



# ONE WATER ONE WATERSHED (OWOW)

## RESOURCE GUIDE

*1ST EDITION*

*Prepared for the*  
Santa Ana Watershed Project Authority  
(SAWPA)

*By the*  
Government Alliance Pillar

June 13, 2013



# INTRODUCTION

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*“The health of our waters is the principal measure how we live on the land.”*

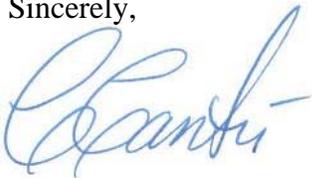
Luna Leopold, Explorer

It is my pleasure to roll out the Santa Ana River Watershed Resource Guide for your review and use. As the first edition, I'd like to thank Marie Jauregui from SAWPA for all of her hard work on assembling and packaging this information the Government Alliance Pillar pulled together. I also appreciate their collective efforts. It has been a work-in-progress since SAWPA initiated the update process for the One Water One Watershed Plan (a.k.a. OWOW 2.0). It also has been a long-term challenge identifying all governmental agencies and appropriate contacts within and outside the Santa Ana River Watershed that support us. We know when you're faced with a program challenge and need to look for the right contact to help how nice it will be to have this handy reference.

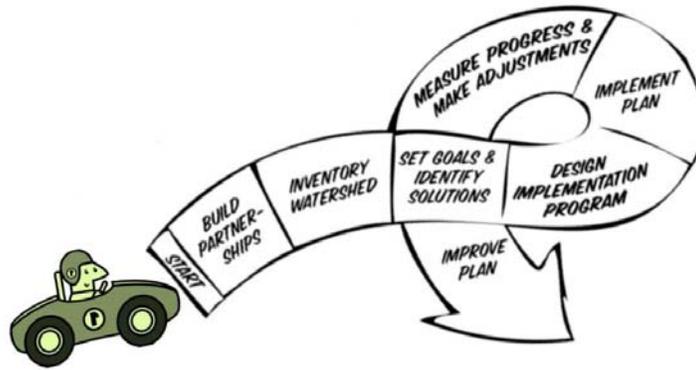
For that reason, it is our objective to periodically update this publication to reflect changes in the contacts and keep the information current. The public, our customers, expect correct and timely information when they want it, and our goal is to ensure they get what they need the first time around. The purpose for this Resource Guide is to help you have the right contact information to successfully navigate in our ever-changing environment and effectively work through the program challenges you face.

There are a number of Federal, Tribal, State, County, and Local agency contacts to thank for helping make this publication possible. Your use is a sign of appreciation to that ongoing endeavor. Please contact Mark Norton at 951.354.4220 with any comments and/or suggestions to help improve this publication. The key to maintaining contact in our watershed starts with you, and I hope you enjoy the reading.

Sincerely,



Celeste Cantú  
General Manager  
Santa Ana Watershed Project Authority



Source: [http://water.epa.gov/polwaste/nps/handbook\\_index.cfm](http://water.epa.gov/polwaste/nps/handbook_index.cfm)

In the beginning...

There was **CHAOS!**

Followed closely by **ORDER...**

With order came **COORDINATION,**

And with coordination came **ALLIANCES,**

And with alliances came **SYNERGY,**

And with synergy came **SUPPORT—**

The sum of the parts is greater than any one **WHOLE...**

That's **TEAMWORK!**

### *Steps to Integrated Planning:*



7. Measure Progress and Make Adjustments
6. Implement the Watershed Plan
5. Develop Watershed Plan Outline
4. Design an Implementation Program
3. Set Goals and Identify Solutions
2. Characterize the Watershed
1. Build Partnerships

Source: <http://water.epa.gov/type/watersheds/datait/watershedcentral/process.cfm>

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# BACKGROUND

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## One Water One Watershed Vision

*A sustainable Santa Ana River Watershed [that] is drought-proofed, salt balanced, and supports economic and environmental vitality in the year 2030.*

The Santa Ana Watershed Project Authority (SAWPA) is a Joint Powers Authority, focusing on water supply and water quality. Its stated mission is to develop and maintain regional plans, programs, and projects that will protect the Santa Ana River basin water resources to maximize beneficial uses within the watershed in an economically and environmentally responsible manner. First formed in 1968 as a planning agency, SAWPA was reformed in 1972 with a mission to plan and build facilities to protect the water quality of the Santa Ana River Watershed, or simply, the Watershed. The agreements formalizing the current agency were signed in 1974 and went into effect in 1975.

As of 2013, the Watershed is home to over five million people in southern California, and the region's population is projected to grow to almost ten million people within the next 50 years. This growth certainly will accelerate the pressures already on the region's limited water resources.

SAWPA has supported its five member water agencies and various stakeholder groups throughout the watershed including the Santa Ana Regional Water Quality Control Board (Regional Board) with developing and implementing plans to ensure that there is sufficient clean water to support all the water needs of the watershed into the future.

As a regional watershed planning group, SAWPA has been facilitating efforts to develop a watershed planning framework to guide water resource management throughout the Santa Ana River Watershed for the immediate future through the year 2030. To date, this has resulted in the development of the One Water One Watershed Plan (OWOW Plan). The genesis of this name and process is the recognition of a need for stakeholders across the watershed to develop an integrated water resource plan where all types of water (local surface and groundwater, imported water, stormwater and treated wastewater effluent) are viewed in a comprehensive manner as a single water resource.

SAWPA's OWOW process is led by a Steering Committee that's composed of other governmental, environmental, regulatory and business community representation, and lead by regional experts representing various technical disciplines (also known as Pillars), ranging from water supply and quality to climate change and environmental justice. These Pillars have prepared the OWOW Plan and helped identifies numerous opportunities to support our vision.

SAWPA developed the OWOW Plan to establish a vision for water resource management in the Santa Ana River Watershed. This effort was led by the OWOW Steering Committee and Pillars, representing different areas of water resource expertise. In 2011, SAWPA began efforts to take this vision to the next level by initiating a series of meetings that provided opportunity for the Pillars to focus in on the key water resource management needs in the watershed and to identify high level watershed concepts for further development. This effort started with identification of six watershed-based or system-wide strategies as follows:

# BACKGROUND

- 
- Stormwater Capture & Off-River Storage
  - Water Banking & Intra-Regional Transfer
  - Regional Water Quality Enhancement
  - Salt Export & Groundwater Management
  - Increase Water Use Efficiency
  - Disadvantaged Community Infrastructure Enhancement

From these broader strategies, the following 11 concept level system-wide projects and programs were developed.

- Multi-Use Flood Control Corridor Projects
- Water Banking and Transfer Projects
- Forest First Program Incentives
- Off-River Storage Projects and Supply Credits
- Transportation Corridor Stormwater Capture and Treatment
- Modified Watershed Brine Management System
- Efficient Water Use Guidebook
- Water Industry Energy Use Reduction Incentive Program
- Regional Land Use Planning Guidebook
- Regional Urban Runoff Management Fund
- Regional Habitat Conservation GAP Planning

The impetus for integrated water resources management is the recognition that the following major threats exist to the future management of water resources in the Santa Ana River Watershed:

- Drought conditions in the Colorado River Watershed, a primary source of imported water to the Santa Ana River Watershed;
- Predictability of future water imports from the San Joaquin-Bay Delta and Colorado River Watershed due to uncertainties in water availability and changing water management requirements;
- Continued population growth and development that puts further stress on the natural hydrology of the watershed and increases the need for additional assured waters supplies;
- Uncertainties as to the extent of climate change and its associated hydrologic variability.

The OWOW Plan is this watershed's preliminary answer to these threats. The Plan envisions a region where its stakeholders take an active rather than passive role in creating a watershed that:

- Is sustainable, drought-proofed and salt-balanced by 2030;
- Protects its water resources and uses water efficiently;
- Supports economic and environmental viability;
- Mitigates and adapts to a changing climate;
- Corrects environmental justice deficiencies;
- Minimizes interruptions to natural hydrology; and
- Creates a new water ethic at both institutional and personal levels.

# PILLARS AND PROCESS

The pillar categories were chosen based upon a review of water resource management strategies defined in the California Department of Water Resources (DWR) State Water Plan, previous DWR guidelines for developing Integrated Regional Water Management Plans (IRWMPs), and local water resource needs.

The pillars consisted of approximately ten to 60 participants depending on the topic and interest level. These participants included representatives from local agencies, special districts, non-profit organizations, university officials, and Native American Tribes, as well as private citizens. Each pillar was led by those with expertise in the water issue assigned to each particular group. The leaders were selected by the SAWPA Commission and approved by the Steering Committee, and were responsible for working with their groups in organizing, leading, and facilitating the planning process for their particular topic. At the end of the process, each pillar group prepared a chapter of the OWOW Plan, documenting current conditions and issues, and describing current and future watershed management strategies.

In addition to identifying issues and potential strategies for their particular area of interest, the pillars were asked to view the watershed problems from a multidisciplinary perspective that extended beyond their topic, and to consider other pillars' perspectives.



Source: SAWPA

# PILLARS AND PROCESS

## OWOW 2.0 Pillar

## What they do:



Beneficial Use Assurance

The Beneficial Use Assurance Pillar provides expertise, reviews data, and coordinates activities to ensure that water quality in the region provides beneficial uses to people and the environment.



Disadvantaged & Tribal Community

The Disadvantaged and Tribal Community Pillar provides expertise, reviews data, and coordinates activities to develop partnerships needed to address water related issues in Disadvantaged and Tribal Communities.



Energy & Environmental Impact Response

The Energy and Environmental Impact Response Pillar provides expertise, reviews data, and coordinates activities to ensure that water managers have the tools to adapt to a changing climate, as well as, reduce carbon produced in their activities.



Government Alliance

The Government Alliance Pillar ensures that federal and state agencies effectively partner in the management of water and other resources within the watershed.



Land Use Planning and Water

The Land Use Planning and Water Pillar provide expertise, reviews data, and coordinates activities to ensure that land use decisions are linked with water management decisions.



Stormwater Management

The Stormwater Management Pillar provides expertise to minimize pollutant mobilization and, enhance groundwater recharge while protecting infrastructure, life and property from flood events.



Natural Resources Stewardship

The Natural Resources Stewardship Pillar provides expertise, reviews data, and coordinates activities to protect habitat, working landscapes, and natural resources associated with water management activities.



Operational Efficiency and Water Transfers

The Operational Efficiency and Water Transfers Pillar provides expertise, reviews data, and coordinates activities in regional management of water resources to better align water supply and storage on a watershed level.



Water Resource Optimization

The Water Resource Optimization Pillar provides expertise, reviews data, and coordinates activities to ensure adequate sustainable water to support humans and the environment.



Water Use Efficiency

The Water Use Efficiency Pillar provides expertise, reviews data, and coordinates activities to ensure that water that supports human and economic activity is used in an efficient, sustainable manner.

Another important role of the Pillars was to provide support and input to the Steering Committee about the OWOW goals and objectives, based on their technical expertise in various water resource fields and their local knowledge.

# ORGANIZATIONS

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## *Federal agencies:*



### **Mission Statement**

Provide leadership on food, agriculture, natural resources, rural development, nutrition, and related issues based on sound public policy, the best available science, and efficient management.



## **FOREST SERVICE**

### **Mission Statement**

Sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations.

#### *San Bernardino National Forest*

Mary Beth Najera, Director, Resources and Restoration  
Jody Noiron, Forest Supervisor  
Robert Taylor, Hydrologist

[mnajera@fs.fed.us](mailto:mnajera@fs.fed.us)

[rgtaylor@fs.fed.us](mailto:rgtaylor@fs.fed.us)

602 S Tippecanoe Avenue  
San Bernardino, CA 92408

P 909.382.2600

Website: <http://www.fs.usda.gov/sbnf>

#### *Cleveland National Forest*

William Metz, Forest Supervisor

P 858.673.6187

10845 Rancho Bernardo Road, Suite 200  
San Diego, CA 92127

P 858.673.6187

Website: <http://www.fs.usda.gov/cleveland>

# ORGANIZATIONS

## *Federal agencies (cont.):*



### **Mission Statement**

The Natural Resources Conservation Service (NRCS) is the primary federal agency that works with private landowners to help them conserve, maintain and improve their natural resources. The Agency emphasizes voluntary, science-based conservation; technical assistance; partnerships; incentive-based programs; and cooperative problem solving at the community level.

#### *Area Office*

Brooks Engelhardt, Area Resource Conservationist  
[brooks.engelhardt@ca.usda.gov](mailto:brooks.engelhardt@ca.usda.gov) P 805.386.4489  
3380 Somis Road, Somis, CA 93066

#### *Field Office, Redlands*

Kimberly Larry, District Conservationist  
[kim.larry@ca.usda.gov](mailto:kim.larry@ca.usda.gov) P 909.799.7407  
25864 Business Center Drive, Suite K, Redlands, CA 92374-4515

#### *Field Office, San Jacinto*

Bob Hewitt, District Conservationist, [robert.hewitt@ca.usda.gov](mailto:robert.hewitt@ca.usda.gov)

#### *Rural Development*

Glenda Humiston [glenda.humiston@usda.gov](mailto:glenda.humiston@usda.gov)

Janice Waddell, State Program Director  
[janice.waddell@ca.usda.gov](mailto:janice.waddell@ca.usda.gov) P 530.792.5800  
430 G Street, Agency 4169, Davis, CA 95616

John Jebian, Area Director  
[john.jebian@ca.usda.gov](mailto:john.jebian@ca.usda.gov) P 760.342.4624 ext 118

Carrie McLeod, Area Specialist  
[carrie.mcleod@ca.usda.gov](mailto:carrie.mcleod@ca.usda.gov) P 760.347.3675 ext 120  
82-901 Bliss, Indio, CA 92201-4355

#### *Rural Development Service Center Office*

Heidi Patterson, District Conservationist  
[heidi.patterson@ca.usda.gov](mailto:heidi.patterson@ca.usda.gov) P 951.656.6800  
22690 March Memorial Drive, Suite 280, Moreno Valley, CA 92553-9024

#### *Rural Development Service Center Office, Victorville*

Holly Johnson Shiralipour, District Conservationist  
[holly.shiralipour@ca.usda.gov](mailto:holly.shiralipour@ca.usda.gov) P 760.843.6882 ext 106  
15415 W. Sand Street, Suite 103, Victorville, CA 92392

# ORGANIZATIONS

## *Federal agencies (cont.):*



## DEPARTMENT OF COMMERCE

### **Mission Statement**

The U.S. Department of Commerce promotes job creation, economic growth, sustainable development and improved standards of living for all Americans by working in partnership with businesses, universities, communities and our nation's workers. The department touches the daily lives of the American people in many ways, with a wide range of responsibilities in the areas of trade, economic development, technology, entrepreneurship and business development, environmental stewardship, and statistical research and analysis.

### **Overview**

To drive U.S. competitiveness in the global marketplace, the Commerce Department works to strengthen the international economic position of the United States and facilitates global trade by opening up new markets for U.S. goods and services. Here at home, the Commerce Department promotes progressive business policies that help America's businesses and entrepreneurs and their communities grow and succeed. Cutting-edge science and technology at the department fosters innovation, and a focus on research and development that moves quickly from the lab to the marketplace generates progress and new 21st century opportunities. No matter where businesses are in their life cycle, whether just getting off the ground or looking to expand into overseas markets, the Commerce Department is singularly focused on making U.S. companies more innovative at home and more competitive abroad, so they can create jobs.



## NATIONAL MARINE FISHERIES SERVICE (NMFS) SOUTHWEST REGIONAL OFFICE

### **Mission Statement**

Stewardship of living marine resources through science-based conservation and management and the promotion of healthy ecosystems

Dr. Kevin Chu, PhD, Deputy Regional Director  
[kevin.chu@noaa.gov](mailto:kevin.chu@noaa.gov)

P 562.980.4002

Anthony Spina, Supervisory Fishery Biologist  
[anthony.spina@noaa.gov](mailto:anthony.spina@noaa.gov)

P 562.980.4045

501 West Ocean Blvd, Suite 4200  
Long Beach, CA 90802  
Website: <http://swr.nmfs.noaa.gov/>

# ORGANIZATIONS

## *Federal agencies (cont.):*



## DEPARTMENT OF HOMELAND SECURITY

### **Mission Statement**

The vision of homeland security is to ensure a homeland that is safe, secure, and resilient against terrorism and other hazards. Three key concepts form the foundation of our national homeland security strategy designed to achieve this vision: security, resilience, and customs and exchange.



## FEMA FEDERAL EMERGENCY MANAGEMENT AGENCY

### **Mission Statement**

The Federal Emergency Management Agency supports citizens and first responders to ensure that as a Nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.

### *Region IX*

Ed Curtis, P.E., CFM

[edward.curtis@dhs.gov](mailto:edward.curtis@dhs.gov)

P 510.627.7100

1111 Broadway, Suite 1200  
Oakland, CA 94607-4052

P 510.627.7100

Website: <http://www.fema.gov>

### **Overview for Region IX**

FEMA supports citizens and first responders to ensure that as a Nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards. FEMA Region IX, headquartered in Oakland, California, is one of ten Regional Offices. The people of the Federal Emergency Management Agency serve the United States by providing help to people impacted by disasters, working with state, local and tribal governments. On call 24/7, FEMA's public servants are experts in the various fields of emergency management. FEMA Region IX supports the development of a regional, all-hazards, risk-based emergency management system of preparedness, prevention, protection, response, recovery, and mitigation through close working relationships that draw on the talents and assets of federal agencies, state, tribal nations, localities, business and industry, and state and local volunteer organizations and faith-based groups.

