivery of adequate Colorado River supplies for Southern California and defend California's rights on the Colorado River.

Given the clear importance of a reliable Colorado River supply to California, ACWA recommends that state and federal agencies support actions to ensure long-term access to and efficient use of Colorado River supplies. Supporting these actions and defending California's rights on the Colorado River will provide stability to water systems throughout the state and reduce demands on the Delta.

IV Implement and fund the Sacramento Valley Water Management Program.

The Sacramento Valley Water Management Program is a collaborative approach to meeting regional and statewide needs for water, environmental protection and water use efficiency. The program, which includes more than 50 projects encompassing groundwater management, water use efficiency measures, water transfers and other strategies, is one of the most positive developments in California water in recent decades. ACWA recommends that state and federal agencies provide support and funding for the program and streamline regulations as needed to allow key projects to move ahead.

V Develop additional groundwater and surface water storage, including proposed surface storage projects now under study if they are determined to be feasible.

California must develop additional groundwater and surface water storage to add flexibility to our water system. Additional storage is needed to improve water quality at critical times, to meet real-time needs of fish and ecosystems, and to accommodate potential changes in California's climate that could significantly reduce the amount of water stored in the Sierra snow pack. ACWA strongly recommends that state and federal agencies complete feasibility studies now under way for several promising surface storage projects and move ahead with constructing those determined to be feasible. ACWA also recommends that the state partner with willing local and regional interests to develop local storage projects that allow groundwater and surface water to be used conjunctively.

Diamond Valley Reservoir, Metropolitan Water District of Southern California.

VI Support and fund local efforts to expand recycled water use and implement best management practices for urban and agricultural water use efficiency.

The strides made by local agencies in water recycling and water use efficiency have been dramatic over the past two decades. Given the clear statewide interest in promoting these water management tools, ACWA recommends that the state and federal governments continue to support local options such as recycling and conservation through appropriate technical and financial assistance. The state also must reduce the regulatory and financial constraints that impede development of these projects.

VII Improve the quality of California's drinking water supplies to safeguard public health and enhance water quality for agriculture and the environment.

Water quality is a critical issue for California. ACWA recommends that state and federal agencies work with local agencies to take a number of actions to improve water quality and protect public health. The actions include implementing the Delta Improvements Package, facilitating collaborative watershed-based management and pollution control programs, supporting programs designed to prevent groundwater contamination, and providing continued funding assistance for economically disadvantaged communities, especially in rural areas, to upgrade water treatment systems.

VIII Work with local agencies to overcome constraints to developing seawater and brackish groundwater desalination.

Seawater and brackish groundwater desalination projects have the potential to play a critical role in the state's water supply mix. ACWA recommends that state and federal agencies work with local agencies to develop desalination by providing support and resources for needed research, streamlining and coordinating the approval process for projects, and exploring ways to allow desalination projects to take advantage of non-retail power rates.

IX Modernize the federal Endangered Species Act and other laws and regulations to allow water infrastructure projects, water supply and water quality activities to proceed while protecting species and habitats.

Water agencies support the purposes of the federal Endangered Species Act (ESA) and other federal and state environmental statutes and regulations. These laws and regulations nonetheless must be modernized to achieve their intended environmental goals while at the same time reducing their burden on California's

water supplies and water supply reliability. ACWA recommends that the state support modernizing the federal ESA in a number of ways, including requiring greater precision in critical habitat designations and increasing habitat-focused species protection through more collaborative agreements with property owners and resource managers. ACWA also recommends modernizing provisions of the Clean Water Act dealing with wetlands protection and non-point pollutant discharges on a watershed basis.

X Expedite the approval process for voluntary water transfers.

Voluntary water transfers and exchanges are a useful and well-accepted tool for meeting both short- and long-term water needs throughout the state. ACWA recommends that state and federal agencies expedite their approval processes for water transfers while protecting water rights, the environment and local economic interests. Expedited approvals are particularly important for annual transfers aimed at relieving drought and short-term water conditions.

XI Clarify and expand the state's role in flood control and promote multi-benefit flood control projects.

A backlog of maintenance on levees, bypasses and channels and a recent court ruling expanding the state's liability for flood damage are creating an urgent need to re-examine and clarify the state's role in flood control. ACWA recommends that the Legislature consider measures to improve emergency response programs, require updated floodplain maps and provide better education on flood risks to the public and agencies responsible for land use decisions. ACWA also urges the state to provide necessary funding subventions to match local spending for flood control and to continue encouraging programs that integrate flood management strategies with environmental enhancements, water quality improvements, conjunctive use and water recycling.

Flooded structure resulting from the Jones Tract levee break, June 2004.

XII Support integrated regional water management plans.

Integrated regional water management plans will play a critical part in meeting the state's water needs. ACWA recommends that the state support integrated regional plans by taking a number of actions, such as partnering with regions where requested to provide funding assistance and technical expertise and streamlining regulations and approval processes for strategies such as water transfers, water recycling and seawater and brackish groundwater desalination.

North Richmond Water Reclamation Plant, East Bay Municipal Utility District.

While the investments in infrastructure and programs outlined here and detailed in ACWA's Blueprint will come at a cost, our member agencies are prepared to pay their fair share for benefits received because they recognize that failure to make those investments will be costlier still. ACWA strongly recommends that the Governor, California Legislature, Congress and other state and federal officials join with local agencies now in acting on this Blueprint. Californians and their communities, farms and environment deserve nothing less.

California is a rare and spectacular combination of natural beauty, stunning topography, diverse population and huge potential. It is also enormously complicated, and attempts to manage and shape the state have challenged even its best thinkers.

Nowhere is this more evident than in the development and management of California's water supply system, a complex mix of natural and man-made features that has allowed growing cities, productive farms and ecosystems to co-exist in a state that receives little or no rain for months at a time. Valuable lessons were learned in the course of developing that system, and today – through ingenuity, skill and artful stretching of supplies – it manages to serve a population and an economy that doubled in the historical blink of an eye.

But while the state's water system has served it well in the past, investments in recent decades have not kept pace with California's growth and 21st century demands for water system flexibility and environmental protection. Without additional statewide investments in our infrastructure now, it will be increasingly difficult and expensive for California to support a healthy environment and a strong economy in future years.

California's Major Water Projects

Where the federal and state governments once led the way with investments in "backbone" infrastructure that brought water where it was needed, in recent years the focus has shifted to local and regional efforts.

Through targeted investments in water management tools of all kinds, local and regional water agencies have developed more than 4 million acre-feet (MAF) of new surface and groundwater storage capacity in the past 10 years. They are spending billions of dollars more on programs such as water recycling, conservation and desalination that stretch existing water supplies, and they are developing an increasingly robust system for voluntary transfers and exchanges among a number of regions of the state. Many regions, however, continue to need state and federal assistance to leverage local dollars and implement programs and projects on the scale needed.

Local water agencies are strongly committed to continuing local and regional efforts, but they can succeed only if the backbone of the state's water system – the federal Central Valley Project (CVP), the State Water Project (SWP), the Colorado River Aqueduct and other key infrastructure – is maintained and improved. Investments in our backbone infrastructure simply must be made to complement and support progress at the local and regional level and ensure water is available to meet our changing needs. Since the investments required are beyond the ability of local and regional agencies to finance alone, state and federal funding is critical.

Simply put, the days when we could rely on the foresight of earlier leaders and the infrastructure they built are over. It is time for this generation of state and national leaders to recognize the broad public interest served by funding water supply infrastructure and programs on a consistent, long-term basis.

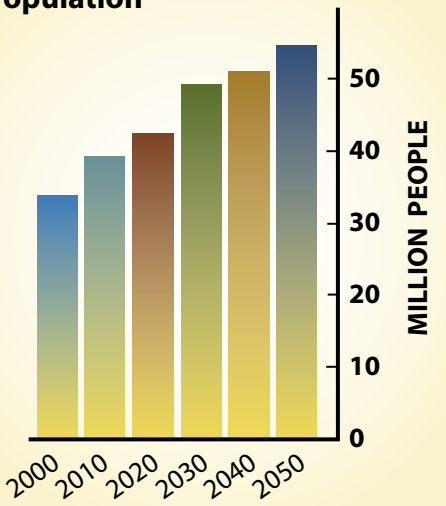
The reality of today's budget climate certainly adds to the challenge. But it does not diminish the urgent need for our water system to again become a priority – especially given the importance of a reliable water supply to California's economy.

Local water leaders from throughout the state have come together to urge state and federal leaders to re-engage in California's water future. As the local agencies charged with delivering water to Californians throughout the state, we have crafted this Blueprint to provide both a call to action and an unflinching look at the factors affecting our water future.

Several Factors are Raising Challenges for California's Future Water Supply:

- *Mounting evidence suggests that California's climate is changing, and a consequence could be a significant reduction in the Sierra snow pack – the state's largest and most important reservoir. Changes in our climate and runoff patterns also could increase the magnitude of flood events and cause sea levels to rise.*
- *The Delta – the single most critical link in our statewide-web of water supply infrastructure – faces threats to its long-term viability as a water supply source and an ecosystem.*
- *Protecting water quality in the Delta, the source of drinking water supplies for 23 million Californians, has become a significant challenge since the 1980s. Increased demands on the Delta have combined to degrade drinking water quality, particularly in fall months. Unless steps are taken now to manage the Delta to protect and improve water quality, the challenge will worsen in the future.*
- *Water quality and wastewater discharge regulations are becoming more stringent and will continue to require substantial new investments in major water treatment facilities and other actions to protect and improve water quality both in the Delta and throughout the state.*
- *Nearly 2 million acre-feet of water that was once available for urban and agricultural use annually statewide has been dedicated to environmental purposes over the past decade. Though healthy ecosystems are essential to the state and it takes water to keep ecosystems healthy, the fact is less water is available today to maintain water supply reliability for cities, farms and businesses.*

Projected Growth in California's Population



** California Dept. of Finance – Demographic Research Unit, May 2004*

State Water Project (SWP)

- *Built in the 1960s*
- *Includes 22 dams and reservoirs*
- *Extends 600 miles from Northern to Southern California*
- *Delivers about 2.3 million acre-feet (MAF) of water annually to parts of the Bay Area, San Joaquin Valley and Southern California.*

Federal Central Valley Project (CVP)

- *Built in the 1930s*
- *Includes 20 reservoirs and 500 miles of canals*
- *Delivers about 5.6 million acre-feet of water annually to agricultural and urban customers*

The following pages lay out an integrated set of actions we believe state and federal leaders and lawmakers must take to address statewide needs for infrastructure, complement local efforts and empower regional solutions that incorporate a range of water management strategies.

