



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



“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.

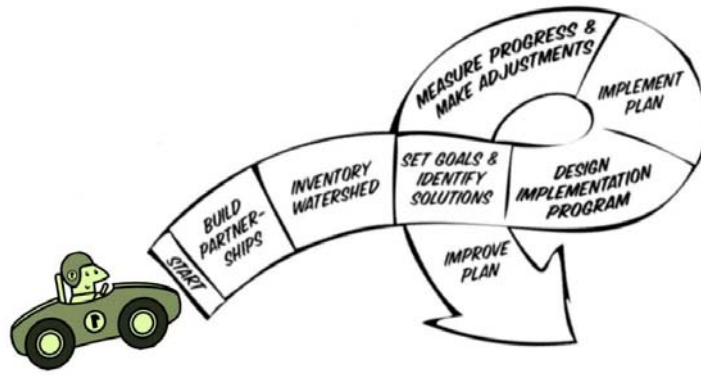
For that reason, it is our objective to periodically update this publication to reflect changes in the contacts and keep the information current. The public, our customers, expect correct and timely information when they want it, and our goal is to ensure they get what they need the first time around. 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,

A handwritten signature in blue ink, appearing to read "Celeste Cantú", written in a cursive style.

Celeste Cantú
General Manager
Santa Ana Watershed Project Authority



Source: 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:



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

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

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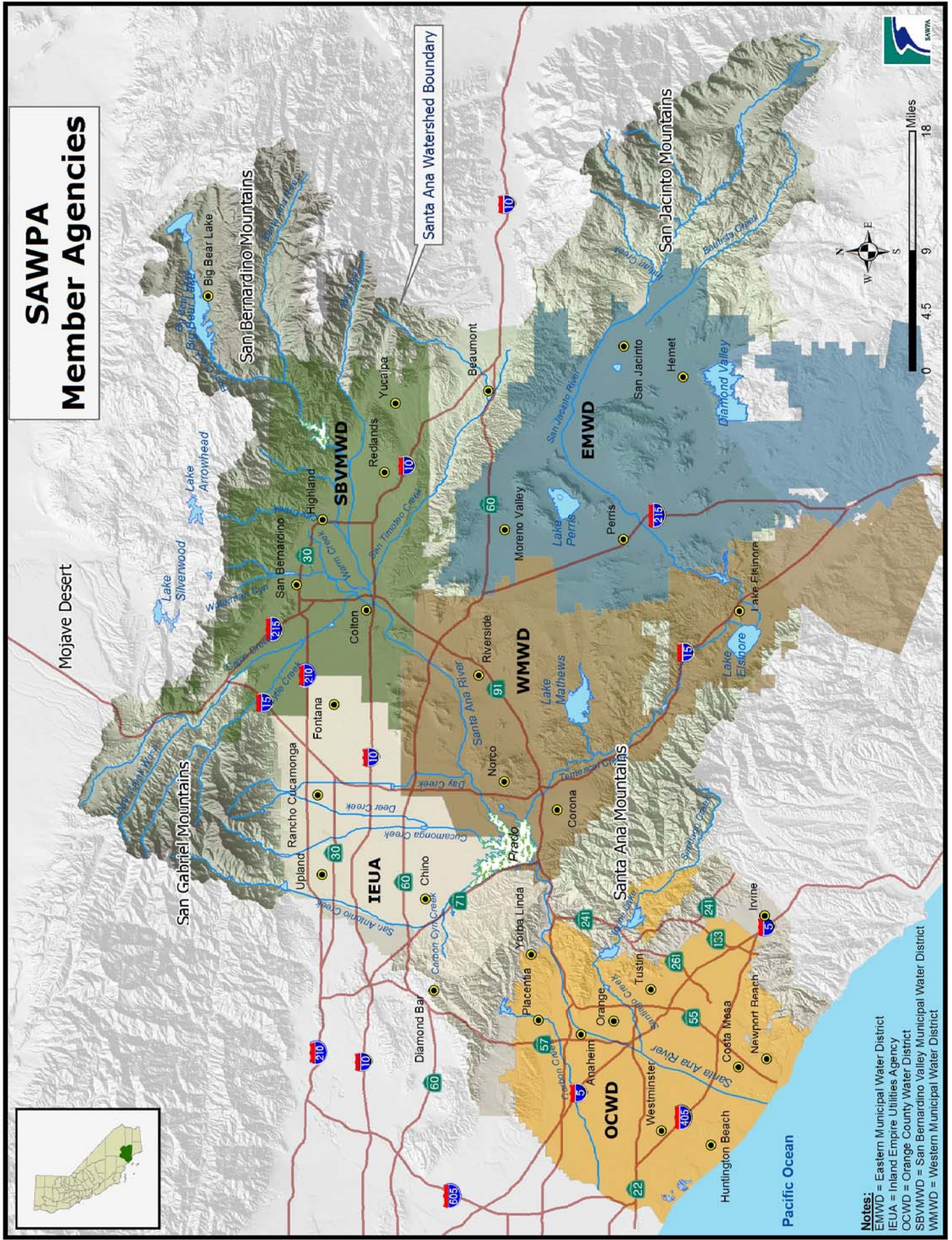
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A map of the United Kingdom with the study area highlighted in green in the south-east. The map shows the coastlines and internal county boundaries. The green area is located in the south-east of England, near the coast.