### **National Flood Insurance Program (NFIP)**

Since standard homeowners insurance doesn't cover flooding, it's important to have protection from the floods associated with hurricanes, tropical storms, heavy rains and other conditions that impact the U.S.

In 1968, Congress created the NFIP to help provide a means for property owners to financially protect themselves. The NFIP offers flood insurance to homeowners, renters, and business owners if their community participates in the NFIP. Participating communities agree to adopt and enforce ordinances that meet or exceed FEMA requirements to reduce the risk of flooding.

**FloodSmart** - [http://www.floodsmart.gov/floodsmart/?cid=Search\\_BingYahoo\\_FEMA\\_Brand](http://www.floodsmart.gov/floodsmart/?cid=Search_BingYahoo_FEMA_Brand)

# ORGANIZATIONS

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## *Federal agencies (cont.):*



## DEPARTMENT OF THE INTERIOR

### **Mission Statement**

The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

### **Overview**

The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future. It manages the Nation's public lands and minerals, including providing access to public lands and the Outer Continental Shelf for renewable and conventional energy; is the steward of 20 percent of the Nation's lands including national parks, national wildlife refuges, and the public lands; is the largest supplier and manager of water in the 17 western states and a supplier of hydropower energy; and upholds Federal trust responsibilities to Indian tribes and Alaska Natives. It is responsible for migratory wildlife conservation; historic preservation; endangered species conservation; surface-mined lands protection and restoration; mapping, geological, hydrological, and biological science for the Nation; and financial and technical assistance for the insular areas.

# ORGANIZATIONS

## *Federal agencies (cont.):*



## DEPARTMENT OF THE INTERIOR (*CONT.*)



## BUREAU OF INDIAN AFFAIRS

### **Mission Statement**

“...enhance the quality of life, to promote economic opportunity, and to carry out the responsibility to protect and improve the trust assets of American Indians, Indian tribes, and Alaska Natives.”

### *Pacific Regional Office*

Amy L. Dutschke, Regional Director  
2800 Cottage Way  
Sacramento, CA 95825

P 916.978.6000

### *Southern California Agency*

Robert Eben, Superintendent  
1451 Research Park Drive, Suite 100  
Riverside, CA 92507

P 951.276.6624

Website: <http://www.bia.gov/WhoWeAre/RegionalOffices/Pacific/WeAre/SouthernCalifornia/index.htm>

The Pacific Regional Office is under the direction of the Regional Director who is responsible to the Director, (BIA), for all non-education related Bureau programs, functions, and activities assigned to the Region. The Regional Director represents the Bureau in dealings with other governmental entities and serves as the representative of the Director, (BIA), with responsibility to work toward strengthening intergovernmental assistance to the 104 Federally recognized Tribes in the Region's service area and improving interagency and intergovernmental cooperation and coordination within the Region. The Office of the Regional Director provides program direction and supervision to four agencies responsible for formulation and promulgating Region applications of national policies; for monitoring and evaluating operating programs and offices to ensure program effectiveness, efficiency, and conformance with established policies; and for obtaining adequate technical advice and assistance to support field operations.

The Southern California Agency is the primary operating level that provides and coordinates the delivery of Bureau of Indian Affairs programs services within a 4 county area of Southern California. The Agency provides services in the following programs: Real Estate Services; Natural Resources/Agriculture; Forestry/Wildland Fire Management; Environmental; Transportation, Housing, Self-Determination, and Tribal Operations.

# ORGANIZATIONS

## *Federal agencies (cont.):*



## DEPARTMENT OF THE INTERIOR (CONT.)



## BUREAU OF RECLAMATION

### **Mission Statement**

To manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

#### *Lower Colorado Region*

Terry Fulp, Regional Director      [tfulp@usbr.gov](mailto:tfulp@usbr.gov)      P 702.293.8411  
500 Fir Street      P 702.293.8411  
Boulder City, NV 89005  
Website:      [www.usbr.gov/lc](http://www.usbr.gov/lc)

#### *Southern California Area Office*

Bill Steele, Area Manager      [wsteele@usbr.gov](mailto:wsteele@usbr.gov)      P 951.695.5310  
Jack Simes, Planning Officer      [jsimes@usbr.gov](mailto:jsimes@usbr.gov)      P 951.695.5310  
27708 Jefferson Avenue, Suite 202      P 951.695.5310  
Temecula, CA 92590  
Website:      <http://www.usbr.gov/lc/socal>

The Bureau of Reclamation's Lower Colorado Region serves as the "water master" for the last 688 miles of the Colorado River within the United States on behalf of the Secretary of the Interior. We also maintain Hoover, Davis and Parker Dams, annually measure and account for the water's use, and maintain the river channel and protective levees; and manage water resource projects and programs in Arizona, southern California and southern Nevada.

The Southern California Area Office administers programs to develop and enhance water management throughout southern California.

# ORGANIZATIONS

## *Federal agencies (cont.):*



## DEPARTMENT OF THE INTERIOR (*CONT.*)



## U.S. FISH AND WILDLIFE SERVICE

### **Mission Statement**

Working with others to conserve, protect and enhance fish, wildlife and plants and their habitats for the continuing benefit of the American people.

#### *Carlsbad Office*

Jim Bartel, Field Supervisor

2177 Salk Avenue, Suite 250  
Carlsbad, CA 92008

P 760.431.9440

#### *Palm Springs Office*

Ken Corey, Assistant Field Office Supervisor

777 East Tahquitz Canyon Way, Suite 208  
Palm Springs, CA 92262

P 760.322.2070

#### *Sacramento Office*

Susan Moore, Field Supervisor  
2800 Cottage Way, Room W-2606  
Sacramento, CA 95825

P 916.414.6600

Website: <http://www.fws.gov/cno/>

The Carlsbad Fish and Wildlife Office (CFWO) works in partnership with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. We serve all or portions of Los Angeles, Orange, San Diego, San Bernardino, Riverside, and Imperial counties, as well as Santa Catalina and San Clemente Islands. Our programs include: Habitat Conservation Planning, Interagency Cooperation (Section 7 consultations), Listing and Recovery (critical habitat, 5-Year Reviews, Recovery Plans), Environmental Contaminants, and Conservation Partnerships.

the Palm Springs office will focus on wildlife conservation issues related to renewable energy development, including development of the Desert Renewable Energy Conservation Plan; implementation of the Western Riverside County Multiple Species Habitat Conservation Plan and the Coachella Valley Multiple Species Habitat Conservation Plan. They will also participate in the Salton Sea restoration process; and work with local tribes, other Federal, state, and local agencies and private landowners on endangered species consultations and Habitat Conservation Planning efforts.

# ORGANIZATIONS

## *Federal agencies (cont.):*



## DEPARTMENT OF THE INTERIOR (CONT.)



### **Mission Statement**

The USGS serves the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

Eric G. Reichard, Director	<a href="mailto:egreich@usgs.gov">egreich@usgs.gov</a>	P 619.225.6134
Robert Kent, Hydrologist	<a href="mailto:rhkent@usgs.gov">rhkent@usgs.gov</a>	P 619.225.6151
Michael Land, Hydrologist	<a href="mailto:mtland@usgs.gov">mtland@usgs.gov</a>	P 619.225.6168
4165 Spruance Road, Suite 200		P 619.225.6100
San Diego, CA 92101		
Website:	<a href="http://ca.water.usgs.gov/index.html">http://ca.water.usgs.gov/index.html</a>	

The USGS is a science organization that provides impartial information on the health of our ecosystems and environment, the natural hazards that threaten us, the natural resources we rely on, the impacts of climate and land-use change, and the core science systems that help us provide timely, relevant, and useable information.

The [California Water Science Center](#) (CAWSC) is one of 48 Water Science Centers in the Water Resources Discipline of the USGS. The Water Science Center's mission is to collect, analyze and disseminate the impartial hydrologic data and information needed to wisely manage water resources for the people of the United States and the State of California.

# ORGANIZATIONS

## *Federal agencies (cont.):*



## DEPARTMENT OF THE INTERIOR (CONT.)



## NATIONAL PARK SERVICE

### **Mission Statement**

The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

MaLisa Martin

[malisa\\_martin@nps.gov](mailto:malisa_martin@nps.gov)

P 323.276.0968

Anne Dove

[anne\\_dove@nps.gov](mailto:anne_dove@nps.gov)

P 323.441.9307

Patrick Johnston

[patrick\\_johnston@nps.gov](mailto:patrick_johnston@nps.gov)

P 323.441.2117

570 West Avenue 26  
Los Angeles, CA 90065

Website: <http://www.nps.gov/>

### **Overview**

Maintains and manages a network of 394 natural, cultural, and recreational sites for the benefit and enjoyment of the American people. Manages and protects over 28,000 historic structures, over 52 million acres of designated wilderness, and a wide range of museum collections and cultural and natural landscapes. Provides outdoor recreation to over 285 million annual park visitors. Provides technical assistance and support to state and local natural and cultural resource sites and programs, and fulfills responsibilities under the National Historical Preservation Act.



## JUAN BAUTISTA DE ANZA NATIONAL TRAIL

Website: <http://www.nps.gov/juba/index.htm>



## OLD SPANISH TRAIL

Website: <http://www.nps.gov/olsp/index.htm>

# ORGANIZATIONS

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## *Federal agencies (cont.):*



### **U.S. ARMY CORPS OF ENGINEERS LOS ANGELES DISTRICT**

#### **Mission Statement**

Provide vital public engineering services in peace and war to strengthen our Nation's security, energize the economy, and reduce risks from disasters.

Colonel Mark R. Toy, Commander

Cori Farrar, Chief Orange & Riverside Counties Section South Coast Branch, Regulatory Division  
[corice.j.farrar@usace.army.mil](mailto:corice.j.farrar@usace.army.mil) P 213.452.3296

Eileen Takata, Watershed Program Manager P 213.452.3836  
[eileen.k.takata@usace.army.mil](mailto:eileen.k.takata@usace.army.mil)

915 Wilshire Blvd., Suite 1101  
Los Angeles, CA 90017  
Website: <http://www.spl.usace.army.mil/>

The Los Angeles District provides civil works and military engineering support to Southern California, Nevada, Arizona, and parts of Utah. The area encompasses 226,000 square miles, 420 miles of coastline, 14 harbors, and the highest, lowest, and hottest spots in the contiguous 48 states. The scope of missions in the district vary from supporting the world's largest groundwater recharge system in Orange County, California, to the district's involvement in one of the nation's most significant transportation projects, the California High-Speed Rail. Among the 14 navigation projects and 13 miles of breakwaters maintained by the district are the Ports of Los Angeles and Long Beach which account for a majority of West Coast trade and shipping.

Major flood-control projects include improvements to Prado Dam and the Santa Ana River Mainstem Project in Southern California.

The district is responsible for the operation and maintenance of 16 dams and 54 miles of flood control channels. The dams and recreation areas host more than 7 million visitors a year.

The mission of the Corps Regulatory Program is to protect the Nation's aquatic resources while allowing reasonable development through fair, flexible, and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands. The Regulatory Program in the Los Angeles District is executed to protect aquatic resources by developing and implementing short- and long-term initiatives to improve regulatory products, processes, program transparency, and customer feedback considering current staffing levels and historical funding trends.

# ORGANIZATIONS

## *Federal agencies (cont.):*



## U.S. ENVIRONMENTAL PROTECTION AGENCY

### **Mission Statement**

Protect human health and the environment

*U.S. EPA Region 9*

Jared Blumenfeld, Regional Administrator    [blumenfeld.jared@Epa.gov](mailto:blumenfeld.jared@Epa.gov)    P 415.947.8000

75 Hawthorne Street

San Francisco, CA 90017

Website:    <http://www.epa.gov/>

*EPA Southern California Field Office*

John Kemmerer, Associate Dir., Water Div.    [kemmerer.john@epa.gov](mailto:kemmerer.john@epa.gov)    P 213.244.1832

600 Wilshire Blvd., Suite 1460

Los Angeles, CA 90017

Website:    <http://www2.epa.gov/aboutepa/epa-region-9-pacific-southwest>

### **Agency Purpose (Overview)**

EPA's purpose is to ensure that:

- all Americans are protected from significant risks to human health and the environment where they live, learn and work;
- national efforts to reduce environmental risk are based on the best available scientific information;
- federal laws protecting human health and the environment are enforced fairly and effectively;
- environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy;
- all parts of society -- communities, individuals, businesses, and state, local and tribal governments -- have access to accurate information sufficient to effectively participate in managing human health and environmental risks;
- environmental protection contributes to making our communities and ecosystems diverse, sustainable and economically productive; and
- the United States plays a leadership role in working with other nations to protect the global environment.

# ORGANIZATIONS

## *Tribal:*



**MORONGO  
BAND OF  
MISSION  
INDIANS**  
A SOVEREIGN NATION

## **MORONGO BAND OF MISSION INDIANS**

David Monroe  
John Covington, Water Manager  
Liz Bogdanski, Environmental Program Manager

P 951.755.5309  
P 951.755.5270  
P 951.755.6624 ext 257

12700 Pumarra Road  
Banning, CA 92220

P 951.849.4697

Website: <http://www.morongonation.org/>



## **PECHANGA BAND OF LUISEÑO INDIANS**

Paul Maccaro, Environmental Director

P.O. Box 1477  
Temecula, CA 92593

P 951.770.6000

Website: <http://www.pechanga-nsn.gov/page?pageId=1>



## **RAMONA BAND OF CAHUILLA INDIANS**

Joseph Hamilton, Chairman  
Manuel Hamilton, Vice Chairman

[jhamilton@ramonatribe.com](mailto:jhamilton@ramonatribe.com)  
[mhamilton@ramonatribe.com](mailto:mhamilton@ramonatribe.com)

P 951.763.4105  
P 951.763.4105

56310 Highway 371, Suite B  
Anza, CA 92539

P 951.763.4105

Website: <http://ramonaband.com/>

# ORGANIZATIONS

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## *Tribal (cont.):*



James Ramos, Chairman P 909.864.8933  
Ed Delgado, Public Affairs [edelgado@sanmanuel-nsn.gov](mailto:edelgado@sanmanuel-nsn.gov)  
Jacob Coin, Director of Communication [jcoin@sanmanuel-nsn.gov](mailto:jcoin@sanmanuel-nsn.gov)  
Mike Lane P 909.864.8933

26569 Community Center Drive P 909.864.8933  
Highland, CA 92346  
Website: <http://www.sanmanuel-nsn.gov/index.asp>



## **SOBOBA BAND OF LUISEÑO INDIANS**

Scott Cozart, Spokesperson P 951.654.6168  
Dione Kitchcen, Exec. Asst. to Tribe [dione@soboba-nsn.gov](mailto:dione@soboba-nsn.gov) P 951.654.2765 ext 4115  
Joe Garcia, Public Works [jgarcia@soboba-nsn.gov](mailto:jgarcia@soboba-nsn.gov)  
Erica Helms-Schneck, Environmental Director P 951.654.5271

23904 Soboba Road P 951.654.5544  
San Jacinto, CA 92583  
Website: <http://www.soboba-nsn.gov/>

# ORGANIZATIONS

## State agencies:



**Cal EMA** CALIFORNIA EMERGENCY MANAGEMENT  
CALIFORNIA EMERGENCY AGENCY

### Mission Statement

To protect lives and property by effectively preparing for, preventing, responding to, and recovering from all threats, crimes, hazards, and emergencies.

#### *Inland Region*

Jim Brown, Regional Administrator    [jim.brown@calema.ca.gov](mailto:jim.brown@calema.ca.gov)    P 916.845.8487  
3650 Schriever Ave.    P 916.845.8470  
Mather, CA 95655  
Website:    <http://www.calema.ca.gov/RegionalOperations/Pages/Inland-Region.aspx>

There are 31 counties within three mutual aid regions within the Inland Administration Region. Within the regions there are 123 incorporated cities that range in population from a few hundred to over one million. The total population of all cities and counties in the Inland region is 7,181,643. (Population figures: CA. Department of Finance 2010).

The Inland Region consists of primarily rural jurisdictions with a few large metropolitan cities. The geography for the Inland Region is vast and varied with terrain consisting of valley floor agricultural centers, grasslands, watershed areas, high desert regions, foothill regions and into the maintain range areas.

Along with such diverse terrain, each area presents with its own unique set of challenges and threats that affect California. Those vulnerabilities include: river and flash flooding; wildfires; dam and levee failures; earthquakes; drought; pestilence; pandemic; agriculture; avalanche hazards; and chemical hazards.

#### *Southern Region*

Mona Bontty, Deputy Regional Administrator    P 562.795.2902  
[mona.bontty@calema.ca.gov](mailto:mona.bontty@calema.ca.gov)  
4671 Liberty Avenue    P 562.795.2900  
Los Alamitos, CA 90720  
Website:    <http://www.calema.ca.gov/RegionalOperations/Pages/Southern-Region.aspx>

There are 11 counties and two Mutual Aid Regions I and VI within the Southern Administration Region. Within the region there are 226 incorporated cities that include two nuclear plants. The total population of all cities and counties in the Southern Region is approximately 21,648,506.

The Southern Region geography is vast and varied with terrain consisting of valley floors, agricultural centers, watershed areas, foothill regions, mountain range areas and high desert regions.

Along with such diverse terrain, each area presents with its own set of challenges and threats that affect California. Those vulnerabilities include: earthquakes; tsunami; wildfires; river and flash flooding; dam and levee failures; pestilence; pandemic; terrorism; and radiological hazards.

# ORGANIZATIONS

## State agencies (cont.):



### CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

#### Mission Statement

To restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality.



### CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

#### Mission Statement

To restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality, by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention.