The Blueprint is organized into three main sections:

1. An Action Plan for improving the backbone of our water system and implementing programs that affect the entire state;
2. A Regional Needs and Issues discussion of pressing local needs that are no less important but are not necessarily addressed as part of the statewide plan; and
3. An Emerging Issues section of factors that could have a major impact on California's water future and that require planning for the long term.

While this Blueprint does not contain every detail or every answer, it is the culmination of decades of lessons learned and an acknowledgment of new realities. The question is not whether this plan will work; we know that it will. The question is whether California can marshal the resources and commitment necessary to put it in place.

Bulletin 160 and the ACWA Blueprint

The California Department of Water Resources has released a public review draft of the latest California Water Plan Update for 2005. The update, part of the Bulletin 160 series published regularly since 1957, includes a strategic plan with goals, recommendations, and actions to address the state's future water challenges.

ACWA's Blueprint provides a policy framework and identifies a mix of actions needed to meet California's water demands in coming decades. It promotes investments in a range of water management strategies and emphasizes the importance of regional and local efforts. The Blueprint does not provide a technical inventory of our water supplies or attempt to quantify the gap between future water demands and water supplies. It also provides an on-the-ground look at key water supply challenges and lays out integrated programs and infrastructure investments to address them and complement local efforts.

ACWA believes the Blueprint and Bulletin 160-2005 will together frame the discussion and guide investments in the programs, policies and infrastructure improvements that will allow California to meet its 21st century needs.

I Improve the existing Delta water conveyance system to increase flexibility and enhance water supply, water quality, levee stability and environmental protection in the near term.

California's two largest water supply projects – the State Water Project and the Central Valley Project – rely on the Delta to convey water from Northern California rivers to the main project pumping facilities. Recognizing that improvements were needed to make the existing conveyance system perform better for both water users and the environment, the August 2000 CALFED Record of Decision included a coordinated set of actions to improve water supply, water quality, levee stability and ecosystem restoration. The actions, known collectively as the Delta Improvements Package, are currently undergoing environmental review by the Department of Water Resources and the U.S. Bureau of Reclamation.

A key action included in the package is an expansion of permitted pumping capacity at the SWP's Harvey O. Banks Pumping Plant from 6,680 cubic-feet per second (cfs) to 8,500 cfs to provide critically needed flexibility to pump more water during wet periods when impacts to fish are low. The change would allow the SWP and CVP to shift pumping away from fish-sensitive, drier periods to less sensitive wetter periods and enable the projects to meet future demands while improving environmental health.

The Delta is the Single Most Critical Link in our Statewide Water System

- *Source of water for 23 million Californians and more than 7 million acres of farmland*
- *Supports 80% of the state's commercial salmon fisheries as well as other key species*
- *Includes more than 730,000 acres of farmland and wildlife habitat, much of which is below sea level*

Improve the Existing Delta Water Conveyance System

The package also includes actions to better integrate operations of the SWP and CVP to provide water supply and ecosystem benefits through more flexible operations. A series of actions designed to improve water quality for cities, farms and the environment also is part of the package. The actions include:

1. Construction of permanent operable flow barriers in the South Delta to protect water levels for South Delta agricultural water users, water quality and fisheries.
2. Implementation of a salinity management plan, including recommendations of the San Joaquin River Water Quality Management Group, to meet all water quality standards in the San Joaquin River.
3. Improvements to protect water quality in the Contra Costa Canal and manage agricultural drainage near Contra Costa Water District's intakes.
4. Modifications to Franks Tract in the Central Delta to improve water quality for in-Delta and export water users.
5. Relocation of Contra Costa Water District's intake on Old River.
6. Improvements to Delta Cross Channel gate operations to improve Delta water quality and address fishery concerns.

CALFED / Delta Improvements Package Timeline

1994: *Bay-Delta Accord signed. Landmark agreement leads to creation of CALFED Bay-Delta Program as a state-federal effort to develop a long-term plan for resolving water supply, water quality and ecosystem health problems in the Delta.*

2000: *CALFED Record of Decision (ROD) issued after five years of planning and public input. The ROD lays out a 30-year program to meet CALFED's objectives.*

2003: *California Bay-Delta Authority created by the Legislature to oversee implementation of the CALFED Program.*

August 2004: *Suite of actions known as the Delta Improvements Package unanimously approved by the Authority. The actions, described in the ROD and developed with public input, are designed to improve water supply reliability, water quality and ecosystem protection and provide flexibility to meet water needs in a manner consistent with environmental recovery.*

March 2005*: Delta Improvements Package actions undergoing environmental review by the Department of Water Resources and the U.S. Bureau of Reclamation.*

7. Actions to meet dissolved oxygen requirements to assist in recovery of San Joaquin River salmon populations.

8. Completion of the San Luis Reservoir Low Point Improvement Project as a complementary action to alleviate water quality impacts associated with reservoir drawdown in late summer and provide increased water supply capability and operational flexibility south of the Delta.

9. Other provisions to ensure ongoing improvements to Delta levees.

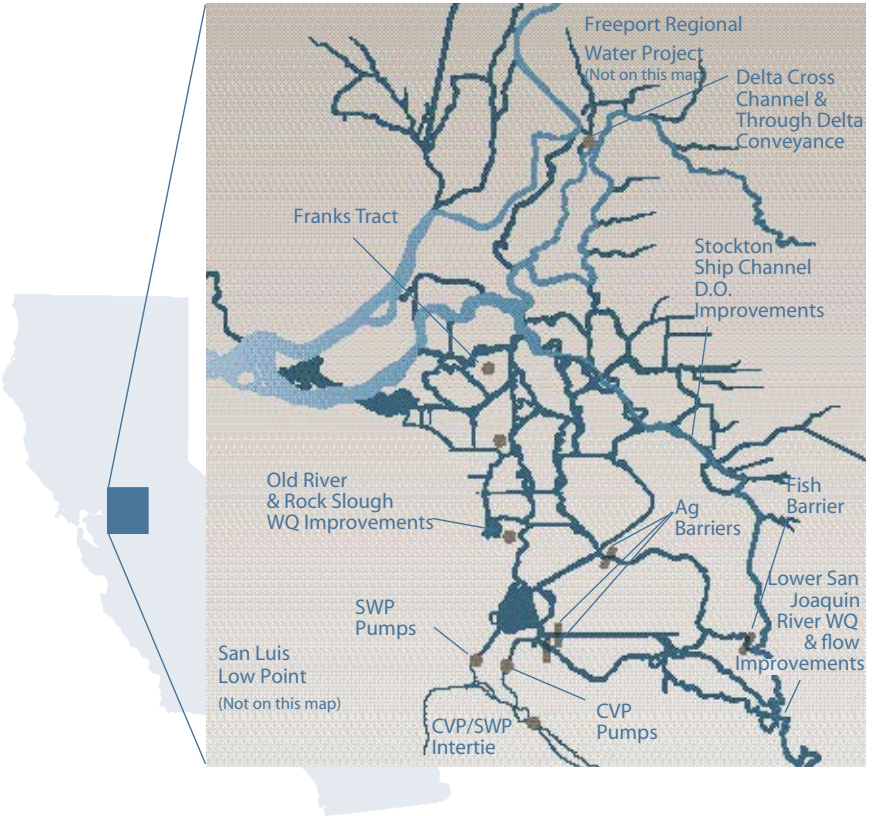
Over the past decade, local water users and statewide bond measures have funded hundreds of millions of dollars' worth of habitat and fish passage improvements. In part due to these investments and the dedication of substantial amounts of water for fishery protection and restoration, some listed fish species, particularly salmonids that migrate through the Delta, have shown encouraging signs of recovery in recent years. To continue this trend and to respond to the needs of in-Delta species, the Delta Improvements Package includes operational flexibility and expansion of the Environmental Water Account, an innovative tool to provide water to protect at-risk species while maintaining deliveries to water users. It also provides for measures specified by regulatory agencies to protect fisheries and calls for improved monitoring and focused research to identify better means of operation for additional benefits to the fisheries.

ACWA recommends state and federal agencies take the following actions to improve water quality and water supplies for many areas of the state, while enhancing environmental protection in the Delta:

1. Complete environmental reviews now under way.

2. Implement the Delta Improvements Package in a timely manner.

Elements of the Delta Improvements Package



Source: California Bay-Delta Authority

II Evaluate long-term threats to the Delta levee and conveyance system and pursue actions to reduce risks to the state's water supply and the environment.

Flooding after Jones Tract levee break in June 2004.

Today's Delta is a patchwork of natural and man-made channels and islands protected by more than 1,100 miles of levees – many of which were built in the 19th century and early 20th century. By any measure, the Delta has seen significant declines in water quality and ecosystem health in recent decades, and faces tremendous pressures in its dual role as water conveyance system and important habitat for several critical species. Beyond the immediate need for the improvements described above, the Delta faces threats to its long-term viability both as a water supply source and an ecosystem.

A credible body of independent scientific research confirms the Delta faces a growing risk of a major disruption to its levee system and hydrology over the next few decades that could jeopardize water supplies for 23 million Californians, millions of acres of farmland, at-risk fish species and the state's economy. Delta sustainability is threatened by the following factors:

- Levee instability
- Major flood events
- Earthquakes
- Land subsidence
- Sea level rise
- Habitat loss & invasive species

Scientific data confirms that Delta levees face an increasing risk of failing in a major flood or earthquake event over the next 50 years. The recent data, developed by UC Davis geologist Dr. Jeffrey Mount, suggests that Delta levees are vulnerable to failure in coming decades as sea levels rise and Delta islands continue to subside. In the western and central Delta, where the deep peat soil that covers many islands continues to erode each year, pressure is increasing exponentially on levees.

According to projections by Dr. Mount and others, there is a two-out-of-three chance of an abrupt event such as an earthquake or flood in the next 50 years that would bring major disruption to the system and result in permanent changes to water quality and hydrology in the Delta. While these findings are undergoing review by CALFED's Independent Science Board and others, a clear conclusion for now is that water

managers and policy makers must begin to view the Delta as a dynamic and vulnerable system, rather than a static landscape. The June 2004 levee failure on Jones Tract under non-flood conditions showed in dramatic fashion how costly even one Delta levee event can be in terms of money, water and system flexibility.