1001 I Street  
Sacramento, CA 95814  
Website: <http://www.dtsc.ca.gov/ContactDTSC/index.cfm>

Regulatory Questions P 916.255.3618  
P 800.728.6942

Los Angeles Environmental Chemical Laboratory  
1449 West Temple Street, Room 101  
Los Angeles, CA 90026-5698 P 213.580.5796



### OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT

#### Mission Statement

Protect and enhance public health and the environment by scientific evaluation of risks posed by hazardous substances.

#### Sacramento Office

George Alexeeff, Ph.D., Director P 916.322.6325  
1001 I Street P 916.324.7572  
Sacramento, CA 95814  
Website: <http://www.oehha.ca.gov/>

#### Oakland Office

1515 Clay Street, 16th floor P 510.622.3200  
Oakland, CA 94612

# ORGANIZATIONS

## *State agencies (cont.):*



### **CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY (CONT.)**



### **STATE WATER RESOURCES CONTROL BOARD**

#### **Mission Statement**

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

1001 I Street  
Sacramento, CA 95814

P 916.341.0250

Website: [http://www.waterboards.ca.gov/about\\_us/contact\\_us/](http://www.waterboards.ca.gov/about_us/contact_us/)



### **SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD**

#### **Mission Statement**

Regional Water Quality Control Boards are responsible for the protection and, where possible, the enhancement of the quality of California's waters.

Kurt V. Berchtold, Executive Officer  
3737 Main Street, Suite 500  
Riverside, CA 92501-3348

P 951.782.4130

Website: <http://www.waterboards.ca.gov/santaana/>

# ORGANIZATIONS

## State agencies:



## CALIFORNIA NATURAL RESOURCES AGENCY

### Mission Statement

To restore, protect and manage the state's natural, historical and cultural resources for current and future generations using creative approaches and solutions based on science, collaboration and respect for all the communities and interests involved.



## CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

### Mission Statement

The California Department of Fish and Wildlife (formerly "Department of Fish and Game") maintains native fish, wildlife, plant species and natural communities for their intrinsic and ecological value and their benefits to people. This includes habitat protection and maintenance in a sufficient amount and quality to ensure the survival of all species and natural communities. The department is also responsible for the diversified use of fish and wildlife including recreational, commercial, scientific and educational uses.

Dwayne Maxwell, Scientist P 562.342.7152  
Chanelle Davis, Wildlife Biologist P 909.627.1613  
Raul Rodriguez, Associate Biologist  
[rodriguez@dfg.ca.gov](mailto:rodriguez@dfg.ca.gov) P 909.393.3935  
Leslee Newton-Reed, Environmental Scientist  
[lnewtonreed@dfg.ca.gov](mailto:lnewtonreed@dfg.ca.gov) P 858.467.4281  
South Coast Region 5  
465 Lampson Avenue, Suite C P 562.342.7152  
Los Alamitos, CA 90720 Website: <http://www.dfg.ca.gov/>



## CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION

### Mission Statement

The California Department of Forestry and Fire Protection serves and safeguards the people and protects the property and resources of California.

Ken Pimlott, Director P 916.653.7772  
Tonya Hoover, State Fire Marshall P 916.445.8200  
Dale Hutchinson, Chief - Southern Region P 559.222.3714  
Southern Region Operations  
2524 Mulberry Street P 951.782.4140  
Riverside, CA 92501 Website: <http://www.calfire.ca.gov/>

# ORGANIZATIONS

## State agencies (cont.):



### CALIFORNIA NATURAL RESOURCES AGENCY



### CALIFORNIA DEPARTMENT OF WATER RESOURCES SOUTHERN REGION

#### Mission Statement

To manage the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments.

Mark Stuart, Southern Region Office Chief  
Brain Moniz, Southern Region Coordinator  
Lauma Jurkevic, Climate Change Specialist

[mark.stuart@water.ca.gov](mailto:mark.stuart@water.ca.gov)  
[brian.moniz@water.ca.gov](mailto:brian.moniz@water.ca.gov)  
[lauma.jurkevics@water.ca.gov](mailto:lauma.jurkevics@water.ca.gov)

770 Fairmont Avenue, Suite 102  
Glendale, CA 91203

P 818.500.1645

Website: <http://www.water.ca.gov/>

YouTube: <http://www.youtube.com/user/calwater?blend=3&ob=5>

Facebook: <http://www.facebook.com/pages/California-Department-of-Water-Resources/95205192448?ref=ts>



### CALIFORNIA STATE PARKS INLAND EMPIRE DISTRICT

#### Mission Statement

California State Parks mission is to provide for the health, inspiration, and education of the people of California by preserving the state's extraordinary biodiversity and creating opportunities for high quality outdoor recreation.

Ron Krueper, District Superintendent [rkrueper@parks.ca.gov](mailto:rkrueper@parks.ca.gov) P 951.940.5622  
Ken Kietzer, Sr Environmental Scientist [kkietzer@parks.ca.gov](mailto:kkietzer@parks.ca.gov) P 951.453.4250

17801 Lake Perris Drive  
Perris, CA 92571

P 951.443.2423

Website: [www.parks.ca.gov](http://www.parks.ca.gov)

Facebook: <https://www.facebook.com/Lakeperris>

# ORGANIZATIONS

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## *State agencies (cont.):*



**CALIFORNIA NATURAL RESOURCES AGENCY**



**CALIFORNIA STATE PARKS  
OFFICE OF HISTORIC PRESERVATION**

### **Mission Statement**

The mission of the Office of Historic Preservation is to provide leadership and promote the preservation of California's irreplaceable and diverse cultural heritage.

Carol Roland-Nawi, SHPO

[cnawi@parks.ca.gov](mailto:cnawi@parks.ca.gov)

P 916.445.7050

Jenan Saunders, Deputy SHPO

[jsaunders@parks.ca.gov](mailto:jsaunders@parks.ca.gov)

1725 23rd Street, Suite 100

P 916.445.7050

Sacramento, CA 95816

Website: [www.ohp.parks.ca.gov](http://www.ohp.parks.ca.gov)

Facebook: <https://www.facebook.com/calshpo>

# ORGANIZATIONS

## *State agencies (cont.):*



## CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

### **Mission Statement**

The California Department of Public Health is dedicated to optimizing the health and well-being of the people in California.

Oliver Pacifico, District Engineer      [oliver.pacifico@cdph.ca.gov](mailto:oliver.pacifico@cdph.ca.gov)      P 714.558.4997  
P.O. Box 997377, MS 0500      P 916.558.1784  
Sacramento, CA 95899-7377  
Website: [www.cdph.ca.gov](http://www.cdph.ca.gov)

Certification and Licenses:

<http://www.cdph.ca.gov/certlic/drinkingwater/Pages/default.aspx>

Division of Drinking Water and Environmental Management:

<http://www.cdph.ca.gov/programs/Pages/DDWEM.aspx>

## CALIFORNIA PUBLIC UTILITIES COMMISSION



### **Mission Statement**

Serve the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement and a healthy California economy.

#### *San Francisco Office*

Paul Clanon, Executive Director      P 415.703.2782  
505 Van Ness Avenue      P 415.703.2782  
San Francisco, CA 94102  
Website: [www.cpuc.ca.gov](http://www.cpuc.ca.gov)

#### *Los Angeles Office*

320 West 4th Street, Ste. 500      P 213.576.7000  
Los Angeles, CA 90013

# ORGANIZATIONS

## State agencies (cont.):



## CALIFORNIA DEPARTMENT OF TRANSPORTATION

### Mission Statement

Caltrans improves mobility across California.

#### *District 8*

David Bricker, Environmental Planner [David.Brick@dot.ca.gov](mailto:David.Brick@dot.ca.gov) P 866.388.7725  
Raymond Wolfe, Public & Governmental Affairs P 909.383.4631

464 West 4th Street P 866.388.7725  
San Bernardino, CA 92401  
Website: <http://www.dot.ca.gov/dist8/>

**Caltrans District 8** covers Riverside and San Bernardino Counties in Southern California, which includes 49 incorporated cities. It is the largest of 12 statewide Caltrans districts and covers approximately 28,650 square miles of land. There are four interstates and 32 state routes totaling 7,200 lane miles within our boundaries.

#### *District 12*

Ryan Chamberlain, Director [ryan\\_chamberlain@dot.ca.gov](mailto:ryan_chamberlain@dot.ca.gov) P 866.388.7725  
Tracy Lavelle, Public Affairs Branch Chief [cindy.quon@dot.ca.gov](mailto:cindy.quon@dot.ca.gov) P 949.724.2031

3347 Michelson Drive, Suite 100 P 866.388.7725  
Irvine, CA 92612  
Website: <http://www.dot.ca.gov/dist12/>

**Caltrans District 12** encompasses the entirety of Orange County and was established by the California State Legislature in 1988. The jurisdictional boundaries of the District, Orange County, encompass a metropolitan area of 794 square miles, including 34 cities and 3 million people (as of 2009), and is crisscrossed by 17 state highway routes. To provide for the transportation needs of the traveling public, District 12 maintains and operates 279 route miles of highway and 226 directional miles of full time High Occupancy Vehicle (HOV) or carpool lanes, one of the largest HOV lane networks in California.

# ORGANIZATIONS

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## *Orange County:*



## COUNTY OF ORANGE

### **Mission Statement**

Making Orange County a safe, healthy, and fulfilling place to live, work, and play, today and for generations to come, by providing outstanding, cost-effective regional public services.

Robert Franz, Interim County Exec Officer [ask.the.ceo@ocgov.com](mailto:ask.the.ceo@ocgov.com)

P 951.955.1110

333 W. Santa Ana Blvd.

P 714.834.5400

Santa Ana, CA 92701

Website: <http://ocgov.com/>



## ORANGE COUNTY FLOOD CONTROL

### **Mission Statement**

Protect Orange County life and property from the threat and damage of floods.

Herb Nakasone, P.E., Executive Director [herb.nakasone@ocpw.ocgov.com](mailto:herb.nakasone@ocpw.ocgov.com)

P 714.796.3908

300 N. Flower Street, 7th Floor

P 714.647.3999

Santa Ana, CA 92703-5000

Website: <http://ocflood.com/>

# ORGANIZATIONS

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## *Orange County cities:*



## CITY OF ANAHEIM PUBLIC UTILITIES



The Metropolitan Water District of Southern California member agency

### **Mission Statement**

Our mission is to add value to the community through a customer-focused approach to providing reliable, high-quality water and power at competitive rates.

Marcie Edwards, General Manager  
Customer Service

[customerservice@anaheim.net](mailto:customerservice@anaheim.net)

P 714.765.3300

P 714.765.3300

201 South Anaheim Blvd  
Anaheim, CA 92805

P 714.765.3300

Website: <https://www.anaheim.net/section.asp?id=54>



## CITY OF NEWPORT BEACH PUBLIC WORKS DEPARTMENT

### **Mission Statement**

Protecting and providing quality public improvements and services

Shane Burckle  
Water Conservation Coordinator

[sburckle@newportbeachca.gov](mailto:sburckle@newportbeachca.gov)

P 949.644.3214

3300 Newport Blvd.  
Newport Beach, CA 92663

P 949.644.3311

Website: <http://www.newportbeachca.gov/>

# ORGANIZATIONS

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## *Orange County agencies:*



### IRVINE RANCH WATER DISTRICT

#### **Mission Statement**

To provide high-quality water and sewer service in an efficient and cost-effective manner, in an environmentally sensitive way that provides a high level of customer satisfaction.

Paul Cook, General Manager  
Customer Service

[customerservice@irwd.com](mailto:customerservice@irwd.com)

P 949.453.5300

P 949.453.5300

15600 Sand Canyon Avenue  
Irvine, CA 92618

P 949.453.5300

Website: <http://www.irwd.com/>



### MESA WATER DISTRICT

#### **Mission Statement**

Dedicated to satisfying our community's water needs.

Paul Shoenberger, General Manager  
Customer Service

[deniseg@mesawater.org](mailto:deniseg@mesawater.org)

P 949.631.1206

[customerservice2@mesawater.org](mailto:customerservice2@mesawater.org)

P 949.631.1200

1965 Placentia Avenue  
Costa Mesa, CA 92627

P 949.631.1200

Website: <http://www.mesawater.org/>

# ORGANIZATIONS

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## *Orange County agencies (cont.):*



## **METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA**

### **Mission Statement**

Provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Jeffrey Kightlinger, General Manager  
General Information

[OfficeoftheGeneralManager2@mwdh2o.com](mailto:OfficeoftheGeneralManager2@mwdh2o.com)

P 213.217.6000

700 North Alameda Street  
Los Angeles, CA 90012-2944

P 213.217.6000

Website: <http://www.mwdh2o.com/>



## **MUNICIPAL WATER DISTRICT OF ORANGE COUNTY**



The Metropolitan Water District of Southern California member agency

### **Mission Statement**

The Municipal Water District of Orange County (MWDOC) is dedicated to ensuring water reliability for the communities we serve. Our efforts are focused on sound planning and appropriate investment in water supply, regional delivery infrastructure and emergency preparedness.

Karl Seckel, Interim General Manager  
General Information

[kseckel@mwdoc.com](mailto:kseckel@mwdoc.com)

P 714.593.5025

P 714.963.3058

18700 Ward Street  
Fountain Valley, CA 92708

P 714.963.3058

Website: <http://www.mwdoc.com/>

# ORGANIZATIONS

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## *Orange County agencies (cont.):*



### ORANGE COUNTY SANITATION DISTRICT

#### **Mission Statement**

We protect public health and the environment by providing effective wastewater collection, treatment, and recycling.

James Ruth, General Manager  
General Information

[jruth@ocsd.com](mailto:jruth@ocsd.com)  
[forinformation@ocsd.com](mailto:forinformation@ocsd.com)

P 714.593.7101  
P 714.962.2411

10844 Ellis Avenue  
Fountain Valley, CA 92708  
Website: <http://www.ocsd.com/>

P 714.962.2411



### ORANGE COUNTY WATER DISTRICT

#### **Mission Statement**

We are committed to water supply and reliability, water quality, environmental stewardship, sound financial management, and industry leadership and innovation.

Michael Markus, General Manager  
General Information

[mmarkus@ocwd.com](mailto:mmarkus@ocwd.com)  
[info@ocwd.com](mailto:info@ocwd.com)

P 714.378.3200  
P 714.378.3200

18700 Ward Street  
Fountain Valley, CA 92708  
Website: <http://www.ocwd.com/>

P 714.378.3200

# ORGANIZATIONS

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## *Orange County agencies (cont.):*



### **Objectives**

SCSC's objectives are to establish proactive programs to address the critical need to remove salts from water supplies; preserve, sustain, and enhance the quality of source water supplies; support economic development; and reach out to the general public on salinity problems.

Jeff Mosher, Administrative Director      [jmosher@nwri-usa.org](mailto:jmosher@nwri-usa.org)      P 714.378.3278  
Tammy Russo, Administrative Coordinator      [trusso@nwri-usa.org](mailto:trusso@nwri-usa.org)      P 714.378.3278

18700 Ward Street      P 714.378.3278  
Fountain Valley, CA 92708  
Website:      <http://www.socalsalinity.org/>

# ORGANIZATIONS

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## *Riverside County:*



### COUNTY OF RIVERSIDE

#### **Mission Statement**

The mission of Riverside County is to provide local government services as mandated by State and Federal law, and discretionary services as requested by County taxpayers, within the bounds of available fiscal resources, in a manner which reflects favorably upon the profession of public service and the American form of democratic government.

Jay Orr, County Executive Officer

[ceo@rceo.org](mailto:ceo@rceo.org)

P 951.955.1110

4080 Lemon Street  
Riverside, CA 92501

P 951.955.1000

Website: <http://www.countyofriverside.us/>



### RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

#### **Mission Statement**

Protect people, property and watershed from damage or destruction from flood and storm waters and to conserve, reclaim and save such waters for beneficial use.

Jason Uhley, Chief of Watershed Protection

[juhley@rcflood.org](mailto:juhley@rcflood.org)

P 951.955.1273

1995 Market Street  
Riverside, CA 92501

P 951.955.1200

Website: <http://www.rcflood.org/>

# ORGANIZATIONS

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## *Riverside County (cont.):*



## **RIVERSIDE COUNTY OFFICE OF EMERGENCY SERVICES**

### **Mission Statement**

County OES fulfills a wide variety of roles from the field response to emergency incidents within the County to operating the County EOC in supporting and recovering from major emergencies and disasters. All County OES activities are focused around the four primary phases of emergency management; Mitigation, Preparedness, Response and Recovery.

Peter Lent, Deputy Director of Emergency Services

P 951.955.4700

4080 Lemon Street  
Riverside, CA 92501

P 951.955.4700

Website: <http://oes.rvcfire.org/Welcome.do>

## **RIVERSIDE COUNTY WATER AND DAM EMERGENCY RESPONSE (WADER) GROUP**

### **Mission Statement**

Our objective is to facilitate public agency preparedness, response and recovery efforts for local and regional disasters and to ensure the delivery of critical public services through mutual aid, communications and compliance with state and federal emergency standards.

4080 Lemon Street, Basement, Room 8  
Riverside, CA 92501

P 951.955.4700

Website: <http://www.rvcfire.org/ourDepartment/OES/Pages/WADER.aspx>

# ORGANIZATIONS

## *Riverside County cities:*



### **CITY OF CORONA DEPARTMENT OF WATER AND POWER**

#### **Mission Statement**

The City of Corona Department of Water and Power's mission is to protect public health by providing the highest quality water, reclaimed water, electric service and efficient water reclamation.

Jonathan Daly, General Manager  
Customer Service

[jonathan.daly@ci.corona.ca.us](mailto:jonathan.daly@ci.corona.ca.us)  
[utilbill@ci.corona.ca.us](mailto:utilbill@ci.corona.ca.us)

P 951.736.2234  
P 951.736.2321

755 Corporation Yard Way  
Corona, CA 92880

P 951.736.2234

Website: <http://www.discovercoronadwp.com>



### **CITY OF RIVERSIDE PUBLIC UTILITIES DEPARTMENT**

#### **Mission Statement**

The City of Riverside Public Utilities Department is committed to the highest quality water and electric services at the lowest possible rates to benefit the community.

David Wright, General Manager  
Customer Service

[dwright@riversideca.gov](mailto:dwright@riversideca.gov)

P 951.782.0330  
P 951.782.0330

3460 Orange Street  
Riverside, CA 92504

P 951.782.0330

Website: <http://riversideca.gov/utilities/>

# ORGANIZATIONS

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## *Riverside County agencies:*



### BEAUMONT-CHERRY VALLEY WATER DISTRICT

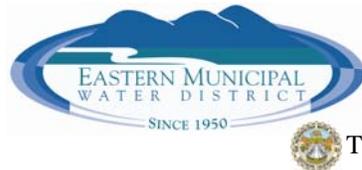
Eric Fraser, General Manager  
General Information

[info@bcvwd.org](mailto:info@bcvwd.org)

P 951.845.9581  
P 951.845.9581

560 Magnolia Avenue  
Beaumont, CA 92223-2258  
Website: <http://www.bcvwd.org/>

P 951.845.9581



### EASTERN MUNICIPAL WATER DISTRICT

The Metropolitan Water District of Southern California member agency

#### **Mission Statement**

Provide safe and reliable water and wastewater management services to our community in an economical, efficient and responsible manner, now and in the future.

Paul D. Jones II, General Manager  
P. Ravishanker, Deputy General Manager

P 951.928.3777  
P 951.928.3777

2270 Trumble Road  
Perris, CA 92570  
Website: <http://www.emwd.org/>

P 951.928.3777

# ORGANIZATIONS

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## *Riverside County agencies (cont.):*



### **ELSINORE VALLEY MUNICIPAL WATER DISTRICT**

#### **Mission Statement**

EVMWD will provide reliable, cost-effective, high quality water and wastewater services that are dedicated to the people we serve.

John Vega, General Manager  
Customer Service

[ihaveavoice@evmwd.net](mailto:ihaveavoice@evmwd.net)

P 951.674.3146

P 951.674.3146

31315 Chaney Street  
Lake Elsinore, CA 92531

P 951.674.3146

Website: <http://www.evmwd.com/>



### **RIVERSIDE-CORONA RESOURCE CONSERVATION DISTRICT**

#### **Mission Statement**

Helps conserve the natural resources (soil, water, plants, and wildlife) of areas within western Riverside and San Bernardino Counties in southern California. The District provides technical advice to land users, educational programs for the community, and conducts on-the-land conservation projects.

Shelli Lamb, District Manager  
General Information

[lamb@rcrcd.com](mailto:lamb@rcrcd.com)

P 951.683.7691

[rcrcd@rcrcd.com](mailto:rcrcd@rcrcd.com)

P 951.683.7691

4500 Glenwood Drive, Building A  
Riverside, CA 92501

P 951.683.7691

Website: <http://www.rcrcd.com/>

# ORGANIZATIONS

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## *Riverside County agencies (cont.):*



### SAN GORGONIO PASS WATER AGENCY

#### **Mission Statement**

To import supplemental water and to protect and enhance local water supplies for use by present and future water users and to sell imported water to local water districts within the service areas of the San Gorgonio Pass Water Agency.

Jeff Davis, General Manager

[jdavis@sgpwa.com](mailto:jdavis@sgpwa.com)

P 951.845.2577

Ken Falls, Operations & Maintenance Mgr

[kfalls@sgpwa.com](mailto:kfalls@sgpwa.com)

P 951.845.2577

1210 Beaumont Avenue

P 951.845.2577

Beaumont, CA 92223

Website: <http://www.sgpwa.com/>



### SAN JACINTO BASIN RESOURCE CONSERVATION DISTRICT

#### **Mission Statement**

To help people conserve, protect and restore natural resources through programs of information, education and technical assistance.

Gayle Holyoak, General Manager

[sjbrcd@earthlink.net](mailto:sjbrcd@earthlink.net)

P 951.654.7733

950 North Ramona Blvd., Suite 6

P 951.654.7733

San Jacinto, CA 92582

# ORGANIZATIONS

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## *Riverside County agencies (cont.):*



### SANTA ANA WATERSHED ASSOCIATION

#### **Mission Statement**

The Santa Ana Watershed Association will develop, coordinate and implement natural resource programs that support a sustainable ecosystem and social benefits from the San Bernardino Mountains to the Pacific Ocean.

Lee Reeder, Executive Director  
Sue Hoffman, Lead Biologist

[lreeder@sawatershed.org](mailto:lreeder@sawatershed.org)  
[sue-hoffman@sbcglobal.net](mailto:sue-hoffman@sbcglobal.net)

P 951.780.1012 ext 23  
P 909.606.1933 ext 104

P.O. Box 5407  
Riverside, CA 92517

P 951.780.1012

Website: <http://www.sawatershed.org/>



### SANTA ANA WATERSHED PROJECT AUTHORITY

#### **Mission Statement**

SAWPA's mission is to facilitate communication, identify emerging opportunities, develop regional plans, secure funding, implement programs, build projects, and operate and maintain facilities.

Celeste Cantú, General Manager  
Jeff Beehler, Program Manager

[ccantu@sawpa.org](mailto:ccantu@sawpa.org)  
[jbeehler@sawpa.org](mailto:jbeehler@sawpa.org)

P 951.354.4220  
P 951.354.4239

11615 Sterling Avenue  
Riverside, CA 92503

P 951.354.4220

Website: <http://www.sawpa.org>

# ORGANIZATIONS

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## *Riverside County agencies (cont.):*



## WESTERN MUNICIPAL WATER DISTRICT



The Metropolitan Water District of Southern California member agency

### **Mission Statement**

Provide water supply, wastewater disposal and water resource management to the public in a safe, reliable, environmentally sensitive and financially responsible manner.

John Rossi, General Manager  
Customer Service

[jrossi@wmwd.com](mailto:jrossi@wmwd.com)

P 951.571.7100

P 951.571.7104

14205 Meridian Parkway  
Riverside, CA 92518

P 951.571.7100

Website: <http://www.wmwd.com/>

# ORGANIZATIONS

## *San Bernardino County:*



### SAN BERNARDINO COUNTY

#### **Mission Statement**

The mission of the government of the County of San Bernardino is to satisfy its customers by providing service that promotes the health, safety, well being, and quality of life of its residents according to the County Charter, general laws, and the will of the people it serves.

Gregory C. Devereaux, Chief Executive Officer

385 N. Arrowhead Avenue  
San Bernardino, CA 92415-0120

P 909.387.5417

Website: <http://www.sbcounty.gov/default.asp>



### SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT

#### **Mission Statement**

Provide a broad range of services and infrastructure to help ensure safe and desirable communities for the people of San Bernardino County. Areas of responsibility include roads, traffic, flood control, storm water quality, water conservation, solid waste services, and county surveyor functions.

Gerry Newcombe, Director  
Kevin Blakeslee, Deputy Director

[kblakeslee@dpw.sbcounty.gov](mailto:kblakeslee@dpw.sbcounty.gov)

P 909.387.7906

P 909.387.7918

825 E Third Street  
San Bernardino, CA 92415

P 909.387.7906

Website: <http://www.sbcounty.gov/dpw/>

# ORGANIZATIONS

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## *San Bernardino County (cont.):*



## **SAN BERNARDINO COUNTY OFFICE OF EMERGENCY SERVICES**

### **Mission Statement**

The Office of Emergency Services (County OES) is a Division of the San Bernardino County Fire Department. County OES is responsible for disaster planning and emergency management coordination throughout the San Bernardino County Operational Area (OA) by functioning as the Lead Agency for the OA.

Mike Antonucci, Emergency Services Manager

1743 Miro Way  
Rialto, CA 92376

Website: <http://www.sbcfire.org/oes/>

P 909.356.3998

# ORGANIZATIONS

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## *San Bernardino County cities:*



### **CITY OF BIG BEAR LAKE DEPARTMENT OF WATER AND POWER**

#### **Mission Statement**

The mission of the DWP is to cost effectively deliver quality water to meet the needs of our current and future customers.

Reggie Lamson, General Manager

[rlamson@bbldwp.com](mailto:rlamson@bbldwp.com)

P 909.866.5050

41972 Garstin Drive

P 909.866.5050

Big Bear Lake, CA 92315

Website: <http://www.bbldwp.com/>



### **CITY OF ONTARIO MUNICIPAL UTILITIES COMPANY**

#### **Mission Statement**

The Municipal Utilities Company is committed to providing quality work and exceptional customer service to the residents and businesses of Ontario.

Scott Burton, Utilities General Manager

P 909.395.2600

General Information

[publicworksadmin@ci.ontario.ca.us](mailto:publicworksadmin@ci.ontario.ca.us)

P 909.395.2600

1425 South Bon View Avenue

P 909.395.2600

Ontario, CA 91761

Website: <http://www.ci.ontario.ca.us/index.aspx?page=432>

# ORGANIZATIONS

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## *San Bernardino County cities (cont.):*



### **CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT**

#### **Mission Statement**

Our mission is to provide quality and cost effective services to the people of San Bernardino. We will provide excellence in leadership through the allocation of public resources to City programs that are responsive to community priorities and maximize opportunities for economic, educational and cultural viability.

John Claus, Director of Water Reclamation

P 909.384.5141

300 North D Street  
San Bernardino, CA 92418

P 909.384.5095

Website: <http://www.ci.san-bernardino.ca.us/water/default.asp>

# ORGANIZATIONS

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## *San Bernardino County agencies:*



### **BIG BEAR AREA REGIONAL WASTEWATER AGENCY**

#### **Mission Statement**

Collect and treat wastewater, and dispose of or utilize the by-products in a safe, progressive and fiscally responsible manner for the health and welfare of the community.

Steven Schindler, General Manager  
Joe Hanford, Plant Superintendent

P 909.584.4018

P 909.584.4520

121 Palomino Drive  
Big Bear City, CA 92314-0517

P 909.584.4018

Website: <http://www.bbarwa.org/>



### **CHINO BASIN WATER CONSERVATION DISTRICT**

#### **Mission Statement**

The Chino Basin Water Conservation District is a public agency whose goal is the protection of the Chino Groundwater Basin in order to guarantee that current and future water needs will be met. The Basin is protected by the capture and percolation of water through the District's network of channels, basins, and spreading grounds. Water conservation education is provided to the individuals and organizations within the District's service area to further promote the efficient use of our water resources.

Eunice Ulloa, General Manager

[eulloa@cbwcd.org](mailto:eulloa@cbwcd.org)

P 909.267.3220

4594 San Bernardino Street  
Montclair, CA 91763

P 909.626.2711

Website: <http://www.cbwcd.org/>

# ORGANIZATIONS

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## *San Bernardino County agencies (cont.):*



### CUCAMONGA VALLEY WATER DISTRICT

#### **Mission Statement**

To provide high quality and reliable drinking water at a reasonable price while practicing good stewardship of natural and financial resources.

Martin E. Zvirbulis, General Manager/CEO  
Customer Service

[custserv@cvwdwater.com](mailto:custserv@cvwdwater.com)

P 909.987.2591

P 909.944.6000

10440 Ashford Street  
Rancho Cucamonga, CA 91730-2799

P 909.987.2591

Website: <http://www.cvwdwater.com/>



### ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE

#### **Mission Statement**

ESRI inspires and enables people to positively impact the future through a deeper, geographic understanding of the changing world around them.

380 New York Street  
Redlands, CA 92373-8100

P 909.793.2853

Website: <http://www.esri.com/>

# ORGANIZATIONS

## *San Bernardino County agencies (cont.):*



### **INLAND EMPIRE UTILITIES AGENCY**



The Metropolitan Water District of Southern California member agency

#### **Mission Statement**

Supply imported and recycled water; collect, treat, and dispose of wastewater; and provide other utility-related (renewable electrical energy, compost) services to the communities it serves. The Agency strives to provide these services in a regionally planned, managed, and cost-effective manner.

Joe Grindstaff, General Manager

P 909.993.1600

Craig Miller, Assistant General Manager

P 909.993.1600

6075 Kimball Avenue

P 909.993.1600

Chino, CA 91708

Website: <http://www.ieua.org/>

#### **Lake Arrowhead**



### **LAKE ARROWHEAD COMMUNITY SERVICES DISTRICT**

#### **Mission Statement**

To provide exceptional water and waste-water services, as we protect our water resources and preserve our environment.

Mark Veysey, Interim General Manager [admin@lakearrowheadcsd.com](mailto:admin@lakearrowheadcsd.com)

P 909.336.7100

Customer Service [custservice@lakearrowheadcsd.com](mailto:custservice@lakearrowheadcsd.com)

P 909.336.7100

28200 State Highway 189, Building O3, Suite 160

P 909.336.7100

Lake Arrowhead, CA 92352

Website: <http://www.lakearrowheadcsd.com/>

# ORGANIZATIONS

## *San Bernardino County agencies (cont.):*



### MONTE VISTA WATER DISTRICT

#### **Mission Statement**

To provide high quality water service while ensuring fiscal responsibility, ethical conduct, and environmental stewardship.

Mark Kinsey, General Manager  
Customer Service

P 909.624.0035

P 909.624.0035

10575 Central Avenue  
Montclair, CA 91763

P 909.624.0035

Website: <http://www.mvwd.org/>



### SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

#### **Mission Statement**

The San Bernardino Valley Municipal Water District (Valley District) was formed in 1954 as a regional agency to plan a long-range water supply for the San Bernardino Valley. It imports water into its service area through participation in the State Water Project (SWP) and manages groundwater storage within its boundaries.

Doug Headrick, General Manager  
General Information

[douglash@sbsvmwd.com](mailto:douglash@sbsvmwd.com)

P 909.387.9226

P 909.387.9200

380 E. Vanderbilt Way  
San Bernardino, CA 92408

P 909.387.9200

Website: [www.sbsvmwd.com](http://www.sbsvmwd.com)

# ORGANIZATIONS

## *San Bernardino County agencies (cont.):*



### **SAN BERNARDINO VALLEY WATER CONSERVATION DISTRICT**

#### **Mission Statement**

The Water Conservation District provides services that assure high quality local water supplies for people and the environment in the San Bernardino Valley.

Daniel Cozad, General Manager  
General Information

[info@sbvwcd.dst.ca.us](mailto:info@sbvwcd.dst.ca.us)

P 909.793.2503  
P 909.793.2503

1630 W. Redlands Blvd., Suite A  
Redlands, CA 92373

P 909.793.2503

Website: <http://www.sbvwcd.dst.ca.us/index.html>



### **VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY**

#### **Mission Statement**

The mission of the Victor Valley Wastewater Reclamation Authority is to cost-effectively provide professional, competent wastewater treatment, reclamation, recycling, and reuse; maintain the environment by providing clean effluent to the community; provide service to our customers; and keep the public informed.

Logan Olds, General Manager  
Gilbert Perez, Director of Operations

[lolds@vwra.com](mailto:lolds@vwra.com)  
[gperez@vwra.com](mailto:gperez@vwra.com)

P 760.948.9849  
P 760.948.9849

15776 Main Street, Suite 3  
Hesperia, CA 92345

P 760.948.9849

Website: <http://www.vwra.com/>

# ORGANIZATIONS

## *San Bernardino County agencies (cont.):*



### WEST VALLEY WATER DISTRICT

#### **Mission Statement**

Provide a reliable, safe drinking water supply to meet our customers' present and future needs at a reasonable cost and to promote water-use efficiency and conservation.

Anthony Araiza, General Manager  
Customer Service

[administration@wvwd.org](mailto:administration@wvwd.org)  
[customerservice@wvwd.org](mailto:customerservice@wvwd.org)

P 909.875.1804  
P 714.378.3200

855 W. Baseline Road  
Rialto, CA 92377

P 909.875.1804

Website: <http://www.wvwd.org/>



### Yucaipa Valley Water District YUCAIPA VALLEY WATER DISTRICT

#### **Mission Statement**

Yucaipa Valley Water District is committed to professionally managing the precious water, sewer and recycled water resources of the Yucaipa Valley in a reliable, efficient and cost effective manner in order to provide the finest service to our customers, both present and future.

Joseph Zoba, General Manager  
Customer Service

[Customer\\_Service@yvwd.dst.ca.us](mailto:Customer_Service@yvwd.dst.ca.us)

P 909.797.5119  
P 909.797.5117

12770 Second Street  
Yucaipa, CA 92399

P 909.797.5117

Website: <http://www.yvwd.dst.ca.us/>

# ORGANIZATIONS

## *Agencies outside the Watershed:*



### CALIFORNA URBAN WATER CONSERVATION COUNCIL

#### **Mission Statement**

The California Urban Water Conservation Council is a membership organization dedicated to maximizing urban water conservation throughout California by supporting and integrating innovative technologies & practices; encouraging effective public policies; advancing research, training, & public education; and building on collaborative approaches and partnerships.

Chris Brown, Executive Director

[chris@cuwcc.org](mailto:chris@cuwcc.org)

P 916.552.5885

716 10th Street, Suite 200

P 916.552.5885

Sacramento, CA 95814

Website: <http://www.cuwcc.org>



### COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK

#### **Mission Statement**

CoCoRaHS is a unique, non-profit, community-based network of volunteers of all ages and backgrounds working together to measure and map precipitation (rain, hail and snow). By using low-cost measurement tools, stressing training and education, and utilizing an interactive Web-site, our aim is to provide the highest quality data for natural resource, education and research applications.