The CALFED ROD selected a through-Delta approach for moving water to the main Delta pumping facilities for the SWP and CVP. While acknowledging that other alternatives could potentially provide greater benefits for water quality and fisheries, the ROD identified the through-Delta approach as the least controversial and more likely to succeed in the short term. The ROD commits state and federal agencies to re-evaluating the through-Delta alternative in 2007 to determine whether additional conveyance facilities or options are needed to meet the goals of improving water supply reliability, water quality, ecosystem health and levee stability.

ACWA strongly recommends the state's leadership begin dealing with these issues now before even more serious problems occur and we are left with little choice but to act on an emergency basis.
In addition to implementing the Delta Improvements Package described earlier to improve Delta conveyance in the near term, state and federal agencies should take the following specific actions to reduce risks to the state's water supply and the environment:

1. Accelerate the planned re-evaluation of the Delta by DWR in light of its increasing vulnerability as a long-term water conveyance system.

Through-Delta Approach One of Three Options Studied by CALFED

The CALFED Bay-Delta Program analyzed three main alternatives to conveying water through the Delta: ***1)*** *existing system conveyance;* ***2)*** *modified through-Delta conveyance; and* ***3)*** *dual-Delta conveyance, utilizing a combination of through-Delta improvements and an isolated diversion facility on the Sacramento River to take water by canal to the export facilities in the south Delta.*

The August 2000 CALFED Record of Decision selected the through-Delta approach as its preferred alternative. While the ROD noted that the dual-Delta conveyance may "technically perform better for certain resource areas" than the preferred alternative, it said the dual conveyance approach presented more serious challenges in terms of costs, scientific uncertainty, assurances and implementation.

The ROD states that if CALFED's goals cannot be fully achieved with the actions proposed in the preferred alternative, additional conveyance actions will need to be considered in the future. It noted that if water quality objectives are not met in the first seven years of implementation, additional actions will be pursued, subject to appropriate environmental review.

Jones Tract Highlights Cost of Levee Failure

On June 3, 2004, a levee failed without warning during dry weather on Upper Jones Tract in the South Delta, flooding more than 12,000 acres of farmland with about 160,000 acre-feet of water. The Department of Water Resources estimates the total cost of the levee break at about $100 million, including emergency response, damage to private property, lost crops, levee repair and the cost of pumping water from the island.

The levee break prompted water officials to curtail Delta pumping and compelled the release of 150,000 acre-feet of water from upstream reservoirs to maintain water quality and guard against the intrusion of salty water into the southern Delta where the state and federal pumping plants are located.

2. Assemble a Blue Ribbon Commission, appointed by Governor Schwarzenegger, to analyze the new findings by DWR and others and develop a strategic plan by December 2006 for reducing vulnerability in the Delta. The commission should consist of high-level, independent experts. Whatever course of action the commission ultimately recommends, it must address all of the threats listed above and protect water supply, water quality, native fish species, habitat – for wildlife as well as people – and levees. It also must protect the existing Delta system during the long lead time that may be needed to put more comprehensive measures in place to make the Delta more sustainable.

3. As part of the evaluation of Delta vulnerability, analyze and document the potential consequences of a major Delta disruption on cities, farms recreation and the environment.

Delta levee.

Importance of Delta Levees

Delta levees play a critical role in protecting the state's water supply system and other key infrastructure. Since about two-thirds of Delta islands and tracts are below sea level and subject to flooding, levees make it possible to farm more than 520,000 acres and protect three state highways, a railroad, natural gas and electric transmission facilities, aqueducts serving water to parts of the Bay Area, and thousands of acres of habitat. They also help safeguard the lives and personal property of more than 400,000 people living in Delta towns and cities.

Delta levees also protect water quality for in-Delta water users and 23 million Californians who rely on the Delta for all or part of their water supply. A levee failure in the central or western Delta would not only flood farmland and habitat but also could disrupt water supply deliveries to urban and agricultural water users by allowing salt water from San Francisco Bay to encroach further into the Delta. Flushing salinity out would require significant releases of freshwater from upstream reservoirs.

Improving and maintaining Delta levees reduces the risk of levee failures and benefits local residents, landowners, farmers, boaters, wildlife, and water users in much of the state.

III Ensure delivery of adequate Colorado River supplies for Southern California and defend California's rights on the Colorado River.

Canals and aqueducts that bring Colorado River water to Southern California are a key component of the state's backbone water infrastructure and an integral part of California's water supply. Water agencies that rely on the Colorado have committed billions of dollars to develop water management programs as part of California's overall strategy to live within its legal entitlement of 4.4 million acre-feet of Colorado River water per year. These programs range from canal linings to water transfers to new groundwater storage projects, and are essential to achieving the region's long-term goal of maintaining a reliable supply from the Colorado River.

Given the clear importance of a reliable Colorado River supply to California, ACWA urges state and federal agencies to support actions to ensure long-term access to and efficient use of Colorado River supplies. Supporting the actions described below would provide stability to water systems throughout the state and potentially reduce demands on the Delta.

Quantification Settlement Agreement

In October 2003, the state and federal governments and four local agencies that rely on the Colorado River (Coachella Valley Water District, Imperial Irrigation District, Metropolitan Water District of Southern California and San Diego County Water Authority) finalized agreements to execute a landmark water-sharing accord known as the Quantification Settlement Agreement (QSA). The agreement provides a transition period for California to implement water transfers and supply programs that will reduce its over-dependence on the Colorado River. The QSA also commits the state to restoring the environmentally sensitive Salton Sea and provides full mitigation for implementation of the water supply programs.

Colorado River Aqueduct Canal.

To assist California in meeting its future Colorado River water needs, state and federal support for the timely implementation of the QSA and associated supply programs is critical. This includes continued support for projects and programs such as the Coachella Canal and All-American Canal Lining Projects, Imperial Irrigation District (IID) transfer programs, and the Palo Verde Irrigation District (PVID) land management program. Likewise, the state's ongoing process of developing and implementing a solution for protecting the Salton Sea ecosystem must stay on schedule to avoid disruptions or delays in QSA transfers.

Scenic view of the Colorado River.

Lower Colorado River Multi-Species Conservation Program

Important to existing and future supply and power operations and related programs is implementation of the Lower Colorado River Multi-Species Conservation Program. This habitat-based conservation program is intended to provide for the conservation of over 27 species and ensure federal and state Endangered Species Act coverage for activities on the Lower Colorado River over the next 50 years.

Multi-year Drought on the Colorado River Watershed

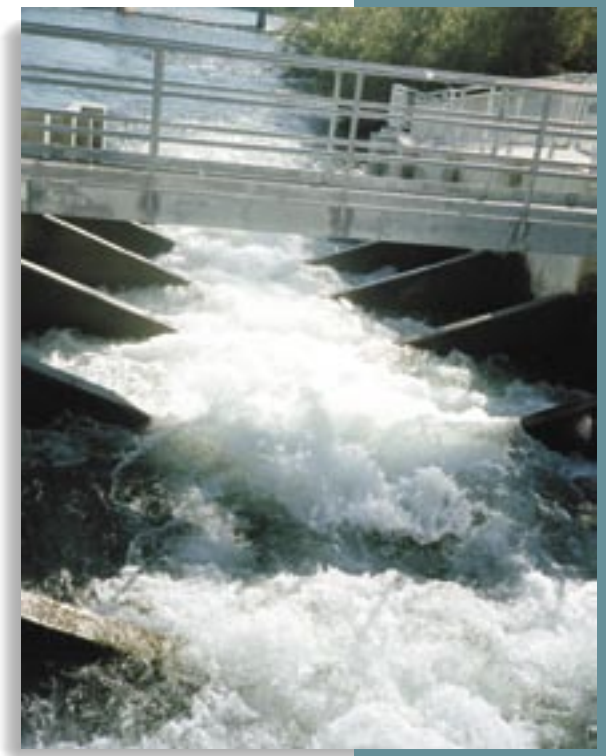
The Colorado River watershed is in the midst of a multi-year drought, and storage levels are at their lowest since the reservoirs were initially filled. The state must ensure that any potential drought management and reservoir storage recovery actions taken by the federal government are coordinated with the seven Colorado River Basin states, equitable to California and in accordance with existing agreements and compacts comprising the Law of the Colorado River. Construction of new regulating storage facilities below Hoover Dam, specifically along the All-American Canal, should be pursued and funded to achieve significant water savings.

ACWA also urges the state to strongly defend California's water rights on the Colorado River in light of suggested revisions to a decades-old agreement assigning priorities during times of shortage. Arizona officials have suggested that the Colorado River Basin Project Act of 1968 be revisited to shift a portion of that state's shortage obligations to other states, primarily California. Any erosion of California's water rights on the Colorado could undermine the water supplies and water management programs so vital to the state's future.

ACWA recommends that state leaders take the following specific actions to ensure a long-term reliable Colorado River supply for the citizens of California:

1. Complete the Lower Colorado River Multi-Species Conservation Program and issue state endangered species permits for covered activities.
2. Provide continued funding for the Coachella Canal and All-American Canal Lining Projects, and work with federal agencies to fund construction of regulating reservoirs.
3. Continue to support Colorado River supply programs such as the IID transfers and the PVID land management program.
4. Select a preferred alternative for protection of the Salton Sea by December 2006 and implement it in a timely way.
5. Develop an interstate drought and shortage management and reservoir storage recovery protocol for the Colorado River Basin.
6. Defend California's water rights on the Colorado River and oppose changes to the 1968 law that would compel California to accept more shortages during droughts.

Fish ladder at Anderson-Cottonwood Irrigation District.



IV Implement and fund the Sacramento Valley Water Management Program.

Sacramento Valley water agencies have worked with other water agencies throughout California to develop more than 50 short- and long-term projects as part of an integrated water management package. The program stems from a landmark water agreement forged in 2002 as an alternative to adversarial water rights proceedings before the State Water Resources Control Board. The program includes fish passage improvements, groundwater management, water use efficiency measures, water transfers and exchanges, flood protection, watershed management and environmental improvements.

The 50 projects, to be implemented over the next 10 years, are expected to make up to 185,000 acre-feet of additional water available. The water will be used to meet local needs, to help meet water quality standards in the Delta and potentially to help meet water needs in other parts of the state.

As a result of the 2002 agreement, the State Board in early 2003 dismissed Phase 8 of the Bay-Delta water rights proceedings, which were launched in the early 1990s to determine responsibility for meeting water quality standards in the Delta. The agreement allowed water users to avoid years of conflict and divisive litigation that undoubtedly would have blocked progress on meeting anyone's water needs.