Henry Reges, National Coordinator

[hreges@atmos.colostate.edu](mailto:hreges@atmos.colostate.edu)

P 970.491.1196

Colorado State University

P 970.491.1196

1371 Campus Delivery

Fort Collins, CO 80523-1371

Website: <http://www.cocorahs.org/>

CoCoRaHS is a grassroots volunteer network of backyard weather observers of all ages and backgrounds working together to measure and map precipitation (rain, hail and snow) in their local communities. By using low-cost measurement tools, stressing training and education, and utilizing an interactive Web-site, our aim is to provide the highest quality data for natural resource, education and research applications. The only requirements to join are an enthusiasm for watching and reporting weather conditions and a desire to learn more about how weather can affect and impact our lives.

# ORGANIZATIONS

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## *Agencies outside the Watershed (cont.):*



### PROJECT WET WATER EDUCATION FOR TEACHERS

#### **Mission Statement**

The mission of Project WET is to reach children, parents, educators and communities of the world with water education.

Brian Brown, Coordinator

[projectwet@watereducation.org](mailto:projectwet@watereducation.org)

P 916.444.6240

717 K Street, Suite 317

Sacramento, CA 95814

P 916.444.6240

Website: <http://www.projectwet.org/>



### SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

#### **Mission Statement**

Under the guidance of the Regional Council and in collaboration with our partners, our mission is to facilitate a forum to develop and foster the realization of regional plans that improve the quality of life for Southern Californians.

Hasan Ikhata, Executive Director

P 213.236.1800

818 West 7th Street, 12th Floor

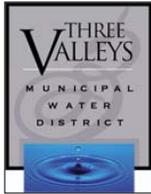
Los Angeles, CA 90017

P 213.236.1800

Website: <http://www.scag.ca.gov/index.htm>

# ORGANIZATIONS

## *Agencies outside the Watershed (cont.):*



### THREE VALLEYS MUNICIPAL WATER DISTRICT



The Metropolitan Water District of Southern California member agency

#### **Mission Statement**

Supplement and enhance local water supplies to meet our region's needs in a reliable and cost-effective manner.

Richard Hansen, General Manager

[rhansen@tvmwd.com](mailto:rhansen@tvmwd.com)

P 909.621.5568

Kirk Howie, Assistant General Manager

[khowie@tvmwd.com](mailto:khowie@tvmwd.com)

P 909.621.5568

1021 E. Miramar Avenue

P 909.621.5568

Claremont, CA 91711-2052

Website: <http://www.threevalleys.com/>



### WATER EDUCATION FOUNDATION

#### **Mission Statement**

The mission of the Water Education Foundation, an impartial, nonprofit organization, is to create a better understanding of water resources and foster public understanding and resolution of water resource issues through facilitation, education and outreach.

Rita Schmidt Sudman, Executive Director

[rsudman@watereducation.org](mailto:rsudman@watereducation.org)

P 916.444.6240

Jean Nordmann, Contributions Director

[jnordmann@watereducation.org](mailto:jnordmann@watereducation.org)

P 916.444.6240

717 K Street

P 916.444.6240

Sacramento, CA 95814

Website: <https://www.watereducation.org/>

# RESOURCES

## KEY DOCUMENTS

Source: <http://www.water.ca.gov/climatechange/docs/IRWM-ClimateChangeClearinghouse.pdf>

*2009 California Climate Adaptation Strategy*

California Natural Resources Agency  
(CNRA) December  
2009

<http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

### Summary

Multiple state agencies, led by the CNRA, developed the *Climate Adaptation Strategy* in response to Gov. Schwarzenegger's November 2008 Executive Order S-13-08 to identify how these agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. The document summarizes climate change impacts in seven specific sectors (i.e., Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure) and provides recommendations on how to manage against climate change threats. DWR was one of the agencies involved in the development of this document and the water sector strategies closely match the strategies laid out in [\*Managing an Uncertain Future: Climate Change Adaptation Strategies for California's Water\*](#). IRWM planners will find the strategies useful for preparation of climate change sections of their IRWM plans and funding proposals.

*Adapting California's Water Management to Climate Change*

Public Policy Institute of California  
November  
2008

[http://www.ppic.org/content/pubs/report/R\\_1108JLR.pdf](http://www.ppic.org/content/pubs/report/R_1108JLR.pdf)

### Summary

Significant water management challenges facing California in the coming decades due to climate change include accelerated sea level and increased temperatures. Sierra Nevada snowpack will be reduced and runoff will shift towards winter months. Changes in timing and amount of precipitation will cause significant flood control challenges. Integrated adaptive responses are needed by all entities responsible for water management in California, including federal, state and local agencies, retail water utilities, and agricultural water districts. IRWM proponents will find a useful discussion of water management adaptation options and associated costs. Institutional capacities and constraints to adaptation as well as the dynamic interaction of climate change mitigation and adaptation actions are also explored.

# RESOURCES

## KEY DOCUMENTS

*California's Water-Energy Relationship*

California Energy Commission

November  
2005

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

### Summary

This report examines how energy is used - and how it can be saved - in the water use cycle. The strategies and goals for a comprehensive statewide water-energy program would achieve incremental energy benefits for water and energy utilities. The report proposes to provide stakeholders with incentives to continuously identify and implement strategies optimizing the state's water and energy resources and assets on an integrated, coordinated, and collaborative basis. The report evaluates actions and methods that can boost the synergistic efficiencies of both the energy and water sectors. These and many other recommendations in the report are useful for IRWM planners.

*California Water Plan Update 2009*

California Department of Water  
Resources

October  
2009

<http://www.waterplan.water.ca.gov/cwpu2009/index.cfm>

### Summary

The 2009 California Water Plan Update emphasizes the need to act now to provide integrated, reliable, sustainable, and secure water resources and management systems for the economy, ecosystems, and human health. Aging infrastructure, impaired water bodies, and declining ecosystems are serious problems that must be addressed in the face of climate change and a rapidly growing human population. Update 2009 promotes IRWM as a strategy to maximize water supply security, protect water quality and ecosystems, and adapt to changing conditions. The report contains a thorough discussion of impacts that have already occurred, and additional changes that are expected, which will be useful to IRWM planners as they prepare climate change-related portions of their documents. A sustainable, resilient infrastructure which high levels of regional involvement and coordination is presented as the best way to deal with the challenges to come.

*California Environmental Quality Act (CEQA) and  
Climate Change*

California Air Pollution Control  
Officer Association (CAPCOA)

January  
2008

<http://www.capcoa.org/CEQA/CAPCOA%20White%20Paper.pdf>

### Summary

The CAPCOA prepared this white paper for public agencies to use as they develop procedures for reviewing greenhouse gas (GHG) emissions from projects. The paper reviews policy choices, analytical tools, mitigation strategies, mitigation measures, and provides examples from guidance documents developed in Massachusetts, Washington, and California. It also presents methodologies for residential, commercial, specific and general plan scenarios and information on estimating emissions from solid waste facilities, wastewater treatment plants, and construction. This document may be particularly helpful for developing strategies for determining the significance of environmental impacts for GHG emissions.

# RESOURCES

## KEY DOCUMENTS

### *CEQA and Climate Change: Technical Advisory*

Office of Planning and Research  
(OPR)

June  
2008

Home page for document

<http://opr.ca.gov/index.php?a=ceqa/index.html>

Actual document

<http://opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf>

#### **Summary**

The Governor's OPR, in collaboration with the CNRA, the California EPA and the Air Resources Board (ARB), published this *Technical Advisory* containing informal guidance for public agencies as they address the issue of climate change and GHG emissions in their CEQA documents. Since the passage of Assembly Bill (AB) 32 (Global Warming Solutions Act of 2006), this *Technical Advisory* provides OPR's perspective on the issue and precedes the climate change and GHG regulations for CEQA. Technical resources, modeling tools to estimate GHG emissions, and examples of GHG reduction measures are included in the *Technical Advisory*.

### *Climate Change Scoping Plan: A Framework for Change* California Air Resources Board

December  
2008

Background for document

<http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>

Home page for document

<http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>

Actual document

[http://www.arb.ca.gov/cc/scopingplan/document/adopted\\_scoping\\_plan.pdf](http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf)

#### **Summary**

The California ARB, in coordination with the Climate Action Team (including DWR), developed the *Scoping Plan* in response to meeting one of the requirements of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed into law in 2006. This law requires a reduction of GHG emissions to 1990 levels by 2020. ARB is the lead agency for implementing AB 32, and has developed a list of discrete early actions to begin reducing GHG emissions, assembled an inventory of historic emissions, established GHG emission reporting requirements, and set the 2020 emissions limit. The *Scoping Plan* outlines the state's strategy to achieve the 2020 GHG emissions limit and proposes actions designed to reduce overall GHG emissions in California, improve the environment, reduce the state's dependence on oil, diversify energy sources, save energy, create new jobs, and enhance public health. Since all activities within the state will be required to comply with the scoping plan by 2012, all IRWM planning entities should review this plan and evaluate its potential impact on their activities.

# RESOURCES

## KEY DOCUMENTS

*Implementing California Flood Legislation into Local Land Use Planning: A Handbook for Local Communities*

California Department of Water Resources

October 2010

[http://www.water.ca.gov/floodmgmt/lrafmo/fmb/docs/Oct2010\\_DWR\\_Handbook\\_web.pdf](http://www.water.ca.gov/floodmgmt/lrafmo/fmb/docs/Oct2010_DWR_Handbook_web.pdf)

### Summary

One of the most effective ways to reduce the vulnerability to potential flooding is through careful land use planning that is fully informed by and reflective of applicable flood information and flood management practices. This Handbook supports the Department of Water Resources FloodSAFE California initiative, which is a statewide initiative to improve public safety through an integrated approach to flood management.

*Information on CEQA and Climate Change*

Office of the Attorney General

<http://ag.ca.gov/globalwarming/ceqa.php>

### Summary

This website, maintained by the Office of the Attorney General, contains information about CEQA and ways that climate change can be analyzed by as part of the process of evaluating and disclosing the significant environmental impacts of proposed projects. Project level mitigation measures are proposed in a document titled *\*Addressing Climate Change at the Project Level*, a link to which can be found on this webpage. Extensive background information on global warming is also available.

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

California Department of Water Resources

October 2008

<http://www.water.ca.gov/climatechange/docs/ClimateChangeWhitePaper.pdf>

### Summary

This report recommends a series of adaptation strategies for state and local water managers to improve their capacity to handle change. Many of the strategies will also help adapt our water resources to accommodate non-climate demands such as a growing populations, ecosystem restoration and greater flood protection. Strategies discussed include investment in IRWM, aggressively increasing water use efficiency, enhancing and sustaining ecosystems, expanding water storage and conjunctive management of surface and groundwater resources, increasing hydrologic monitoring, data analysis and management and planning for sea level rise.

# RESOURCES

## KEY DOCUMENTS

### *New CEQA Guideline Amendments*

<http://ceres.ca.gov/ceqa/guidelines/>

#### **Summary**

On December 30, 2009 the CNRA adopted amendments to the CEQA guidelines for GHG emissions, as directed by Senate Bill 97 (SB 97). The amendments became effective March 18, 2010. The new guidelines state that lead agencies should quantify GHG emissions where quantification is possible, or perform qualitative analysis, or both as appropriate in the context of the particular project, in order to determine the amount, types, and sources of GHG emissions resulting from the project. The guidelines preserve the discretion of lead agencies in making determinations of significance but recommend that lead agencies consider the adoption of broad programmatic approaches for reducing GHG emissions from their activities. All IRWM activities which require CEQA analyses must comply with these new guidelines.

### *Preparing for Climate Change: A Guidebook for Local, Regional, and State Governments*

**University of Washington  
Center for Science in the Earth  
System**

**September  
2007**

<http://www.cses.washington.edu/db/pdf/snoveretalgb574.pdf>

#### **Summary**

This guidebook emphasizes that waiting until climate change impacts are completely clear entails risk of being poorly equipped to manage the social, economic and ecological consequences, as well as losing the opportunity to take advantage of potential benefits. Creating climate resilient communities are the end goal of this process. The guidebook explains how to conduct vulnerability and risk assessments and how to develop and implement a “preparedness plan.”

### *Sierra Climate Change Toolkit: Third Edition*

**Sierra Nevada Alliance**

**2011**

[http://www.sierranevadaalliance.org/publications/db/pics/1303760072\\_12034.f\\_pdf.pdf](http://www.sierranevadaalliance.org/publications/db/pics/1303760072_12034.f_pdf.pdf)

#### **Summary**

This document reviews the science of climate change on the global, national, state, and regional levels. An overview of the effects of GHG emissions and suggested reduction actions by individuals are provided. Climate change adaptation planning strategies for water, watershed management, species protection, forest management, wildfire management, and land use planning are included and make up the bulk of this document. The principles provided in the document are useful tools in the assessment of regional climate change adaptation and actions for addressing GHG emissions.

# RESOURCES

## KEY DOCUMENTS

*Urban Drought Guidebook*

California Department of Water  
Resources, Office of Water Use  
Efficiency and Transfers

2008  
Updated  
Edition

[http://www.water.ca.gov/pubs/planning/urban\\_drought\\_guidebook/  
urban\\_drought\\_guidebook\\_2008.pdf](http://www.water.ca.gov/pubs/planning/urban_drought_guidebook/urban_drought_guidebook_2008.pdf)

### Summary

DWR, in conjunction with Reclamation and the California Urban Water Conservation Council, developed this guidebook to provide technical assistance to local water suppliers and help local agencies and communities prepare for dry weather conditions and water supply interruptions. Drought, climate change, natural disasters, and environmental protections can all affect water supplies. Good planning and preparation can help IRWM practitioners and water agencies maintain reliable water supplies and reduce the impacts of supply interruptions. The guidebook presents examples of efforts by water suppliers throughout California and the United States and a wide array of approaches to address the variable water supply and demand scenarios throughout the state. Water suppliers will be able to use this guidebook to design programs that reflect local and regional conditions. The guidebook is in the process of being updated again; however, IRWM practitioners can use the current version until the update is finalized.

*California Adaptation  
Planning Guide*

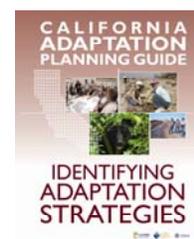
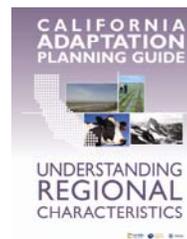
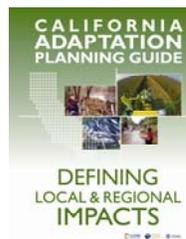
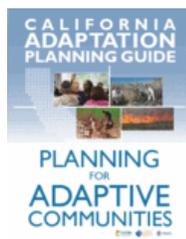
Cal EMA, California Energy  
Commission, California Natural  
Resources Agency, FEMA

2012

<http://www.preventionweb.net/english/professional/publications/v.php?id=30104>

### Summary

The California Adaptation Planning Guide (APG), a set of four complementary documents, provides guidance to support communities in addressing the unavoidable consequences of climate change. The APG introduces the basis for climate change adaptation planning and details a step-by-step process for local and regional climate vulnerability assessment and adaptation strategy development. In addition, APG provides a more in-depth understanding of how climate change can affect a community and includes seven “impact sectors” to support communities conducting a climate vulnerability assessment. It also identifies climate impact regions in California, including their environmental and socioeconomic characteristics, and explores potential adaptation strategies that communities can use to meet adaptation needs.



# RESOURCES

## KEY DOCUMENTS

*Using Future Climate Projections to Support Water Resources Decision Making in California*

California Department of Water Resources

May 2009

<http://www.energy.ca.gov/2009publications/CEC-500-2009-052/CEC-500-2009-052-F.PDF>

### Summary

This document describes advances climate projection information in California water resource planning since the 2006 climate change assessment by DWR, *Progress on Incorporating Climate Change into Management of California's Water Resources*. Advances include a better understanding of how well current models represent historical climate conditions and refined technologies represent streamflows, outdoor urban and agricultural water demands, and sea level rise. Twelve climate projections are used to assess the reliability of Central Valley Project and the State Water Project operations. This information is particularly useful for addressing the implications and considerations of climate change on changing hydrology.

# RESOURCES

## TOOLS

### *Advisory Council on Historic Preservation*

<http://www.achp.gov/>

#### **Summary**

The Advisory Council on Historic Preservation promotes the preservation, enhancement, and sustainable use of our nation's diverse historic resources, and advises the President and the Congress on national historic preservation policy.



### *Inland Empire Garden Friendly*

<http://www.iegardenfriendly.com/>

#### **Summary**

Inland Empire Garden Friendly assists consumers in locating and learning about climate-appropriate plants for the Inland Empire and provide educational opportunities and easily identifiable and obtainable sources of climate-appropriate plants.



### *Moscow Forestry Sciences Laboratory*

<http://forest.moscowfsl.wsu.edu/climate/>

#### **Summary**

Research on Forest Climate Change: Potential Effects of Global Warming on Forests and Plant Climate Relationships in Western North America and Mexico



### *National Trust for Historic Preservation*

<http://www.preservationnation.org/>

#### **Summary**

The National Trust for Historic Preservation, a privately funded nonprofit organization, works to save America's historic places. We are the cause that inspires Americans to save the places where history happened. The cause that connects us to our diverse pasts, weaving a multi-cultural nation together. The cause that transforms communities from places where we live into places that we love. As the leading voice for preservation, **we are the cause for people saving places.**



### *Never Waste*

<http://www.home-water-works.org/neverwaste/>

#### **Summary**

The Alliance for Water Efficiency has launched a new campaign to increase awareness about water waste. Never Waste offers consumers ideas on using water more efficiently. It provides a list of ways to reduce water use in and around the house. There is also a water calculator to determine household water use and compare it to the average of homes in the area.



# RESOURCES

## TOOLS

### *Preserve America*

<http://www.preserveamerica.gov/overview.html>

#### **Summary**

Preserve America is a federal program that encourages and supports community efforts to preserve and enjoy our priceless cultural and natural heritage. The program's goals include expanding knowledge about the nation's past, strengthening regional identities and local pride, increasing public participation in preservation, and supporting the economic vitality of our communities.



### *Save Our Water*

<http://www.saveourh2o.org/>

#### **Summary**

Save Our Water is a statewide program aimed at helping Californians reduce their everyday water use. Created in 2009 by the California Department of Water Resources and the Association of California Water Agencies, the program offers ideas and inspiration for permanently reducing water use—regardless of whether California is in a drought.



### *Southern California Wetlands Recovery Project*

<http://www.nerrs.noaa.gov/ScienceCollaborative.aspx>

#### **Summary**

The goal of this project is to create a robust set of tools to help resource managers use information about past and current conditions, and potential future changes to wetland ecosystems to steer restoration and management goals. The Orange County Task Force is a member of this project.

### **Tijuana River National Estuarine Research Reserve**

### *Urban Planning Tools for Climate Change Mitigation*

**Lincoln Institute of Land Policy**

**2009**

[https://www.lincolninst.edu/pubs/dl/1573\\_890\\_Tools%20for%20Climate%20Change%20final.pdf](https://www.lincolninst.edu/pubs/dl/1573_890_Tools%20for%20Climate%20Change%20final.pdf)

# RESOURCES



## TOOLS

Source: [California's Water – Energy Relationship, 2005 CPUC Report No. 04-IEPR-01E](#)

### **Water and energy relationship:**

Refers to the types and magnitude of water and energy interdependencies requiring documentation and evaluation for various types of water resources, end uses, systems, and processes in order to fully understand the water-energy tradeoffs under different resource planning scenarios. In this report staff uses water and energy utilities when encompassing all water, wastewater, electricity, natural gas, and diesel fuel suppliers, utilities, and districts, both public and private.

### **Water Equivalents Table**

Source: [www.mwdh2o.com](http://www.mwdh2o.com)

1 cubic foot .....	7.48 gallons .....	62.4 pounds of water
1 acre-foot .....	43,560 cubic feet .....	325,851 gallons of water

*An acre-foot covers 1 acre of land 1 foot deep*

1 cubic foot per second (cfs) .....	450 gallons per minute
1 cfs .....	0.646 mgd
1 cfs .....	646,320 gallons per day
For 24 hours .....	1.983 acre-feet
For 30 days .....	59.5 acre-feet
For 1 year .....	724 acre-feet
1 million gallons .....	3.07 acre-feet
1 million gallons per day (mgd) .....	1,120 acre-feet per year
1 mgd .....	1.547 cfs
1,000 gallons per minute (gpm) .....	2.23 cfs
1000 gpm .....	4.42 acre-feet per day

*One acre-foot of water represents the needs of two average families, in and around the home, for one year*

### **Electrical Terms**

**Watt: The unit of measurement of electrical power (capacity)**

746 watts .....	1 horsepower
1,000 watts .....	1 kilowatt (kW)
1,000 kilowatts .....	1 megawatt (MW)
1,000 megawatts .....	1 gigawatt (GW)

**Kilowatt-hour (kWh): A unit of work or energy expended in one hour at a steady rate of 1 kilowatt**

*Ten 100-watt light bulbs can consume a total power of 1,000 watts or 1 kilowatt. Burning for one hour, they will use 1 kilowatt-hour of electric energy.*

*21.6¢/kWh = 216 mills/kWh = \$216 MWh*

*An average Los Angeles household uses about 500 kilowatt-hours each month.*

### **Energy Requirement to pump one acre-foot of water to southern California**

	Net kilowatt-hours per acre-foot
State Water Project	
East Branch	3,236
West Branch	2,580
Colorado River Aqueduct	2,000

# RESOURCES

## KEY WEBSITES AT A GLANCE

### *CalAdapt*

<http://cal-adapt.org/>

### *California Department of Water Resources Climate Change Home Page*

<http://www.water.ca.gov/climatechange/>

### *California Climate Change Portal*

<http://www.climatechange.ca.gov/>

### *California Environmental Information Catalog*

<http://gis.ca.gov/catalog/>

### *California Integrated Water Resources Information System*

<http://www.water.ca.gov/iwris>

### *California Surface Water Ambient Monitoring Program*

[http://www.swrcb.ca.gov/water\\_issues/programs/swamp](http://www.swrcb.ca.gov/water_issues/programs/swamp)

### *California Sustainability Alliance*

[http://sustainca.org/tools/green\\_general\\_plan\\_toolkit/ggp\\_introduction](http://sustainca.org/tools/green_general_plan_toolkit/ggp_introduction)

### *California Water Data Library*

<http://wdl.water.ca.gov>

### *Caltrans Statewide Stormwater Program*

<http://www.dot.ca.gov/hq/env/stormwater/>

### *“Citywide Transportation Greenhouse Gas Emissions Inventories: A Review of Selected Methodologies”*

<http://www.embarq.org/sites/default/files/Citywide%20Transportation%20Greenhouse%20Gas%20Emissions%20Inventories%20A%20Review%20of%20Selected%20Methodologies.pdf>

### *Climate Change, Land Use and Infrastructure Web Portal*

<http://www.climatechange.ca.gov/action/cclu/>

### *Cool California*

<http://www.coolcalifornia.org/>

### *Community Collaborative Rain, Hail & Snow Network*

<http://www.cocorahs.org/>

# RESOURCES

## KEY WEBSITES AT A GLANCE

### *Energy Aware Planning Guide*

[http://sustainca.org/files/CEC\\_Energy\\_Aware\\_Guide.pdf](http://sustainca.org/files/CEC_Energy_Aware_Guide.pdf)

### *EPA Climate Ready Water Utilities*

<http://water.epa.gov/infrastructure/watersecurity/climate/index.cfm>

### *General Plan Guideline Update*

<http://www.opr.ca.gov/index.php?a=planning/gpg.html>

### *The General Planning Process and Sustainable Transportation Planning*

<http://transweb.sjsu.edu/mtiportal/research/publications/documents/calgeneral/calgen.htm>

### *Green General Plan and Local Government Operations Protocol (LGOP) toolkits*

[http://sustainca.org/newsroom/ggp\\_lgop\\_toolkits](http://sustainca.org/newsroom/ggp_lgop_toolkits)

### *GovLoop*

<http://www.govloop.com/resources>

### *HUD-DOT-EPA Partnership for Sustainable Communities*

<http://www.epa.gov/smartgrowth/partnership/index.html>

### *I.C.L.E.I.—Local Governments for Sustainability (Climate Resilient Communities Program)*

[http://www.icleiusa.org/programs/climate/Climate\\_Adaptation](http://www.icleiusa.org/programs/climate/Climate_Adaptation)

### *Water Conversion Table*

[http://dnrc.mt.gov/wrd/water\\_rts/wr\\_general\\_info/wrforms/615.pdf](http://dnrc.mt.gov/wrd/water_rts/wr_general_info/wrforms/615.pdf)

### *Water Equivalent Table*

[http://www.evmwd.com/services/information\\_center/water\\_equivalents\\_table.asp](http://www.evmwd.com/services/information_center/water_equivalents_table.asp)

[http://www.wateruse.com/water\\_equivalents.htm](http://www.wateruse.com/water_equivalents.htm)

### *Water: Polluted Runoff (Roads, Highways and Bridges—NPS Categories)*

<http://water.epa.gov/polwaste/nps/roadshwys.cfm>

### *Water: Polluted Runoff (Planning Considerations for Roads, Highways and Bridges)*

<http://water.epa.gov/polwaste/nps/planroad.cfm>

### *Water Toolbox (Army Corps of Engineers)*

<http://rsgisias.crrel.usace.army.mil/intro/f?p=689:1>

# RESOURCES



## FEDERAL LAWS

Law	Lead Agency	Required Actions
Clean Air Act (CAA) - Authority to Construct and Permit to Operate	San Diego Air Quality Management District (AQMD)	Authority to Construct is a permit to construct or modify a facility that may emit air pollutants from a stationary source into the atmosphere. Permit to Operate is to operate said facility.
<b>Summary</b>		
Enacted in 1970, the law is designed to control air pollution on a national level. It requires the EPA to develop and enforce regulations to protect the public from airborne contaminants known to be hazardous to human health.		
Clean Water Act (CWA) Section 404 (33 USC § 1344)	U.S. Army Corps of Engineers (USACE)	Section 404 permit for discharges of dredged or fill material into waters of the U.S., including jurisdictional wetlands
CWA Section 401 (33 USC § 1341)	California State Water Resources Control Board (SWRCB) Santa Ana Regional Water Quality Control Board (RWQCB)	Water Quality Certification or Waiver for work in wetlands or streams
CWA Section 402 (33 USC §§ 1311, 1342)	Santa Ana RWQCB	National Pollution Discharge Elimination System (NPDES) Permit required for construction disturbances exceeding 1 acre and discharge of recycled water to water bodies which serve as municipal water supplies
CWA Section 402 (33 USC § 1343)	Santa Ana RWQCB	NPDES Ocean Discharge Permit required for discharge of AWTP effluent (primarily brine and microfiltrate backwash)
<b>Summary</b>		
The CWA is the primary federal law in the U.S. governing water pollution. Passed in 1972, the Act established the goals of eliminating releases of high amounts of toxic substances into water, eliminating additional water pollution by 1985, and ensuring that surface waters would meet standards necessary for human sports and recreation by 1983.		
Coastal Zone Management Act (CZMA) (16 USC § 1451 et seq.) and 15 CFR § 930; Federal Consistency with Approved Coastal Management Programs	NOAA California Coastal Commission (CCC)	Encourages states/tribes to preserve, protect, develop, and where possible, restore or enhance valuable natural coastal resources.
<b>Summary</b>		
Enacted in 1972, the Act encourages coastal states to develop and implement coastal zone management plans (CZMPs). The Act also established a national policy to preserve, protect, develop, and where possible, restore or enhance, the resources of the nation's coastal zone for this and succeeding generations.		

# RESOURCES



## FEDERAL LAWS

Law	Lead Agency	Required Actions
Executive Order (EO) 11990: Protection of Wetlands	USACE Reclamation	Requires federal agencies to follow avoidance/mitigation/preservation procedures before proposing new construction in wetlands
<b>Summary</b> President Carter issues it in 1977 in furtherance of the NEPA as amended, to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or Indirect support of new construction in wetlands wherever there is a practicable alternative.		
EO 11998: Floodplain Management	Department of Defense FEMA	Requires federal agencies to take action to reduce the risk of flood loss and restore and preserve the values of floodplains
<b>Summary</b> This Order, signed by President Carter, requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and avoid direct and indirect support of floodplain development wherever there is a practicable alternative. Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities through the following actions: <ul style="list-style-type: none"><li>• acquiring, managing, and disposing of federal lands and facilities;</li><li>• providing federally-undertaken, financed, or assisted construction and improvements; and</li><li>• conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.</li></ul>		
EO 13045: Environmental Health and Safety Risks to Children	All federal agencies	Requires that relevant regulatory actions by all federal agencies include an evaluation of the environmental health or safety effects on children.
<b>Summary</b> Each federal agency shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.		

# RESOURCES



## FEDERAL LAWS

Law	Lead Agency	Required Actions
EO 13112: Invasive Species	Invasive Species Council U.S. Department of Agriculture	Requires federal agencies to work to prevent and control the introduction and spread of invasive species.

### Summary

This Order, signed by President Clinton in 1999, established the National Invasive Species Council and requires that a Council of Departments dealing with invasive species be created. Currently there are 13 Departments and Agencies on the Council. The Invasive Species Council provides national leadership regarding invasive species, and oversee the implementation of this order and see that the federal agency activities concerning invasive species are coordinated, complementary, cost-efficient, and effective, relying to the extent feasible and appropriate on existing organizations addressing invasive species, such as the Aquatic Nuisance Species Task Force, the Federal Interagency Committee for the Management of Noxious and Exotic Weeds, and the Committee on Environment and Natural Resources. It encourages planning and action at local, tribal, State, regional, and ecosystem-based levels to achieve the goals and objectives of the Management Plan in section 5 of the order, in cooperation with stakeholders and existing organizations addressing invasive species. It develops recommendations for international cooperation in addressing invasive species and, in consultation with the Council on Environmental Quality (CEQ), guidance to federal agencies pursuant to the NEPA on prevention and control of invasive species, including the procurement, use, and maintenance of native species as they affect invasive species. The order facilitates development of a coordinated network among Federal agencies to document, evaluate, and monitor impacts from invasive species on the economy, the environment, and human health and establishment, It also facilitates coordinated, up-to-date information-sharing system that utilizes, to the greatest extent practicable, the Internet; this system shall facilitate access to and exchange of information concerning invasive species, including, but not limited to, information on distribution and abundance of invasive species; life histories of such species and invasive characteristics; economic, environmental, and human health impacts; management techniques, and laws and programs for management, research, and public education; and prepare and issue a national Invasive Species Management Plan as set forth in section 5 of the order.

Federal Endangered Species Act (ESA) (16 USC § 661 et seq.)	U.S. Fish and Wildlife Service (USFWS) NMFS	Consultation regarding effects to listed species and critical habitat authorization to "take"
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### Summary

Enacted in 1973, it was designed to protect critically imperiled species from extinction as a "consequence of economic growth and development untempered by adequate concern and conservation." The Act is administered by two federal agencies, the USFWS and the National Oceanic and Atmospheric Administration (NOAA).

Fish and Wildlife Coordination Act (16 USC § 661 et seq.)	USFWS NMFS California Department of Fish and Wildlife (CDFWS)	Consultation or Fish and Wildlife Coordination Act Report
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### Summary

Enacted in 1934 to protect fish and wildlife when federal actions result in the control or modification of a natural stream or body of water. The Act provides the basic authority for the involvement of the USFWS in evaluating impacts to fish and wildlife from proposed water resource development projects.

# RESOURCES



## FEDERAL LAWS

Law	Lead Agency	Required Actions
Magnuson-Stevens Fishery Conservation and Management Act (16 USC § 1801, PL 94-265) as amended through October 11, 1996	NMFS	To provide for the conservation and management of the fisheries, and for other purposes.
<b>Summary</b>		
To take immediate action to conserve and manage the fishery resources found off the coasts of the United States, and the anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species and Continental Shelf fishery resources[, and fishery resources in the special areas*]; and to support and encourage the implementation and enforcement of international fishery agreements for the conservation and management of highly migratory species, and to encourage the negotiation and implementation of additional such agreements as necessary		
Marine Mammal Protection Act (MMPA) (16 USC § 1361 and 50 CFE § 216)	NMFS	Prohibits the “take” of marine mammal species or importation of marine mammal products
<b>Summary</b>		
Enacted in October 1972, and amended substantially in 1994, all marine mammals are protected under this Act. It prohibits, with certain exceptions, the "take" of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S. based on the following findings and policies:		
<ul style="list-style-type: none"><li>• Some marine mammal species or stocks may be in danger of extinction or depletion as a result of human activities;</li><li>• These species or stocks must not be permitted to fall below their optimum sustainable population level ("depleted");</li><li>• Measures should be taken to replenish these species or stocks;</li><li>• There is inadequate knowledge of the ecology and population dynamics; and</li><li>• Marine mammals have proven to be resources of great international significance.</li></ul>		
Marine Protection, Research, and Sanctuaries Act (MPRSA) (33 USC § 1401)	U.S. Environmental Protection Agency (USEPA)	Restricts the dumping and transportation of materials into ocean waters
<b>Summary</b>		
The MPRSA or <b>Ocean Dumping Act</b> was enacted in 1972 and has two essential aims: to regulate intentional ocean disposal of materials, and to authorize any related research. MPRSA regulates the ocean dumping of waste and provides for a research program on ocean dumping, it also provides for the designation and regulation of marine sanctuaries. The act also regulates ocean dumping of material beyond the territorial limit (3 miles (4.8 km) from shore) and prevents or strictly limits dumping material that would adversely affect human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities. The Act authorizes EPA to regulate ocean dumping of materials included, but not limited to, industrial waste, sewage sludge, biological agents, radioactive agents, garbage, chemicals, and laboratory, as well as other wastes, into U.S. territorial waters through a permit program. EPA can issue permits for dumping of materials other than dredge spoils if the agency determines, through a full public notice and process, that the discharge will not unreasonably degrade or endanger human health or welfare or the marine environment. The law also has provisions related to creating marine sanctuaries, conducting ocean disposal research and monitoring coastal water quality.		