The Sacramento Valley Water Management Program is one of the most positive developments in California water in recent decades and represents the kind of collaborative, multi-purpose program needed to meet regional and statewide water needs.

ACWA recommends state and federal agencies take the following actions:

1. Provide funding and other assistance to support implementation of the Sacramento Valley Water Management Program.
2. Streamline regulatory approvals as needed to allow key projects to move ahead.

Phase 8 Agreement Proves There is a Better Way

In 1996, the State Water Resources Control Board launched proceedings to determine responsibility for meeting water quality standards in the Delta. After completing Phases 1 through 7 of the proceedings in 1999, the board turned its focus to Phase 8, the potentially divisive process of allocating responsibility among water users and water rights holders on the Sacramento River and its tributaries.

Seeking to avoid years of conflict and litigation, more than 40 water suppliers in the Sacramento Valley signed an agreement to cooperatively implement projects and programs that would free up water to meet local water needs, help satisfy water quality standards in the Delta and help meet water needs in other parts of the state. The Department of Water Resources, Department of Fish and Game, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, State Water Contractors, and the Contra Costa Water District also signed on to the agreement.

As a result, the State Board in January 2003 dismissed the Phase 8 proceedings. The State Water Project and Central Valley Project remain responsible for meeting Delta water quality standards on an interim basis while the Sacramento Valley agencies implement projects as part of the agreement.

V Develop additional groundwater and surface water storage, including proposed surface storage projects now under study if they are determined to be feasible.

In today's world, storage is about more than increasing the number of acre-feet our water system can deliver. It's about adding much-needed flexibility to the system to improve water quality at critical times and meet real-time water needs of fish and ecosystems.

California relies on an elaborate network of water storage and delivery systems to supply cities, farms, businesses and the environment with adequate water year-round. Given the state's highly seasonal precipitation and the fact that annual runoff can vary wildly from year to year, groundwater basins and surface water storage facilities have meant the difference literally between year-round prosperity and ruinous drought. Over time, demands on our water system have grown even as regulatory requirements have constrained the timing and volume of water deliveries and compelled the release of stored water for fish species at times that may be less than optimal for water users and other species. The flexibility of the system to respond to ecosystem needs and hydrologic variability has eroded, and the result is a system that struggles to meet the competing demands placed upon it – even with significant investments having been made in urban and agricultural water use efficiency.

Additional storage would provide a valuable tool for meeting those needs. The groundwater and surface storage projects envisioned today would increase water system flexibility with minimal environmental impacts. And as evidence mounts that California's climate is changing and a significant portion of our snow pack may be replaced with intensive rainfall events over the next few decades, additional storage will be imperative to capture higher levels of peak runoff and facilitate programs that conjunctively manage surface and groundwater. Failure to consider these potential changes and develop the storage to address it will all but guarantee a future that swings from extreme floods to droughts on a regular basis.

Surface storage

Several surface storage projects and scores of groundwater storage projects are currently under various stages of study and environmental review. Four promising surface storage projects are:

- **Proposed enlargement of Shasta Reservoir.** Raising Shasta Dam by a height of 18.5 feet would provide an estimated 636,000 acre-feet of additional storage capacity that could be used for cold-water fish flows, increased Delta outflows, additional agricultural and urban water supplies and increased flood control capacity.

ROD Points to Need for Storage

After five years of study, CALFED determined that some form of additional surface storage is critical to meeting California's needs. The CALFED Record of Decision concluded that:

"Not only is additional storage needed to meet the needs of a growing population but, if strategically located, it will provide much needed flexibility in the system to improve water quality and support fish restoration efforts. Water supply reliability depends upon capturing water during peak flows and during wet years, as well as more efficient water use through conservation and recycling."

– Excerpted from CALFED Record of Decision, August 2000

- **Proposed construction of Sites Reservoir.** Construction of an off-stream reservoir with a storage capacity of 1.9 million acre-feet at Sites near Maxwell in the Sacramento Valley would provide water supplies in average and dry years for urban, agricultural and environmental purposes, increase Delta outflows during critical times, improve flood control, enhance groundwater recharge, contribute to the Environmental Water Account (EWA), and improve flexibility for existing projects, such as Shasta Reservoir.

Los Vaqueros Reservoir, Contra Costa Water District.

- **Proposed expansion of Los Vaqueros Reservoir.** Expansion of Contra Costa Water District's Los Vaqueros Reservoir from 100,000 acre-feet to as much as 500,000 acre-feet would improve drought supplies and drinking water quality for San Francisco Bay Area water agencies. It would also enhance the Delta environment by allowing water diversions to be reduced during fish-sensitive periods without impacting water supplies, consistent with the EWA.

- **Proposed development of storage in the Upper San Joaquin Basin.** Development of additional surface storage capacity at Temperance Flat or elsewhere on the upper portion of the San Joaquin River would provide additional water for public trust resources without devastating highly productive agricultural regions in Fresno, Tulare, Kern and Merced counties. Depending on the project's size and location, the new storage could yield 500,000 to more than 2 million acre-feet of additional surface storage.

Collectively, these projects could add as much as 4.5 million acre-feet to the state's storage capacity. State and federal agencies must complete feasibility and technical studies on schedule and move ahead with constructing projects determined to be feasible. Financing should be developed through cost-sharing agreements that recognize all benefits from the projects, including water supply and water quality improvements, flood control, power generation, recreation and environmental restoration. Opportunities to assist in developing local and regional storage projects also should be pursued.

Groundwater storage and conjunctive use

Groundwater is managed at the local and regional level in California, and that must continue. Developing additional groundwater storage, particularly for use in concert with existing and new surface storage, is one of the most promising strategies available for adding flexibility and yield to local and regional water supplies. In addition to providing local and regional benefits, locally managed groundwater storage can yield broader statewide benefits by making better use of existing surface and groundwater resources, providing additional water storage capacity and enhancing water system flexibility.

Conjunctive use, defined as the coordinated and planned management of surface and groundwater supplies to maximize the efficient use of the resource, has been practiced for decades in California and is a thoroughly proven technique for increasing water supplies in a cost-effective and environmentally sound way. In general, conjunctive use programs take advantage of available groundwater storage capacity to "bank" or store surface water through natural and / or artificial recharge for later extraction and use. In many areas, there is tremendous potential to enhance local supplies even further by utilizing storm flows and recycled water where appropriate to recharge groundwater basins.

Recent statewide bond measures, particularly Proposition 13 of 2000 and Proposition 50 of 2002, provided substantial financial resources to develop local groundwater management programs. Projects funded by these bonds to date will yield an additional 300,000 acre-feet of water annually, providing strong evidence of the benefits of groundwater storage and management. In addition to new water supplies, the projects will result in water quality improvements, environmental benefits in the form of increased flows and new habitat, and reduced overdraft, subsidence, and saline intrusion in the state's groundwater basins. Funding additional projects such as these would provide for further improvements to the state's water supplies. ACWA believes the broad statewide benefits of developing local and regional groundwater storage and conjunctive use programs justify a significant level of funding from state sources.

Beneficiaries Pay – A Guiding Principle for CALFED and Future Water Projects

A key principle of the CALFED Program is that beneficiaries of program actions should, to the extent possible, pay for those program costs. ACWA members are prepared to pay their fair share of the costs for benefits received, but believe a distinction must be made between the program's "public benefits," or those that should be funded by the state and federal general funds, and "water user benefits," or those that should be funded through user-specific charges under the beneficiaries pay principle.

Local water agencies are willing to partner with state and federal agencies to develop additional surface water storage, for example. Cost-sharing agreements or other contractual agreements developed in an open and public process will be an effective way to finance projects such as storage that have direct beneficiaries. But because many storage projects would provide public benefits as well, it is appropriate to utilize public funding to finance some portion of the projects.

Conjunctive Use : Making the Most of Available Water Supplies

Groundwater storage is important in and of itself. But when used in conjunction with surface water storage, it can go a long way toward meeting local and regional needs for greater flexibility, increased water supply reliability and improved water quality.

By allowing surface water to be captured in wet periods and stored in groundwater basins for use in dry periods, locally managed conjunctive use programs provide an array of tools and options that would not be available otherwise. Among the benefits: cost-effectiveness, more efficient use of groundwater and surface water supplies, and ability to avoid diverting surface water during sensitive times for fish and wildlife.

Urban Water Use Efficiency Best Management Practices (BMPs) Include:

BMP 1: *Residential Survey Programs*
BMP 2: *Residential Plumbing Retrofit*
BMP 3: *System Water Audits*
BMP 4: *Metering with Commodity Rates*
BMP 5: *Large Landscape Conservation*
BMP 6: *High Efficiency Clothes Washers*
BMP 7: *Public Information Programs*
BMP 8: *School Education Programs*
BMP 9: *Commercial Industrial Institutional*
BMP 10: *Wholesaler Agency Assistance Programs*
BMP 11: *Conservation Pricing*
BMP 12: *Conservation Coordinator*
BMP 13: *Water Waste Prohibitions*
BMP 14*: Residential Ultra Low Flush Toilet Replacement Programs*

ACWA recommends that state and federal agencies take the following actions to develop additional groundwater and surface water storage to help meet the state's needs for flexibility and reliable water supplies:

1. Complete surface storage feasibility and technical studies on schedule and move ahead with constructing projects determined to be feasible.
2. Develop financing for storage projects through cost-sharing agreements that recognize all benefits from the projects, including water supply and water quality improvements, flood control, power generation, recreation and environmental restoration.
3. Partner with willing local and regional interests, when requested, to advance local and regional surface storage projects and groundwater management programs.
4. Recognizing that many local agencies lack the resources to formally apply for state funding, develop a less cumbersome and less costly application process or, at a minimum, provide assistance to those agencies lacking resources to apply for grants and loans.

VI Support and fund local efforts to expand recycled water use and implement best management practices for urban and agricultural water use efficiency.

Locally developed water management options such as water recycling are a critical part of developing a diverse and reliable water supply for the state. Local water agencies have been on the leading edge of water recycling for decades, and today they recycle well over 500,000 acre-feet of water a year, thereby reducing demand for freshwater supplies and cutting down on wastewater discharges into sensitive ecosystems. With the help of substantial funding from federal sources as well as grants and loans through voter-approved bond measures such as Proposition 204 of 1996, Proposition 13 of 2000 and Proposition 50 of 2002, many large recycling projects have come on line in recent years and a substantial number more are on the horizon. In many cases, grants and loans to match local funds have tipped the balance to make local recycling efforts cost-effective.