# RESOURCES



## FEDERAL LAWS

Law	Lead Agency	Required Actions
National Environmental Policy Act (NEPA)  (Council on Environmental Quality [CEQ] Regulations for Implementing the Procedural Provisions of NEPA, 40 Code of Federal Regulations (CFR) §§ 1500-1508, and NEPA of 1969, as amended, 42 United States Code (USC))	Any Federal Agency	Environmental Impact Statement
<b>Summary</b>		
NEPA is a U.S. environmental law that established a U.S. national policy promoting the enhancement of the environment and also established the President's CEQ. NEPA's most significant effect was to set up procedural requirements for all federal government agencies to prepare an environmental assessment (EA) and or environmental impact statement (EIS). EA and EIS contain statements of the environmental effects of proposed federal agency actions. NEPA's procedural requirements apply to all Executive Branch agencies.		
National Historic Preservation Act (NHPA) Section 106 (16 USC § 470 et seq.)	California State Historic Preservation Officer (SHPO)  California Native American Heritage Commission	Consultation; requires federal agencies, prior to approval of an undertaking, to consider the effects of an undertaking on historic properties
NHPA Section 110 (16 USC § 470 et seq.)	SHPO  California Native American Heritage Commission	Consultation; requires federal agencies to establish a preservation program for the identification, evaluation, nomination to the National Register, and protection of historic properties

### Summary

Enacted in 1966 to preserve historical and archaeological sites. It created the National Register of Historic Places, the list of National Historic Landmarks, and the State Historic Preservation Offices. It requires federal agencies to evaluate the impact of all federally funded or permitted projects on historic properties (buildings, archaeological sites, etc.) through a process known as Section 106 Review.

**Section 106** mandates federal agencies undergo a review process for all federally funded and permitted projects that will impact sites listed on, or eligible for listing on the National Register of Historic Places. Specifically, it requires the federal agency to "take into account" the effect a project may have on historic properties. It also allows interested parties an opportunity to comment on the potential impact projects may have on significant archaeological or historic sites. The main purpose for the establishment of the Section 106 review process is to minimize potential harm and damage to historic properties. Any federal agency whose project, funding or permit may affect a historic property, both those listed or eligible for inclusion in the National Register of Historic Places, must consider the effects on historic properties and "seek ways to avoid, minimize or mitigate" any adverse effects on historic properties. A typical Section 106 review involves four primary steps: 1 - Initiation of the Section 106 Review; 2 - Identification of Historic Properties; 3 - Assessment of Adverse Effects; and 4 - Resolution of Adverse Effects. Further steps may be required if there is a disagreement among the consulting parties on adverse effects or the resolution of the effects.

**Section 110** was added in 1980 and required further requirements for federal agencies such as the need to establish their own internally staffed historic preservation programs. In 1992, amendments to this law increased protection for Native American and Native Hawaiian preservation efforts.

# RESOURCES



## FEDERAL LAWS

Law	Lead Agency	Required Actions
Native American Graves Protection and Repatriation Act (25 USC §§ 3001-3013)	Native American Graves Protection and Repatriation Review Committee	Consultation with appropriate Native American tribes
<b>Summary</b> Enacted in November 1990, the Act requires federal agencies and institutions that receive federal funding to return Native American "cultural items" to lineal descendants and culturally affiliated Indian tribes and Native Hawaiian organizations. Cultural items include human remains, funerary objects, sacred objects, and objects of cultural patrimony. A program of federal grants assists in the repatriation process and the Secretary of the Interior may assess civil penalties on museums that fail to comply.		
Secretary of the Interior Order 3215, Principles for the Discharge of the Secretary's Trust Responsibility	U.S. Department of the Interior (USDI)	Provides guidance on defining the nature and extent of Indian trust assets by setting principles for the fulfillment of the trust responsibility.
<b>Summary</b> This Order is intended to provide guidance to the employees of the USDI who are responsible for carrying out the Secretary's trust responsibility as it pertains to Indian trust assets. All Departmental regulations, policy statements, instructions, or manuals regarding the discharge of the Secretary's trust responsibility shall be interpreted or developed using these trust principles. Additionally, these principles provide guidance to all persons who manage Indian trust assets. The Order is intended to address neither the unique government-to-government relationship between the United States and American Indian and Alaska Native tribal governments nor the unique relationship between the United States and individual Indians, both of which have been referred to as a trust responsibility.		
USDI Manual, Part 303, DM 2, Principles for Managing Indian Trust Assets	USDI	Provide guidance for carrying out the Secretary of the Interior's Indian trust responsibility.
<b>Summary</b> This Chapter provides Department-wide guidance for carrying out the Secretary's trust responsibility as it pertains to Indian trust assets. This Chapter is intended to enhance the Department's management of the Secretary's trust responsibility. It is not intended to, and does not, create any right to administrative or judicial review, or any legal right or benefit, substantive or procedural, enforceable by a party against the United States, its agencies, or instrumentalities, its officers or employees, or any other person.		

# RESOURCES



## CALIFORNIA STATE LAWS

Law	Lead Agency	Required Actions
<a href="#">California Code of Regulations</a>	California Office of Administrative Law	
California Endangered Species Act Permitting (CESA)	California Department of Fish and Wildlife	Allows CDFW to authorize project proponents to take state-listed threatened, endangered, or candidate species if certain conditions are met.
<a href="#">California Health &amp; Safety Code</a>	State Water Resources Control Board	The official Health & Safety Code on the California Legislative Counsel Website, which contains provisions relating to underground storage tanks.
<a href="#">California Water Code</a>	State Water Resources Control Board	The official Water Code on the California Legislative Counsel Website
<a href="#">CPUC Water Standard Practices</a>	California Public Utilities Commission	The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies.
Lake and Streambed Alteration Program (LSA)	California Department of Fish and Wildlife	Agreement
<a href="#">Porter-Cologne Water Quality Control Act</a>	State Water Resources Control Board	Excerpts of California Water Code, Division 7 (Water Quality)
Timberland Conservation Program	California Department of Fish and Wildlife	Permits
<a href="#">Title 23 (Waters)</a>	California Office of Administrative Law	
<a href="#">Title 23 (Waters) - Division 3</a>	California Office of Administrative Law	Excerpts pertaining to Water Rights
<a href="#">Title 23 (Waters) - Meeting Regulations</a>	California Office of Administrative Law	Excerpts pertaining to meetings before the water boards.

# RESOURCES



## CALIFORNIA STATE LAWS

Law	Lead Agency	Required Actions
<a href="#">Title 27 (Environmental Protection)</a>	California Office of Administrative Law	Title 27, Division 2, Subdivision 1 Consolidated Regulations or Treatment, Storage, Processing or Disposal of Solid Waste.
<a href="#">Title 27 (Environmental Protection) - Solid Waste</a>	California Office of Administrative Law	Excerpts pertaining to Consolidated Regulations or Treatment, Storage, Processing or Disposal of Solid Waste.
<a href="#">Various Water Quality Control Policies</a>	State Water Resources Control Board	

# WATER SECTOR ACRONYMS

---

## A

### A & E

Architectural and Engineering

### AB

Assembly Bill

### AC

Alternating Current

### AC

Area Conservationist

### ACOE

Army Corps of Engineers (COE)

### ACRES

Actual Cost Recovery Evaluation System

### ACWA

Association of California Water Agencies

### ADI

Acceptable Daily Intake

### ADLP

Agricultural Drainage Loan Program

### AF

Acre Foot

*1 AC = 325,851 gallons*

### AFO

Animal Feeding Operation

### ALTA

American Land Trust Association

### AMA

Agricultural Management Association

### AMIGA

Agua Mansa Industrial Growth Association

### AMTA

Agricultural Market Transition Act

### AOC

Assimilable Organic Carbon

### AOS

Adult Onsite Exposure

### APG

Adaptation Planning Guide

### AQMD

Air Quality Management District

### ARB

Air Resources Board

### ASCE

American Society of Civil Engineers

### ATA

Approval to Award

### AWMFH

Agricultural Waste Management Field Handbook

### AWOP

Area Wide Optimization Program

*A voluntary program to optimize the performance of surface water treatment plants*

### AWWA

American Water Works Association

[www.awwa.org](http://www.awwa.org)

### AWWARF

American Water Works Association Research Foundation

[www.awwarf.com](http://www.awwarf.com)

# WATER SECTOR ACRONYMS

---

## B

### BAC

Biological Activated Carbon

### BAF

Biological Aerated Filter

### BATNEEC

Best Available Techniques Not Entailing Excessive Costs

### BCSD

Bias Correction Spatial Disaggregation

### BIA

Bureau of Indian Affairs

### BMP

Best Management Practices

### BOD

Biochemical Oxygen Demand

### BOD5

Biochemical Oxygen Demand  
(over a 5 day period)

### BOR

Bureau of Reclamation (see USBOR)

### BPEO

Best Practicable Environmental Option

### Brine Line

Inland Empire Brine Line

### BSE

Bovine Spongiform Encephalopathy

### BSRIA

Building Services Research & Information Association (UK)

### BTEX

Benzene, toluene, ethylbenzene and total xylenes

## C

### CA

Conservation Agronomist

### CAA

Clean Air Act (EPA)

### CAFO

Confined Animal Feeding Operation

### CalEMA

California Emergency Management Agency

### Caltrans

California Department of Transportation

### CAMS

Combines Administrative Management System

### CAP

Common Agricultural Policy (EU)

### CAPCOA

California Air Pollution Control Officers Association

### CAPEX

Capital Expenditure Investment

### CAWSC

California Water Science Center

### CBWCD

Chino Basin Water Conservation District

### CBWM

Chino Basin Watermaster

# WATER SECTOR ACRONYMS

---

## CCA

Certified Crop Advisor

## CCC

California Coastal Commission

## CCR

Consumer Confidence Report

## CCRP

Continuous Conservation Reserve Program

## CCTV

Closed Circuit Television

## CDA

Chino Basin Desalter Authority

## CDFW

California Department of Fish and Wildlife

## CDPH

California Department of Public Health

## CED

County Executive Director

## CEQ

Council on Environmental Quality

## CEQA

California Environmental Quality Act

## CESA

California Endangered Species Act

## CESWI

Civil Engineering Specification for the Water Industry

## CFC

Chlorofluorocarbons

## CFO

Conservation Farm Option

## CFR

Code of Federal Regulations

## cfs

Cubic foot per second

## CFWO

Carlsbad Fish and Wildlife Office

## charrette

Collaborative group

## CHP

Combined Heat and Power

## CIWQS

California Integrated Water Quality System

## CJD

Creutzfeld-Jakob's Disease

## CMIP

Coupled Model Inter-comparison Project

## CMP

California Milk Producers

## CNMP

Comprehensive Nutrient Management Plan

## CNRA

California Natural Resources Agency

## CO<sub>2</sub>

Carbon Dioxide (see Greenhouse Gas)

## COC

County Committees

## CoCoRaHS

Community Collaborative Rain, Hail, & Snow Network

## COD

Chemical Oxygen Demand

## COE

Corps of Engineers

# WATER SECTOR ACRONYMS

---

## **CORDIS**

Community Research and Development Information Service (of the European Community)

## **CPA**

Conservation Planning Assistance

## **CPE**

Comprehensive Performance Evaluation  
*An evaluation of the performance of a SWTP*

## **CPUC**

California Public Utilities Commission

## **CRBSCP**

Colorado River Basin Salinity Control Project

## **CREP**

Conservation Reserve Enhancement Program

## **CRMP**

Coordinated Resource Management Plan

## **CRP**

Conservation Reserve Program

## **CRSP**

Colorado River Salinity Program

## **CRWQCB**

California Regional Water Quality Control Board (Regional Board)

## **CSDOC**

County Sanitation District of Orange County (now OCSD)

## **CSO**

Combined Sewer Overflow

## **CSP**

Conservation Security Program

## **CSREES**

Cooperative State Research, Education, and Extension Service

## **CST**

Customer Service Toolkit

## **CT**

Concentration of disinfectant residual (C) times contact time (T)

## **CUWCC**

California Urban Water Conservation Council

## **CVOC**

Chlorinated volatile organic compound

## **CW**

Converted Wetland

## **CW+YR**

Converted Wetland Plus Year

## **CWA**

Clean Water Act

## **CWAP**

Clean Water Action Plan

## **CWEA**

California Water Environment Association

## **CWS**

Community Water System  
*A public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents*

## **CZMA**

Coastal Zone Management Act

## **CZMP**

Coastal Zone Management Plan

# WATER SECTOR ACRONYMS

---

## D

### DAC

Disadvantaged Community

### DAF

Dissolved Air Flootation

### DBP

Disinfection Byproduct  
*A regulated contaminant that is a byproduct of using chlorine to disinfect water containing organic matter*

### DC

District Conservationist

### DCO

Data Collection Officer

### DCP

Downscaled Climate Projections

### Delta

Delta method for assessing hydrologic impacts, where “climate change” weather reflects change in period monthly mean temperature and precipitation sampled from a single projection

### DFA

Dairy Farmers of America

### DFG

CA Department of Fish and Game, now called CA Department of Fish and Wildlife

### DHS

Department of Health Services

### DMA

District Meter Area

### DO

Dissolved Oxygen

### DOC

Dissolved Organic Carbon

### DOQ

Digital Orthophotoquad

### DTI

Department of Trade and Industry (UK)

### DWAG

Drinking Water Advisory Group

### DWB

Drinking Water Bureau

### DWR

CA Department of Water Resources

### DWRLF

Drinking Water Revolving Loan Fund  
*Portion of DWSRF used for loans to water systems*

### DWSRF

Drinking Water State Revolving Fund  
*Annual federal grant that pays for loans and DWB activities*

## E

### EA

Environmental Assessment (in accordance with NEPA)

### EBCT

Empty Bed Contact Time

### EBI

Environmental Benefits Index

### ECP

Emergency Conservation Program

# WATER SECTOR ACRONYMS

---

## EEA

European Environmental Agency

## EEC

European Economic Community or Commission

## EFC

Environmental Finance Center

## EFH

Engineering Field Handbook

## eFOTG

Electronic Field Office Technical Guide

## EFT

Electronic Fund Transfer

## EHS

Environment and Heritage Service  
[www.doeni.gov.uk](http://www.doeni.gov.uk)

## EI

Erodibility Index

## EID

Environmental Information Document

## EIR

Environmental Impact Report (for California CEQA documents)

## EIS

Environmental Impact Statement (for federal NEPA documents)

## EMARCD

Elsinore-Murrieta-Anza Resource Conservation District

## EMAS

Eco-Management and Audit Scheme

## EMS

Environmental Management System

## EMWD

Eastern Municipal Water District

## EO

Executive Order

## EPA

Environment Protection Agency (see USEPA)

## EPIC

Erosion/Productivity Impact Calculator

## EQIP

Environmental Quality Incentive Program

## EQO

Environmental Quality Objective

## EQS

Environmental Quality Standard

## ERG

Expense Reimbursement Grant  
*A grant to reimburse operators for training*

## ES

Extension Service

## ESA

Endangered Species Act

## ESA

Environmentally Sensitive Area

## ET

Evapotranspiration

## EU

European Union

## EUREAU

European Union of National Associations of Water Suppliers and Waste Water Services

## EVMWD

Elsinore Valley Municipal Water District

# WATER SECTOR ACRONYMS

---

## **EVRC**

East Valley Resource Conservation District

## **EWP**

Emergency Watershed Protection

## **EWPCA**

European Water Pollution Control  
Association  
[www.atv.de/ewpca/ewpca.htm](http://www.atv.de/ewpca/ewpca.htm)

## **EWRI**

European Water Research Institutes  
Partnership

## **EWRP**

Emergency Wetlands Reserve Program

# F

## **FACTA**

Food and Agriculture Conservation and  
Trade Act

## **FAIRA**

Federal Agriculture Improvement and  
Reform Act of 1996

## **FAO**

Food and Agriculture Organization (UN)

## **FAS**

Farm Assessment System

## **FEMA**

Federal Emergency Management Agency

## **FI**

Fouling Index

## **FNM**

Financial Management

## **FOCS**

Field Office Computing System

## **FOIA**

Freedom of Information Act

## **FOTG**

Field Office Technical Guide

## **FPP**

Farmland Protection Program

## **FRPP**

Farm and Ranch Protection Program

## **FRR**

Flood Risk Reduction

## **FS**

U.S. Forest Service

## **FSA**

Farm Service Agency

## **FSA**

Food Security Act

## **FWS**

U.S. Fish and Wildlife Service  
(see USFWS)

# G

## **GAC**

Granular Activated Carbon

## **GC**

Gas Chromatography

## **GCM**

General Circulation Model or Global  
Climate Model

# WATER SECTOR ACRONYMS

---

## GCMS

Gas Chromatograph + Mass Spectrometer

## GHG

Greenhouse Gas

## GIS

Geographic Information System

## GLA

Grazing Land Application

## GLCI

Grazing Land Conservation Initiative

## GLV

Guideline Valve

## GM

General Manual

## GMO

Genetically Modified Organism

## gpm

Gallons per Minute

## GPRA

Government Performance Reporting Act

## GPS

Global Positioning System

## GRP

Grassland Reserve Program

## GSA

General Services Agreement

## GW

Gigawatt

## GWR

Groundwater Rule

## GWRS

Groundwater Replenishment System

## GWUDI

Ground Water Under Direct Influence  
*Groundwater that is impacted at least part of the year by surface water*

# H

## HAA5

Haloacetic Acids  
*The sum of the concentrations, in mg/L, of haloacetic acid compounds (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid).*

## HACCP

Hazard Analysis and Critical Control Point

## HC

Hydrocarbons

## HCMP

Hydraulic Control Monitoring Program

## HCP

Habitat Conservation Plan

## HD

Hybrid-Delta  
*Method for assessing hydrologic impacts, where “climate change” weather reflects change in period monthly distributions of temperature and precipitation sampled from a single projection.*

## HDe

Ensemble Hybrid-Delta  
*Method for assessing hydrologic impacts, where “climate change” weather reflects change in period monthly distributions of temperature and precipitation sampled from a pooled ensemble of projection.*