The strides made by urban and agricultural water agencies in water use efficiency have been dramatic over the past two decades. Spurred by water supply uncertainties and increased costs for water, urban agencies, irrigation districts and farmers have adopted water use efficiency practices and technologies that compare favorably with those found anywhere in the world. Further advances are possible, but they must be based on rigorous examination of the benefits and costs, as well as a disciplined approach to adopting measures that deliver real benefits versus those that don't.

Most of the state's large urban water agencies have implemented conservation programs through the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU), an agreement that commits signatories to carry out a series of water conservation best management practices (BMPs). These BMPs are the state standard for conservation, and ACWA supports their implementation. Efficient water management practices for the agricultural sector have been defined and are being institutionalized through the work of the Agricultural Water Management Council (AWMC) and its signatory agricultural water agencies, environmental groups and other agricultural water use interests. There are currently 65 signatories to the AWMC Memorandum of Understanding, representing approximately half of the irrigated acreage in California.

Since circumstances vary from region to region, local agencies should take the lead in planning and implementing these options.

ACWA recommends that the state and federal governments take the following actions to support local options such as recycling and conservation:

1. Provide appropriate technical and financial assistance, including future water bonds, and necessary implementing legislation.
2. Provide support and resources to help remove the regulatory and financial constraints that often impede development of recycling and water use efficiency projects.
3. Continue to help fund programs and practices that may not be locally cost effective but which, if implemented, provide broad benefits throughout California and the Western states.

Subsurface drip irrigation on row crop near Hollister.

Efficient Water Management Practices (EWMPs) for Agriculture Include:

1. *Prepare and adopt a Water Management Plan.*
2. *Designate a Water Conservation Coordinator.*
3. *Support the availability of water management services to water users, including:*
    - *a. On-farm irrigation and drainage system evaluation*
    - *b. Normal year and real-time irrigation scheduling and crop evapotranspiration information*
    - *c. Surface water, groundwater, and drainage water quality data*
    - *d. Educational programs and materials for farmers, staff, and public*
    - *e. Water user pump testing and evaluation*
4. *Where appropriate, improve communication and cooperation among water suppliers, water users, and other agencies.*
5. *Evaluate the need, if any, for changes in policies of the institutions to which the water supplier is subject.*
6. *Evaluate and improve efficiencies of water suppliers' pumps.*

4. Work with water suppliers to seek collaborative arrangements with private enterprise to accelerate the development of water use efficiency technologies.

5. Actively follow up on the 2003 California Recycled Water Task Force Report and implement its recommendations for addressing impediments and expanding the use of recycled water.

VII Improve the quality of California's drinking water supplies to safeguard public health and enhance water quality for agriculture and the environment.

Water quality is important in all regions of the state. There are specific regions where it is, or soon will be, a seriously limiting factor if it is not addressed.

ACWA recommends that state and federal agencies take the following actions to improve water quality and protect public health:

1. Implement the Delta Improvements Package to improve water quality for in-Delta water users as well as portions of the Bay Area and much of Southern California.

2. Facilitate collaborative watershed-based management and pollution control programs that promote incentive-based programs to protect water quality and avoid contentious regulation.

3. Prioritize water quality requirements based on well-accepted data, sound science and cost-benefit methodology. To the extent regulatory agencies set rational and consistent priorities, dischargers can be assured their infrastructure investments and efforts are focused on actions that will net real benefits.

4. Streamline state and federal regulatory approvals to allow the use of advanced treatment options such as membranes and ultraviolet disinfection in public water systems.

5. Continue to provide funding assistance for economically disadvantaged communities, especially in rural areas, to upgrade water treatment systems.

6. Fund and support the California Comprehensive Groundwater Quality Monitoring Program, developed as a result of 2001 state legislation to enhance groundwater quality monitoring and assessment efforts and increase coordination and data sharing among agencies that use groundwater.

7. Complete the San Luis Reservoir Low Point Improvement Project to provide drinking water quality improvements for consumers in Santa Clara, San Benito and Monterey counties who receive water from the San Felipe Unit of the CVP. The project, included in the 2004 federal CALFED reauthorization as a complementary action, also will increase operational flexibility for both the CVP and SWP.

8. Support programs designed to prevent groundwater contamination and ensure that those responsible for pollution pay for cleanup and replacement water if necessary.

VIII Work with local agencies to overcome constraints to developing seawater and brackish groundwater desalination.

Once dismissed as too costly, desalination has re-emerged as a viable element in California's water supply mix. Thanks to technological advances that have reduced energy and cost requirements, desalination of both seawater and brackish groundwater is expected to play a greater role in several areas of the state in the near future. DWR received more than 40 applications in early 2005 for the first round of grant funding for desalination projects under Proposition 50 of 2002. About $25 million in grants will be awarded in this round of funding.

Many local agencies and communities see desalination as a way to develop a local, reliable source of water to help "drought proof" their region, reduce their dependence on imported water, meet future demands, offset water lost from other sources, reduce groundwater overdraft and make otherwise unusable groundwater available for local use. Desalination is not without its challenges, however. One impediment to both seawater and brackish groundwater desalination are infrastructure costs and permitting associated with disposing of the concentrated brine left over from the process. The state should provide funding resources and support to local agencies to develop environmentally acceptable means to resolve this issue and allow these much needed projects to move forward.

Reverse osmosis filters used at desalination plant, Marina Coast Water District.

Statewide Water Recycling Task Force Recommendations

The statewide Recycled Water Task Force convened in 2002 with the express mission of identifying ways to increase the safe use of recycled water in California. The 40-member task force submitted a report to the Legislature in July 2003 that recommended several actions, statutory changes and regulatory policies to address obstacles to recycling and in general promote expanded use of recycled water.

The task force estimated that by 2030, California has the potential to recycle up to 1.5 million acre-feet of water per year, yielding about 1.2 million acre-feet of "new" water to meet a significant portion of municipal water needs. Achieving that potential, however, would require an investment of nearly $11 billion for additional infrastructure to produce and deliver recycled water, the task force reported.

Both brackish groundwater and seawater desalination are critical elements in meeting the state's water needs.

ACWA recommends that state agencies adopt the October 2003 recommendations of California Water Desalination Task Force aimed at addressing impediments and encouraging additional development of desalination as one of the elements of a local water supply mix, particularly in coastal areas.

Recommended actions include:

1. Provide funding for research and development projects.
2. Identify and coordinate the roles of regulatory agencies involved in permitting desalination projects.
3. Create mechanisms to share research and operational data on desalination.
4. Explore ways to allow desalination projects to take advantage of non-retail power rates.
5. Allow individual communities to consider what role, if any, is appropriate for private companies in developing local and regional desalination projects.

Statewide Water Desalination Task Force Identifies Opportunities

Legislation signed into law in 2002 directed the Department of Water Resources to convene a Water Desalination Task Force to identify opportunities for brackish groundwater and seawater desalination and examine what role, if any, the state should play in furthering the use of desalination technology.

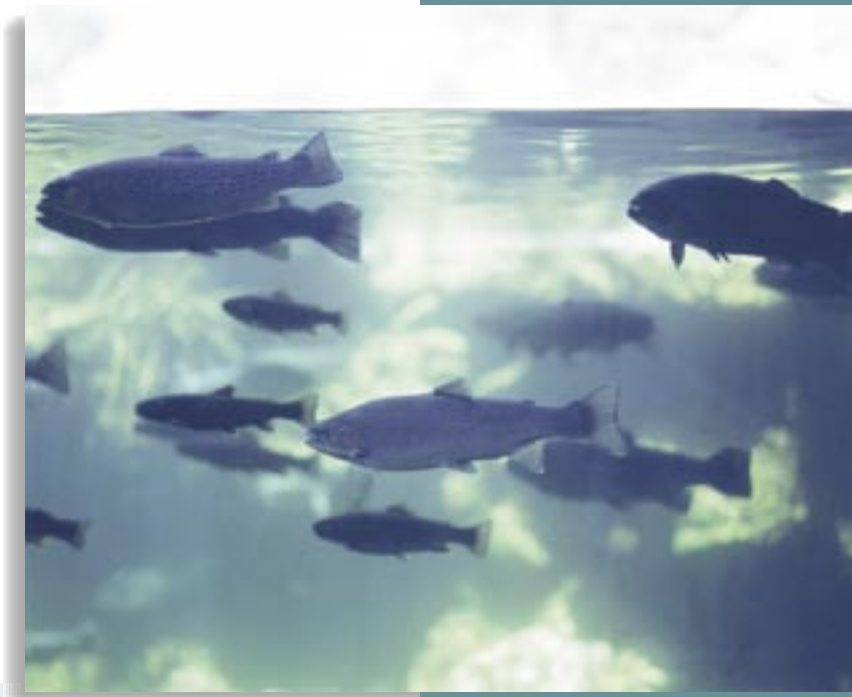
Drawing on the recommendations and input from the task force, the Department of Water Resources issued a report in October 2003 that concluded that economically and environmentally acceptable desalination should be considered part of a balanced water portfolio to help meet California's existing and future water supply needs. The report included a number of findings and specific recommendations to guide the process of evaluating, permitting, funding and implementing desalination projects.

IX Modernize the federal Endangered Species Act and other laws and regulations to allow water infrastructure projects, water supply and water quality activities to proceed while protecting species and habitats.

Water agencies, like the public in general, support the purposes of the federal Endangered Species Act (ESA) and other federal and state environmental statutes and regulations. These laws and regulations nonetheless must be modernized to achieve their intended environmental goals while reducing their burden on the regulated public.

ACWA recommends the following actions to modernize the ESA:

1. Require critical habitat designations to include more robust and peer reviewed science, greater precision in the geographic scope of habitat designations, and better economic impact assessment and a transparent balancing process for determining what lands should be excluded.
2. Emphasize species recovery and delisting as the ultimate goal of the ESA, based on properly funded, vigorous, collaborative recovery plans, measurable recovery objectives, and a timeline for subsequent recovery review and delisting decisions.

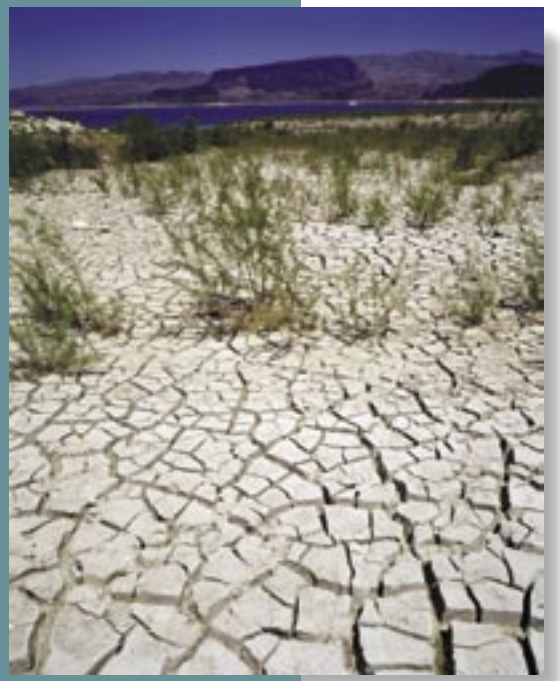


Invasive Species: A Growing Challenge to Water Supply Management

Invasive species are posing a formidable challenge to the job of managing water supplies and ecosystems. Non-native weeds such as Brazilian pondweed and hyacinth clog water infrastructure and overwhelm native plant species. Exotic fish and mollusks can harm endangered native species and disrupt the food web. Introduced invasive plants such as tamarisk (salt cedar) and arundo (giant cane) drain away scarce water along aqueducts and canals and choke out native habitat along streams and rivers.

The growing presence of invasive species makes it more critical than ever to use proven chemical and mechanical means to combat these invaders, and develop new research and tools to protect ecosystems and the reliability of our water supply infrastructure. Real-time monitoring of water quality, restrictions on ballast water releases, early detection and control or eradication of invasive species and other science-driven solutions are needed to improve the health of watersheds throughout California.

3. Increase habitat-focused species protections through more proactive, collaborative, and incentive-based management agreements with property owners and resource managers.
4. Clarify and codify "no surprises" regulations to provide certainty that "a deal is a deal" when it comes to habitat mitigation requirements in approved habitat conservation plans.



Dry conditions in the Colorado River region.

There are other environmental objectives that water agencies believe can be achieved more effectively by streamlining and modernizing aspects of the federal Clean Water Act regarding wetlands protections and managing non-point pollutant discharges on a watershed basis.

X Expedite the approval process for voluntary water transfers.

Voluntary water transfers and exchanges are a useful and well-accepted tool for meeting both short- and long-term water needs throughout the state. Both during drought and non-drought years transfers from areas with adequate water supplies to those areas that are lacking should continue to be part of the water supply mix, while respecting water rights and environmental concerns. Unfortunately, too often conflicting laws and policies, sometimes coupled with regulatory inertia, have prevented some potential water transfers from occurring in time to ameliorate urgent problems.

ACWA recommends that state and federal agencies take the following actions to make water transfers a more useful tool for solving water problems and to allow for more efficient use of both resources and infrastructure:

1. Expedite approval processes for water transfers while protecting water rights, the environment, agriculture and local economic interests.
2. Anticipate potential transfers in advance and prepare specific guidelines for droughts and emergency situations so transfers can be completed in time to relieve shortages in ways that protect the environment and local interests. This would include minimizing physical conveyance limitations associated with the statewide transfer of supplies.
3. Identify and reduce, amend or repeal laws and regulations that preclude or unnecessarily hinder environmentally safe voluntary transfers.

XI Clarify and expand the state's role in flood control and promote multi-benefit flood control projects.

With its feast-or-famine rainfall and hugely varied topography, California has always been susceptible to more than its share of flooding. But new trends and realities, including a backlog of maintenance on levees, bypasses and channels and a recent court ruling expanding the state's liability for flood damage, are creating an urgent need to re-examine and clarify the state's role in flood control.

As DWR noted in its January 2005 report to the Legislature, "Flood Warnings: Responding to California's Flood Crisis," factors such as aging infrastructure, escalating development in flood plains, and lack of state and federal funding to maintain and improve the flood control system are putting public safety and the state's financial stability at risk. The report correctly asserts that aggressive investments in our flood management system and a new philosophy are needed to protect lives, property and economic well-being.

ACWA recommends the Legislature and state agencies take measures to accomplish the following actions:

1. Improve emergency response programs, including improvements in monitoring and data collection from streams and flood-prone areas.
2. Update floodplain maps and provide better education on flood risks to the public and agencies responsible for land use decisions.
3. Support a constitutional amendment to exempt local flood control projects from inverse condemnation liability and to exempt local flood control districts from the Proposition 218 two-thirds voting requirement.
4. Continue to promote multi-objective planning in flood control projects at the state and local levels, consistent with legislation adopted in 2000 (AB 1147 – Honda).
5. Provide state funding subventions to match local flood control funding under the existing cost-sharing formula.

ACWA also calls on state and federal leaders to support agreements such as the landmark accord on American River flood control and water supply improvements, a balanced package of projects developed by local leaders and stakeholders and authorized by Congress in 2003. The package, which includes elements such as levee improvements and modifications to Folsom Dam, now must receive adequate funding appropriations to proceed.

Community along the Sacramento River.

Multi-Benefit Flood Control Projects

Programs that integrate flood management strategies with environmental enhancements and water quality improvements are a critical way to achieve multiple benefits with the limited funding available for flood control projects.

Multi-objective projects help leverage funding from all sources and contribute to more efficient water resources management at the regional and statewide level. But while the multi-objective planning approach is useful, the primary purpose of flood control projects must be protecting life and property from the risk of floods.

XII Support integrated regional water management plans.

California friendly landscaping, Desert Hot Springs.

Regional water management efforts have long played a key role in meeting the state's water needs. Today, they are assuming even greater importance as individual agencies and communities forge partnerships to diversify their water supplies, improve water quality and reliability, enhance environmental stewardship and increase flexibility to better cope with droughts, floods and other uncertain future conditions.

Though the specifics vary according to local needs, integrated regional water management plans generally include an appropriate mix of infrastructure improvements, environmental enhancements, and programs such water recycling, water use efficiency, groundwater management and conjunctive use, water transfers and exchanges, flood protection, and watershed management. By pursuing these strategies and integrating efforts across jurisdictions where appropriate, regions can maximize their investments, make most efficient use of available resources and better coordinate information among all local governments.

As important as integrated regional plans and partnerships are to our future, they cannot and should not replace the statewide actions and investments described in other sections of this document. Indeed, the success of regional efforts will ultimately depend in large part on state and federal agencies meeting their responsibilities to maintain and improve the state's backbone water infrastructure and implement actions such as the Delta Improvements Package that are key to the state's overall water supply, water supply reliability and flexibility.

ACWA recommends the state support integrated regional water management plans by taking the following actions:

1. Direct the Department of Water Resources to better assist local agencies as they undertake regional programs and to provide for better coordination of regional efforts to help meet statewide needs.
2. Partner with regions where requested to provide funding assistance and technical expertise to help develop sound integrated regional plans.
3. Streamline regulations and approval processes for strategies such as water transfers, water recycling and seawater and brackish groundwater desalination to allow regional programs to move ahead.
4. Clarify the definition of integrated regional water plans in the context of state grant programs and legislation requiring plans as a prerequisite to receiving funding.
5. Establish funding priorities for development of financial assistance for regional plans and projects.
6. Actively seek partnerships with local, regional and federal agencies to develop programs such as surface and groundwater storage projects that provide both regional and statewide benefits.

REGIONAL NEEDS

All regions of the state share the need for adequate, reliable and good quality water at affordable rates to allow farmers to farm, businesses to thrive, citizens to trust the safety and adequacy of supplies at the tap, and the environment to receive the water it needs.

Resolving complex water issues in a way that meets the needs of every region of the state is difficult at best. Locally and regionally driven programs are generally the most effective way to address local needs. But regional plans alone will not be enough. California also needs improvements in and additions to statewide infrastructure that meet the needs of all regions.

ACWA believes California can best meet its water needs through a combination of statewide and regional investments that recognize local conditions, support regional solutions, and integrate an appropriate mix of infrastructure, water management tools and environmental improvements. State and federal leaders must join with local leaders to make those investments in a timely and decisive way, or the consequence could be dramatic for key regions of the state, the state as a whole and even the nation.

While all share common issues and needs, each region of California faces unique challenges that might be summarized as follows:

North Coast

North Coast communities strive to provide safe, reliable water supplies for residential and agricultural users while protecting watersheds and contributing to the recovery of threatened or endangered fisheries. The integrated regional water management plan now under development for the North Coast region will support achievement of these goals. The plan is expected to advance projects that will help protect and restore listed species, support completion of essential water and wastewater infrastructure projects, implement water reuse programs that reduce demand on surface water sources, and initiate projects to protect groundwater and surface water quality in the region's pristine rivers, streams, bays and lakes.

ACWA urges state and federal agencies to help the North Coast by supporting its integrated regional water management plan and by modernizing regulatory processes to allow water infrastructure and water supply activities to move ahead without sacrificing water quality, species or the environment.

Bay Area

The Bay Area has stretched its limited local resources through water use efficiency, including conservation and recycling. But it still depends heavily on a mix of locally developed and imported water supplies, and as a result faces a variety of water supply reliability and water quality challenges. Water quality is an especially critical issue for those who rely on Delta water. Other key issues include vulnerability to water supply interruption from infrastructure failure, low-point operational issues at San Luis Reservoir, lack of local storage and potential changes to existing critical infrastructure such as San Francisco's Hetch Hetchy Reservoir.

To address these challenges, Bay Area agencies are pursuing a variety of initiatives including additional conservation and recycling, feasibility studies for additional storage and desalination, and implementing approved projects such as upgrades to the San Francisco Hetch Hetchy system and the Freeport Regional Water Project to meet dry year needs. They are also pursuing improvements for drinking water quality through a variety of measures, ranging from better source water protection to advanced treatment. Cities, counties, water management agencies, environmental groups and the business community are working to develop an integrated regional water management plan for the nine Bay Area counties.

ACWA urges state and federal agencies to help the Bay Area by implementing the Delta Improvements Package, developing additional storage, including potential expansion of Los Vaqueros Reservoir, funding water recycling projects, supporting the Freeport Regional Water Project and implementing the San Luis Reservoir Low Point Improvement Project to better utilize existing storage to restore and improve water quality, system flexibility and reliability.

Sacramento Valley

The Sacramento Valley, a tapestry of farms, managed wetlands, the state Capital and many growing communities, is traversed by two of the state's most important rivers and is blessed with generally high quality groundwater resources. Sacramento Valley water users spent the past decade on aggressive efforts to improve fish passage and environmental habitat in the region. They are now developing an integrated water supply management and water development program that will utilize a more comprehensive and collaborative process to meet environmental, agricultural and municipal water needs, improve water quality in the region and potentially provide water for uses in other parts of the state.