## HDPE

High Density Polyethylene

# WATER SECTOR ACRONYMS

---

## HEL

Highly Erodible Land

## HELC

Highly Erodible Land Conservation

## HEP

Habitat Evaluation Procedures

## HGM

Hydrogeomorphic Methodology

## HGSD

Home Gardens Sanitary District

## HOS

Hypolimnetic Oxygenation System

## HOV

High Occupancy Vehicle

## HPC

Heterotrophic Plate Count

## HUC

Hydrologic Unit Code



## IAS

Integrated Accounting System

## ICADS

Integrated Chino Arlington Desalter System

## IDSE

Initial Distribution System Evaluation  
*A requirement of Stage 2 Disinfectants and Disinfection Byproduct Rule*

## IEUA

Inland Empire Utilities Agency  
(formerly Chino Basin MWD)

## IEWRCD

Inland Empire West Resource Conservation District

## IOC

Inorganic Chemical  
*Inorganic chemicals are metals, salts, and other compounds that do not contain carbon.*

## IPC

Integrated Pollution Control

## IPCC

Intergovernmental Panel on Climate Change

## IPM

Integrated Pest Management

## IPPC

Integrated Pollution Prevention and Control

## IRS

Internal Revenue Service

## IRWD

Irvine Ranch Water District

## IRWM

Integrated Regional Water Management

## IRWMP

Integrated Regional Water Management Plan

## IS

Initial Study (for CEQA)

## IUP

Intended Use Plan  
*Annual EPA required document for the SRF grant*

## IWA

International Water Association

## IWP

Integrated Watershed Plan

# WATER SECTOR ACRONYMS

---

## IWRP

Integrated Water Resources Plan

## IWSA

International Water Supply Association

## IWSWTR

Interim Enhanced Surface Water Treatment Rule

## IWW

Industrial Waste Water

# J

## JCSD

Jurupa Community Services District

## JEG

Joint Enterprise Group

## JMC

Joint Management Committee

## JTU

Jackson Turbidity Unit

# K

## km

Kilometer

## kW

Kilowatt

## kWh

Kilowatt Hour

# L

## LCR

Lead & Copper Rule

## LDPE

Low Density Polyethylene

## LESA

Land Evaluation and Site Assessment

## LESJWA

Lake Elsinore & San Jacinto Watersheds Authority

## LID

Low Impact Development

## LRO

Legally Responsible Official

## LT1 or LT1ESWTR

Long Term 1 Enhanced Surface Water Treatment Rule

## LT2 or LT2ESWTR

Long Term 2 Enhanced Surface Water Treatment Rule

## LTC

Long Term Contract

## LTP

Land Treatment Program

## LWG

Local Work Group

# WATER SECTOR ACRONYMS

---

## M

### M&E

Monitoring and Evaluation

### M&O

Maintenance and Operation

### MAC

Maximum Admissible Concentration

### MAP

Mean Areal Precipitation

### MAT

Mean Areal Temperature

### MB

Mixed Bed

### MBE/WBE

Minority Business Enterprise/Womens  
Business Enterprise

### MCL

Maximum Contaminant Level  
*Maximum concentration of a contaminant that  
is allowed in drinking water*

### MDWCA

Mutual Domestic Water Consumer's  
Association

### mg/L

Milligrams per Liter  
*Units of chemical concentration (aka parts per  
million).*

### MGD

Million Gallons per Day

### MLD

Megalitres per Day

### MMPA

Marine Mammal Protection Act

### MND

Mitigated Negative Declaration (for  
CEQA)

### MOR

Monthly Operating Report  
*A monthly report that surface water treatment  
systems must submit*

### MOU

Memorandum of Understanding

### MPA

Microscopic particulate Analysis  
*Water analysis used to determine if a water  
source is GWUDI*

### MPRSA

Marine Protection, Research, and  
Sanctuaries Act

### MSHCP

Multi-species Habitat Conservation Plan

### MTBE

Methyl-tert-butyl Ether

### MW

Megawatt

### MW

Minimal effect on a Wetland

### MWD

See TMWDSC

### MWDOC

Municipal Water District of Orange County

# WATER SECTOR ACRONYMS

---

## N

### **NACD**

National Association of Conservation Districts

### **NAD**

National Appeals Division

### **NAM**

National Agronomy Manual

### **NAPL**

Non Aqueous Phase Liquid

### **NBH**

National Biology Handbook

### **NCCP**

Natural Community Conservation Plan

### **ND or Neg Dec**

Negative Declaration (for CEQA)

### **ND**

Not Detected

### **NEPA**

National Environmental Policy Act

### **NF**

Nanofiltration

### **NFIP**

National Flood Insurance Program

### **NFS**

National Forest Service

### **NFSAM**

National Food Security Act Manual

### **NHCP**

National Handbook of Conservation Practices

### **NHEL**

Non-Highly Erodible Land

### **NHPA**

National Historic Preservation Act

### **NHQ**

National Headquarters

### **NIFA**

National Institute of Food and Agriculture

### **NLEAP**

Nitrogen Leaching and Economic Analysis Package

### **NMFS**

National Marine Fisheries Service

### **NOAA**

National Oceanic and Atmospheric Administration

### **NOD**

Notice of Determination

### **NOE**

Notice of Exclusion (for NEPA)

### **NOE**

Notice of Exemption (for CEQA)

### **NOI**

Notice of Intent (for CEQA and NEPA)

### **NO<sub>x</sub>**

Nitrogen Oxide

### **NPDES**

National Pollutant Discharge Elimination System

### **NPDWR**

National Primary Drinking Water Regulations

### **NPPH**

National Planning Procedures Handbook

# WATER SECTOR ACRONYMS

---

## NPS

National Park Service

## NRCD

National Resource Conservation District

## NRCS

National Resource Conservation Service

## NRDC

National Resource Defense Council

## NRI

National Resources Inventory

## NRPH

National Range and Pasture Handbook

## NTE

Not-to-Exceed

## NTNCWD

Non-Transient Non-Community Water System

*A PWS that is not a community water system and that regularly serves at least 25 of the same persons over 6 months per year.*

## NTS

Natural Treatment System

## NTU

Nephelometric Turbidity Units

*The unit of measurement of turbidity in water*

## NWRA

National Water Resource Association

## NWS

National Weather Service

## NWSRFS

National Weather Service River Forecasting System

# O

## O&M

Operations and Maintenance

## OA

Operational Area

## OAL

Office of Administrative Law

## OBMP

Optimum Basin Management Plan

## OC RDMD

Orange County Resources & Development Management Department

## OCFCD

Orange County Flood Control District

## OCR

Optical Character Recognition

## OCSD

Orange County Sanitation District

## OCWD

Orange County Water District

## OECD

Organization for Economic Cooperation and Development ([www.oecd.org](http://www.oecd.org))

## OEHHA

Office of Environmental Health Hazard Assessment

## OES

Office of Emergency Services

## OGC

Office of General Council

# WATER SECTOR ACRONYMS

---

## OMB

Office of Management and Budgeting

## OMI

Operations Management International, Inc.

## OPEX

Operating Expenditure on a recurring annual basis

## OPR

Office of Planning and Research

## OSEC

On-Site Electrolytic Chlorination

## OWOW

One Water One Watershed

# P

## PAC

Powdered Activated Carbon

## PAH

Polycyclic Aromatic Hydrocarbons

## PAT

Process Action Team

## PBT

Performance Based Training  
*Operators taken through a series of advanced training sessions to meet AWOP goals.*

## PCA

Potential Construction Agencies

## PCMS

Purchase Card Management System

## PCV

Prescribed Concentration or Value

## PDF

Portable Document Files

## PE

Population Equivalent

## PE

Professional Engineer

## PER

Preliminary Engineer Review

## PET

Potential Evapotranspiration

## pH

Hydrogen potential

## PHEL

Potential Highly Erodible Land

## PI

Phosphorus Index

## PIAs

Pay Item Adjustments

## PL-566

Small Watershed Program

## PLGR

Precision Lightweight Guidance Receiver

## PMC

Plant Material Center

## PMPA

Petroleum Marketers Practices Act

## PO

Purchase Order

## POI

Personal Office Identifier

## POTW

Publicly Owned Treatment Works

# WATER SECTOR ACRONYMS

---

## ppb

Parts Per Billion

*Units of measure for concentrations equivalent to micrograms per liter (ug/L)*

## ppm

Parts Per Million

*Units of measure for concentrations equivalent to milligrams per liter (mg/L)*

## PPRF

Public Project Revolving Fund

*Administered by NMFA*

## ppt

Parts Per Trillion

## ppt

Precipitation (rain)

## precip

Jargon for precipitation (rain)

## PRMS

Performance Reporting Measurement System

## PRV

Pressure Reducing Valve

## PTE

Potentially Toxic Element

## PVC

Polyvinyl Chloride

## PWS

Public Water System

*A water system that has at least 15 connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.*

## PWSS

Public Water System Supervision

*A federal grant to drinking water programs.*

# R

## RBC

Rotating Biological Contactor

## RBTS

Reed Bed Treatment System

## RC&D

Resource Conservation and Development

## RCAC

Rural Community Assistance Corporation

## RCD

Resource Conservation District

## RCFC&WCD

Riverside County Flood Control & Water Conservation District

## RCM

Regional Climate Model

## RCP

Reinforced Clay Pipe

## RCRCD

Riverside-Corona Resource Conservation District

## RCSO

Rubidoux Community Services District

## RD

Rural Development

*A USDA program that, among other functions, assists rural water systems.*

## RFI

Request for Information

## RFP

Request for Proposals

# WATER SECTOR ACRONYMS

---

## **RIX**

Regional Infiltration Extraction

## **RMS**

Rangeland Management Specialist

## **RMS**

Resource Management System

## **RO**

Reverse Osmosis

## **ROW**

Right of Way

## **RTC**

Real Time Control

## **RUSLE**

Revised Universal Soil Loss Equation

## **RWQCB**

Regional Water Quality Control Board

# S

## **SAR**

Santa Ana River

## **SARBS**

Santa Ana River Basin Section

## **SARDA**

Santa Ana River Discharge Association

## **SARE**

Sustainable Agriculture Research and Education

## **SARI**

Santa Ana Regional Interceptor  
(referred to as *Brine Line* as of 2011)

## **SARI Reaches**

I, II, III, IV, IV-A, IV-B, IV-D, IV-E, V

## **SART**

Santa Ana River Trail

## **SARWG**

Santa Ana River Watershed Group

## **SARWMB**

Santa Ana River Wetlands Mitigation Bank

## **SARWQCB**

Santa Ana Regional Water Quality Control Board

## **SAW**

Santa Ana Watershed

## **SAWA**

Santa Ana Watershed Association of Resource Conservation Districts

## **SAWPA**

Santa Ana Watershed Project Authority

## **SB**

Senate Bill

## **SBCFCD**

San Bernardino County Flood Control District

## **SBR**

Sequencing Batch Reactor

## **SBVMWD**

San Bernardino Valley Municipal Water District (see Valley District)

## **SBVWCD**

San Bernardino Valley Water Conservation District

## **SBWD**

San Bernardino Water Department

## **SCADA**

Supervisory Control and Data Acquisition

# WATER SECTOR ACRONYMS

---

## SCAG

Southern California Association of Governments

## SCAQMD

South Coast Air Quality Management District

## SCCWRP

Southern California Coastal Water Research Project

## SCD

Soil Conservation District

## SCE

Southern California Edison

## SCIWP

Southern California Integrated Watershed Program

## SCSC

Southern California Salinity Coalition

## SDWA

Safe Drinking Water Act  
*The federal law regulating public water systems.*

## SEIR

Subsequent Environmental Impact Report (for CEQA)

## SERP

State Environmental Review Process  
*An environmental review process required for projects funded by federal loan funds.*

## SERT

State Emergency Response Team

## SGPWA

San Geronio Pass Water Agency

## SI

International System of Units

## SHPO

State Historic Preservation Officer

## SI

Sustainable Infrastructure

## SJBRCD

San Jacinto Basin Resource Conservation District

## SLR

Sea level rise

## SME

Small and Medium Sized Enterprises

## SNC

Significant Non-Compliance

## SOC

Synthetic Organic Chemical  
*A group of organic chemicals commonly found in pesticides and other industrial and commercial chemical discharges.*

## SOP

Standard Operating Procedure

## SPA

Sanitary Projects Act

## SRC

State Resource Conservationist

## SRF

State Revolving Fund (see DWSRF)

## SRM

Society for Range Management

## SS

Suspended Solids

## SSO

Sanitary Sewer Overflow

## SSSI

Site of Special Scientific Interest

# WATER SECTOR ACRONYMS

---

## **SSURGO**

Soil Survey Geographic Database

## **STATSGO**

State Soil Geographic Database

## **STW**

Sewage Treatment Work

## **STWMA**

San Timoteo Watershed Management Authority

## **SVAP**

Stream Visual Assessment Protocol

## **SWAPA**

Soil Water Air Plants and Animals

## **SWAPA+H**

Soil Water Plants Animals and Humans

## **SWCA**

Soil and Water Conservation Assistance

## **SWCD**

Soil and Water Conservation District

## **SWCS**

Soil and Water Conservation Society

## **SWP**

State Water Project

## **SWPP**

Source Water Protection Program

## **SWRCB**

State Water Resources Control Board

## **SWTP**

Surface Water Treatment Plant

# T

## **T&E**

Threatened and Endangered Species

## **TAD**

Thermophilic Aerobic Digestion

## **TC**

Total Coliform

## **TCAS**

Total Cost Accounting System

## **TCE**

Trichlorethylene

## **TCR**

Total Coliform Rule

## **TDS**

Total Dissolved Solids or Tonne of Dried Solids

## **THM**

Trihalomethane

## **TIN**

Total Inorganic Nitrogen

## **TIN/TDS**

Nitrogen and TDS

## **TKN**

Total Kjeldahl Nitrogen

## **TMDL**

Total Maximum Daily Load

## **TMWDSC**

The Metropolitan Water District of Southern California (also commonly referred to as MWD)

# WATER SECTOR ACRONYMS

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## TOC

Total Organic Carbon

## TP

Treatment Plant

## TSP

Technical Service Provider

## TSS

Total Suspended Solids

## TTHM

Total Trihalomethanes

*The sum of the concentration in mg/L of the trihalomethane compounds (trichloromethane [chloroform], dibromochloromethane, bromodichloromethane and tribromomethane [bromoform]). These are disinfection byproduct chemicals.*

## TTOs

Total Toxic Organics

## TVRI

Temescal Valley Regional Interceptor  
*SARI Reach V*

## TWL

Top Water Level

## TZW

Technologiezentrum Wasser

# U

## UCMR

Unregulated Contaminant Monitoring Rule

## ug/L

Micrograms Per Liter

*Units of chemical concentration (aka ppb)*

## UNEP

United Nations Environment Programme

## UNESCO

United Nations Educational, Scientific and Cultural Organization

## USACE

United States Army Corps of Engineers

## USBOR

United States Bureau of Reclamation

## USC

United States Code

## USDI

United States Department of the Interior

## USEPA

United States Environmental Protection Agency

## USFWS

United States Fish and Wildlife Service

## USGCRP

United States Global Change Research Program

## USGS

United States Geological Survey

## USPS

United States Postal Service

## UV

Ultraviolet Radiation

# WATER SECTOR ACRONYMS

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## V

### Valley District

San Bernardino Valley Municipal Water District (see SBVMWD)

### VCP

Vitrified Clay Pipe

### VE

Value Engineering

### VFA

Volatile Fatty Acid

### VFD

Variable Frequency Drive

### VIC

Variable Infiltration Capacity hydrologic model

### VOC

Volatile Organic Chemical  
*A variety of compounds composed primarily of carbon and hydrogen, but may also contain chlorine, fluorine, and/or bromine. They are predominantly used as solvents, degreasers, cleaning solutions, dry cleaning fluids, and components of pesticides and plastics.*

### VSS

Volatile Suspended Solids

### VVWRA

Victor Valley Wastewater Reclamation Authority

## W

### WADER

Water and Dam Emergency Response

### WaterSMART

WaterSMART (Sustain and Manage America's Resources for Tomorrow)

### WB

Wildlife Biologist

### WBP

Water Bank Program

### WC

Water Column

### WC

Wetlands Conservation

### WCRP

World Climate Research Programme

### WDRs

Waste Discharge Requirements (CA permits through SWRCB or RWQCB for discharge to land or water)

### WDSP

Waterborne Disease Surveillance Program

### WebTCAS

Web Based Total Cost Accounting System

### WEF

Water Environment Federation  
[www.wef.org](http://www.wef.org)

### WEPP

Water Erosion Prediction Project

### WEPS

Wind Erosion Prediction Project

# WATER SECTOR ACRONYMS

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## **WEQ**

Wind Erosion Equation

## **WERF**

Water Environment Research Foundation  
[www.werf.org](http://www.werf.org)

## **WHDP**

Wildlife Habitat Development Plan

## **WHIP**

Wildlife Habitat Incentives Program

## **WHO**

World Health Organization

## **WHPP**

Well Head Protection Program

## **WLA**

Workload Analysis

## **WMWD**

Western Municipal Water District

## **WQ**

Water Quality

## **WQC**

Water Quality Certification (under CWA  
Section 401)

## **WQIP**

Water Quality Incentive Program

## **WRAS**

Watershed Restoration Action Strategies

## **WRCRWA**

Western Riverside County Regional  
Wastewater Authority

## **WRP**

Water Reclamation Plant

## **WRP**

Wetlands Reserve Program

## **WRRTP**

West Riverside Regional Treatment Plant

## **WSBCWD**

West San Bernardino County Water  
District

## **WTP**

Water Treatment Plant

## **WVWD**

West Valley Water District

## **WWTP**

Waste Water Treatment Plant

# Y

## **YVWD**

Yucaipa Valley Water District