Because of its location upstream from the Delta, all water not consumptively used within the Sacramento Valley returns to the system for in-stream flows, subsequent diversion by others or for Delta outflow. Implementation of the integrated regional program will contribute to addressing many statewide problems. The integrated program will utilize conjunctive water management, intra-regional and inter-regional water transfers, water use efficiency, fish passage improvements, environmental water programs, watershed management, water quality improvements, flood protection and potentially off-stream storage to increase the water reliability and flexibility both within the region and in other areas of the state.

ACWA urges state and federal agencies to assist the Sacramento Valley by supporting and funding its integrated water management plan, developing additional surface and groundwater storage – including a potential off-stream reservoir at Sites, and by streamlining water transfers and other regulatory processes.

Walnut orchard in Sacramento Valley.

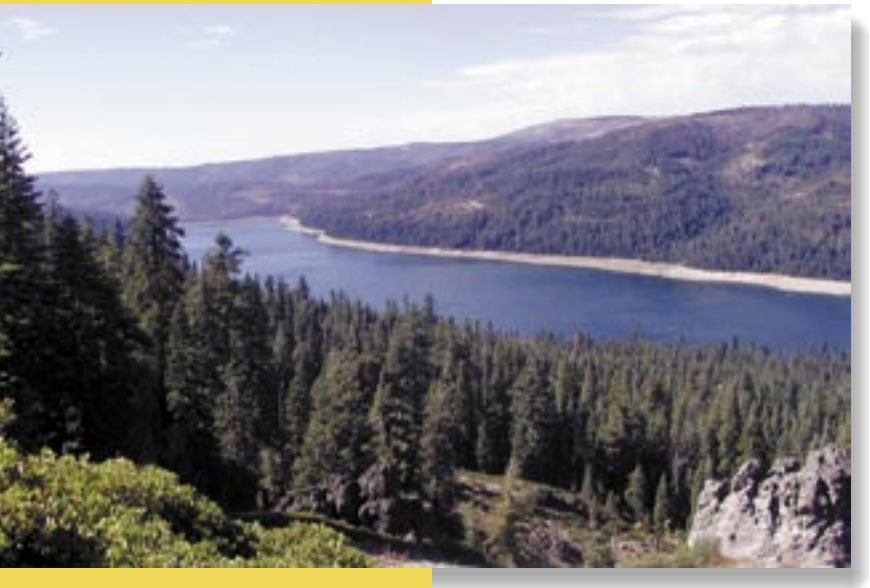
Hetch Hetchy Studies Spark New Debate

Recent studies by Environmental Defense and UC Davis have reignited debate over restoring the Hetch Hetchy Valley, revered by some as the stunning twin of nearby Yosemite Valley. Environmental Defense says removing O'Shaughnessy Dam, completed in 1923 to deliver Sierra water to San Francisco, would restore the Hetch Hetchy Valley and add a crown jewel to the state's natural treasures. The Hetch Hetchy water system today provides 220 million gallons a day of very high quality water to over 2.4 million people in the San Francisco Bay Area and generates 1.7 billion kilowatt-hours of clean hydroelectricity each year.

Responding to a request from members of the Legislature, California Resources Secretary Mike Chrisman in November 2004 directed the Department of Water Resources to review the growing body of studies on Hetch Hetchy restoration and to summarize the range of conclusions. The secretary noted, however, that a key challenge facing proposed restoration is the fact that California needs a net increase in storage capacity, not a decrease, to meet its water demands. Any plan to remove or modify the existing reservoir, he said, would have to be balanced with a viable plan to replace the water supply now provided by the Hetch Hetchy reservoir.

Sierra Foothill and Mountain Regions

Portions of the Sierra foothill and mountain regions are experiencing water shortages and need new facilities to replace aging infrastructure and to meet the needs of rapid population growth. Many communities have excellent water rights but cannot always exercise those rights because of the high cost and controversy associated with diverting water. Some areas have access to groundwater as part of their resource mix, while others do not.



French Meadows, Placer County.

The region has made significant investments in water use efficiency and strategies such as water recycling, and regional relationships are developing to allow local agencies to form partnerships to share resources and meet mutual needs. A key issue driving the agenda for many foothill and mountain agencies is the need to prepare for droughts and future demands by developing multi-purpose storage projects to protect water quality, water supply and the environment. One emerging strategy involves areas without adequate groundwater storage capacity partnering with agencies in the Sacramento Valley to pursue joint storage programs.

Another key issue is the changing demographics of the region. Much of the existing infrastructure was built to convey water for irrigation and other purposes. Today's growing residential needs call for traditional irrigation ditches and flumes to be replaced with enclosed pipes and other delivery systems – all of which pose financial challenges for local agencies with large geographic service areas and relatively small ratepayer bases.

ACWA urges state and federal agencies to help the region by providing financial assistance to replace aging, inadequate infrastructure as well as financial and technical assistance to meet stringent new drinking water standards. State and federal agencies also should clarify roles and responsibilities associated with water transfers and ensure that area of origin protections and water rights are honored as the region's local needs for water grow.

Delta

As the hub of the state's water resources system, the Delta faces ongoing and intense competition for freshwater supplies among the environment, in-Delta water users and exporters. Added to that is the growing risk from continued reliance on a vulnerable and under-maintained levee system to protect the integrity of water supply and water quality for all of these users. Despite the substantial local and state investments that continue to make incremental improvements in the existing levee system, the enormous potential consequences of levee failure warrant increased investment by the state and federal governments in Delta levees and channel capacity. The U.S. Army Corps of Engineers should take the lead for the federal government.

ACWA urges state and federal agencies to help the Delta region by implementing the Delta Improvements Package, which will provide immediate improvements in water quality and water levels in the Delta. Long term, a strategic plan for addressing threats to Delta levees posed by floods, erosion, loss of channel capacity, seismic stability questions, island subsidence, rising ocean levels and burrowing animals must be developed and carried out by the state and federal governments in conjunction with local interests. The Delta levee subvention program should be preserved and enhanced while a comprehensive plan is put in place to make the Delta sustainable.

San Joaquin Valley

The San Joaquin Valley, home of three of the top agricultural producing counties in the nation, is one of the fastest growing areas of the state but faces water quality and drainage problems, serious groundwater overdraft, and unreliable surface water availability. Additionally, the communities along the San Joaquin River below Friant Dam and the south Delta confront challenges of impaired water quality, including low oxygen levels, as well as inability to capture flows in the river which have already been dedicated to outflow requirements. Potential court-mandated changes to operation of Friant Dam could add significant new challenges both in maintaining adequate surface storage and addressing groundwater overdraft.

ACWA recommends that state and federal agencies help the San Joaquin Valley by developing additional surface and groundwater storage, including potential storage on the upper portion of the San Joaquin River, and by implementing the Delta Improvements Package. We also recommend that the agencies provide financial assistance to develop local and regional conjunctive use programs and expedite the water transfer process. Additionally, small towns throughout the San Joaquin Valley are badly in need of technical and financial assistance to upgrade treatment systems to meet new drinking water standards.

Friant Dam in Fresno County.

Friant Decision Raises Specter of Operational Changes

A federal judge ruled in August 2004 that operation of Friant Dam violates state law requiring water releases to protect fish and wildlife. The ruling on a lawsuit brought in 1988 by the Natural Resources Defense Council and others set the stage for a "remedy phase" that could result in court-ordered changes to Friant Dam operations to allow more water to flow down the San Joaquin River for environmental purposes.

Any such releases would come from existing supplies currently used to irrigate nearly 1 million acres of farmland in Merced, Madera, Fresno, Tulare and Kern counties. The water is delivered through the Madera and Friant-Kern canals and supports more than $4 billion in gross agricultural production each year. Friant Dam was built in the 1940s and is operated by the U.S. Bureau of Reclamation.

Central Coast

The stretch of coastline from Santa Cruz to Santa Barbara is facing continual growth pressure and resource allocation challenges. Many areas are grappling with groundwater overdraft and seawater intrusion as well as competing demands for water to meet the needs of people and anadromous fish. Historically, many communities have chosen to address their water needs individually and sought only limited participation in the state's larger water projects. Though a few communities opted to finance an extension to receive water from the State Water Project, chronic water shortages are still common and providing water service is very expensive. Those high costs threaten the viability of agriculture in the region and may erode the ability to preserve open spaces in the face of urban growth pressures.

Groundwater percholating basins along the Santa Ana River.

State and federal agencies can help the Central Coast by providing technical and financial assistance to pursue seawater and groundwater desalination projects. Similar assistance also is needed to protect and manage the small but important groundwater aquifers along the coast, and to address challenges associated with protecting steelhead in coastal streams.

South Coastal Plain

The south coastal plain is a semi-arid region that is home to more than half of the state's population and a large portion of its economy. The region has been highly effective in managing existing supplies by implementing conservation best management practices, groundwater management and water recycling projects, all of which have helped secure a reliable water supply and reduce dependency on imported supplies from the Colorado River and the State Water Project. In addition, the region has invested in local groundwater and surface storage to increase flexibility and reliability of the imported water system. However, regulatory and financing issues jeopardize the region's ability to maintain existing water supply infrastructure and further diversify its resources through conservation, recycling, water transfers, and groundwater and seawater desalination.

ACWA recommends that state and federal agencies provide support and resources to assist the region in developing a variety of supply and management options. We also recommend that they adopt equitable regulations and efficient approval processes to allow these efforts to proceed as planned. For example, the state must clearly identify the steps needed to gain approval for a seawater desalination facility and the specific roles of each regulatory agency involved in permitting such facilities. Clear and consistent regulatory policies also are needed on groundwater recharge using recycled water.

State and federal funding assistance is needed to develop a more diversified supply for Southern California and to invest in local infrastructure to ensure delivery of a high quality, reliable water supply to the 18 million people living in the south coastal plain. To improve water quality and reliability of imported sources, the QSA and related supply and salinity management programs must be fully implemented on the Colorado River, along with the Delta Improvements Package.

Inland Empire

The Inland Empire is one of the state's fastest growing areas and faces water quality problems such as nitrates, perchlorate and other contaminants. Though local water agencies have made great strides in developing and implementing new technologies to clean up groundwater and develop local surface and groundwater supplies, they continue to face financial and regulatory limitations that constrain solutions.

Local agencies in the region have done an excellent job of responding to the demands of rapid urban growth and the need for local water supplies. In the Santa Ana watershed, for example, local agencies have developed an integrated watershed plan that incorporates development of new water supplies and recycled water opportunities, while addressing environmental mitigation along the Santa Ana River. Where the opportunity to develop local surface water supplies exists, such as at the U.S. Army Corps of Engineers' flood control dam at Seven Oaks, local agencies have undertaken the preliminary steps necessary to ensure that the opportunity is preserved. They have been among the state's leaders in developing and implementing new groundwater clean-up technologies.

But these efforts will not, by themselves, be sufficient. ACWA recommends that state and federal agencies help the Inland Empire by taking action to improve statewide infrastructure through the Delta Improvements Package and development of additional storage. We also recommend that they provide assistance for locally driven programs to develop new water supplies through water recycling and by improving cooperation on state and federal endangered species issues. Research partnerships also are needed to develop clean-up and environmental mitigation strategies to support future water development.

Housing development in Southern California.

Colorado River Region

Agencies that rely on the Colorado River for all or part of their supplies are facing reduced allocations, primarily due to an ongoing drought in the Colorado River basin that may be the most severe in several centuries and could place additional pressure on other water supply sources. The agencies are working to implement the QSA and related programs to ensure long-term access to supplies from the Colorado. These programs, which include the construction of new regulating reservoirs along the All-American Canal, are taking on even more importance as the Colorado basin drought continues.

ACWA urges state and federal agencies to help by ensuring timely implementation of the QSA and development of an interstate drought management plan that will help the region avoid potentially disastrous water shortages. The state also must remain vigilant and defend California's rights to Colorado River water.

Scenic view of the Colorado River.

Colorado River Basin Drought

Locked in a dry spell for close to a decade, runoff in the Colorado River basin over the past five years has averaged about half that of the Dust Bowl years. While precipitation in the lower basin improved in early 2005, the upper basin remains well below normal. The U.S. Geological Survey says the current drought could be among the worst in 500 years on the river. The current dry period, which in 2004 dropped key reservoirs to levels not seen since they initially filled, comes as growing lower basin states such as Nevada, Arizona and California are using their maximum apportionment of Colorado River water.

Planning for California's long-term water future is complicated by several factors that could change both the availability of our water supply and our most effective strategies for meeting water needs.

While some of these so-called "emerging" issues are not really new, they defy easy resolution and as a result continue to resurface. Others present significant new challenges that could have a major impact on our water supply system as configured today.

The list below is not all-inclusive, but raises some key issues that must be part of any long-term plan for California. Though longer-range study and planning will be needed to address them, the take-home message today is that we cannot assume a static water supply or water delivery system in the future.

Risks to Groundwater Quality

The threat of groundwater contamination has existed in California for decades, and today many of the state's aquifers are at least partially contaminated. But as contaminants are detected in more and more basins, even as California's reliance on groundwater grows, the need to protect aquifers will be critical.

In many regions of the state, contaminants such as perchlorate, N-nitrosodimethylamine (NDMA), nitrates, salinity, MTBE and other volatile organic compounds (VOCs) from industrial sites have migrated into groundwater basins that play a key role in the local water supply mix. Spread of these contaminants, some of which are extremely costly and difficult to remove, not only threatens available water supplies but also jeopardizes plans to store surface water in groundwater basins as part of local and regional conjunctive use programs. Elsewhere, naturally occurring arsenic in groundwater likewise threatens to limit the potential for conjunctive use programs to help meet future water needs.

Oil refinery.

Groundwater is a resource California simply cannot afford to lose. ACWA believes a locally controlled approach to protecting local groundwater basins is required to safeguard aquifers and avoid foreclosing on the future of conjunctive use programs. The state and federal governments should provide assistance for local groundwater protection efforts and also support programs that prevent groundwater contamination where possible. They also must continue to fund and support the California Comprehensive Groundwater Quality Monitoring Program, developed to enhance groundwater quality monitoring and assessment efforts and increase coordination and data sharing among agencies that use groundwater. In

The Cost of Groundwater Contamination

In recent years, groundwater contaminants such as perchlorate and gasoline additive methyl tertiary butyl ether (MTBE) have complicated the job of delivering safe drinking water in many communities.

Local water suppliers in Santa Monica, South Lake Tahoe, Sacramento and the San Gabriel Valley, for example, have been forced to shut down drinking water wells and pursue costly treatment systems as a result of contamination. Many water suppliers have been strapped with millions of dollars in water treatment, cleanup and replacement water costs annually. Often, the fiscal burden continues for years while regulatory agencies investigate the source of contamination and carry out the long process of holding responsible parties accountable.

In the case of Santa Monica, it took more than eight years for the city to fully recover costs associated with MTBE contamination. The city lost about half of its water supply in 1996 when MTBE was discovered in two of its groundwater well fields. Santa Monica was forced to spend millions of dollars a year and temporarily raise water rates to buy replacement water from Metropolitan Water District while it pursued treatment alternatives and sought a settlement with parties responsible for the contamination.

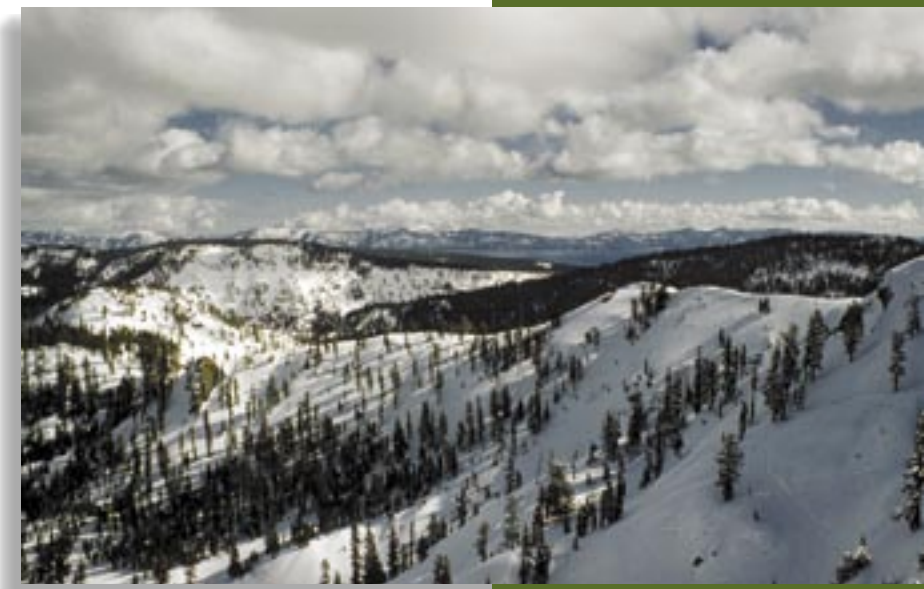
addition, they must ensure that polluters pay for cleanup where contamination has not been prevented and provide for replacing water supplies lost to contamination.

Climate Change

Though the science continues to evolve, a growing body of data suggests there could be dramatic changes in California's climate and runoff patterns over the next few decades. These changes could lead to a significant reduction in the Sierra Nevada snow pack – California's largest and most important reservoir. Some new scenarios suggest that as much as one-third of the precipitation that currently falls as snow could instead come in the form of rain, resulting in earlier runoff and potentially producing floods far greater than what California has experienced in modern times. More rain and less snow means the state loses out on much of the natural storage provided by the snow pack. It also means periods of heavy runoff in months when there is the least amount of storage capacity available.

These changes hold real implications for our reservoirs and flood control facilities, which were designed to accommodate the relatively slow runoff of melting snow, not the rapid runoff from rain. In addition, rising ocean levels are anticipated as a result of climate change, and some researchers believe sea level could rise by as much as 12-16 inches in the Delta over the coming decades, further stressing the fragile levee system and the drinking water supply for two out of three Californians.

In addition to the comprehensive Delta plan recommended earlier in this document, we recommend that DWR and the Bureau of Reclamation expedite their efforts to analyze and refine data on likely changes in runoff patterns and sea level rise and their impacts on water supply and flood control. The agencies also must accelerate studies of additional surface and groundwater storage, as well as conveyance and pumping infrastructure, to adapt to the likely changes and protect life, property, the environment and our water supply.



Sierra Nevada snow pack provides water for Californians.

New Drinking Water Issues

Over the past 30 years, drinking water regulations have focused on "traditional" contaminants from industry and naturally occurring chemicals found in water sources. But the detection of trace amounts of pharmaceuticals, caffeine, cleaners and other household products in water supply sources raises new challenges for drinking water purveyors.

These substances – collectively known as "xenobiotics" – enter the environment through wastewater discharges and likely have been present in water supply sources for as long as such products have been in use. But our ability to detect and measure them at very low concentrations has improved dramatically, and recent studies suggest they occur widely in trace amounts in rivers and streams throughout the United States. ACWA believes further research is needed to determine whether these substances affect public health or the environment and to identify options for reducing their occurrence in water supply sources.

Research also is needed in other areas of source water protection and drinking water treatment technology to provide additional tools for safeguarding water supplies. In addition, research is needed to further develop applications for recycled water – including potable reuse – and build public confidence in them as the technology advances. Clear and consistent regulatory policies also are needed on the use of recycled water for groundwater recharge.

California's water supply system no longer has the flexibility to respond effectively to the 21st century demands placed upon it by cities, farms, the natural environment and at-risk species.

Looming changes in our runoff patterns and ongoing risks posed by aging infrastructure and levee subsidence further contribute to the problem.

While great strides continue to be made at the local and regional levels in water management and development of alternative supplies, these efforts alone will not reliably meet California's needs. We must also sustain our state's backbone infrastructure to provide the kind of flexibility needed for the future.

To respond to these challenges and ensure California has the water supply system it needs in the coming decades, ACWA urges the Governor, the State Legislature, Congress, and the federal Administration to take the actions identified in this Blueprint to make the statewide investments needed and support ongoing local and regional initiatives.

As the local agencies charged with delivering water to Californians throughout the state, ACWA members believe these investments must be made in a timely and decisive way. Failure to do so will carry a hefty cost for key regions of the state, the state as a whole and the nation.

The actions outlined in this Blueprint will not be easy or inexpensive. But as difficult as the task may be, we must begin now. Leadership – at the local, state and federal levels – will be the critical first step. ACWA stands ready to work with leaders, policy makers and stakeholders on all levels to take the actions required to meet California's water needs today, tomorrow and in the future.

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