Notes:
EMWD = Eastern Municipal Water District
IEUA = Inland Empire Utilities Agency
OCWD = Orange County Water District
SBVMWD = San Bernardino Valley Municipal Water District
WMWD = Western Municipal Water District

BACKGROUND

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.

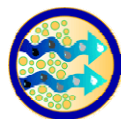


Source: SAWPA

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

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

mnajera@fs.fed.us

Jody Noiron, Forest Supervisor

Robert Taylor, Hydrologist

rgtaylor@fs.fed.us

602 S Tippecanoe Avenue

P 909.382.2600

San Bernardino, CA 92408

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

Cleveland National Forest

William Metz, Forest Supervisor

P 858.673.6187

10845 Rancho Bernardo Road, Suite 200

P 858.673.6187

San Diego, CA 92127

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

ORGANIZATIONS

Federal agencies (cont.):



DEPARTMENT OF AGRICULTURE (CONT.)



NATURAL RESOURCES CONSERVATION SERVICE RURAL DEVELOPMENT

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
3380 Somis Road, Somis, CA 93066

P 805.386.4489

Field Office, Redlands

Kimberly Larry, District Conservationist
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

Rural Development

Glenda Humiston glenda.humiston@usda.gov

Janice Waddell, State Program Director
janice.waddell@ca.usda.gov
430 G Street, Agency 4169, Davis, CA 95616

P 530.792.5800

John Jebian, Area Director
john.jebian@ca.usda.gov

P 760.342.4624 ext 118

Carrie McLeod, Area Specialist
carrie.mcleod@ca.usda.gov
82-901 Bliss, Indio, CA 92201-4355

P 760.347.3675 ext 120

Rural Development Service Center Office

Heidi Patterson, District Conservationist
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

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

P 562.980.4002

Anthony Spina, Supervisory Fishery Biologist
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

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

ORGANIZATIONS

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 P 702.293.8411
500 Fir Street P 702.293.8411
Boulder City, NV 89005
Website: www.usbr.gov/lc

Southern California Area Office

Bill Steele, Area Manager wsteele@usbr.gov P 951.695.5310
Jack Simes, Planning Officer 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	egreich@usgs.gov	P 619.225.6134
Robert Kent, Hydrologist	rhkent@usgs.gov	P 619.225.6151
Michael Land, Hydrologist	mtland@usgs.gov	P 619.225.6168
4165 Spruance Road, Suite 200		P 619.225.6100
San Diego, CA 92101		
Website: http://ca.water.usgs.gov/index.html		

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

P 323.276.0968

Anne Dove

anne_dove@nps.gov

P 323.441.9307

Patrick Johnston

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

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 P 213.452.3296

Eileen Takata, Watershed Program Manager P 213.452.3836
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 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 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
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

Tribal (cont.):



SAN MANUEL BAND OF MISSION INDIANS

James Ramos, Chairman P 909.864.8933
Ed Delgado, Public Affairs edelgado@sanmanuel-nsn.gov
Jacob Coin, Director of Communication 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 Kitchen, Exec. Asst. to Tribe dione@soboba-nsn.gov P 951.654.2765 ext 4115
Joe Garcia, Public Works 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 MANAGEMENT AGENCY **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 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 mountain 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
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

Regulatory Questions P 916.255.3618
P 800.728.6942

Website: <http://www.dtsc.ca.gov/ContactDTSC/index.cfm>

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
1001 I Street
Sacramento, CA 95814

P 916.322.6325
P 916.324.7572

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

Oakland Office

1515 Clay Street, 16th floor
Oakland, CA 94612

P 510.622.3200

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/



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
rrodriguez@dfg.ca.gov P 909.393.3935
Leslee Newton-Reed, Environmental Scientist
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
brian.moniz@water.ca.gov
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
Ken Kietzer, Sr Environmental Scientist

rkrueper@parks.ca.gov
kkietzer@parks.ca.gov

P 951.940.5622
P 951.453.4250

17801 Lake Perris Drive
Perris, CA 92571

P 951.443.2423

Website: www.parks.ca.gov

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

ORGANIZATIONS

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

P 916.445.7050

Jenan Saunders, Deputy SHPO

jsaunders@parks.ca.gov

1725 23rd Street, Suite 100

P 916.445.7050

Sacramento, CA 95816

Website: 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

P 714.558.4997

P.O. Box 997377, MS 0500

P 916.558.1784

Sacramento, CA 95899-7377

Website: 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

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 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 P 866.388.7725
Tracy Lavelle, Public Affairs Branch Chief 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

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

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

P 714.796.3908

300 N. Flower Street, 7th Floor

P 714.647.3999

Santa Ana, CA 92703-5000

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

ORGANIZATIONS

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

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

P 949.644.3214

3300 Newport Blvd.
Newport Beach, CA 92663

P 949.644.3311

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

ORGANIZATIONS

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

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

P 949.631.1206

customerservice2@mesawater.org

P 949.631.1200

1965 Placentia Avenue
Costa Mesa, CA 92627

P 949.631.1200

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

ORGANIZATIONS

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

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

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

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
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
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

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	P 714.378.3278
Tammy Russo, Administrative Coordinator	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

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

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

P 951.955.1273

1995 Market Street
Riverside, CA 92501

P 951.955.1200

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

ORGANIZATIONS

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
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

P 951.782.0330
P 951.782.0330

3460 Orange Street
Riverside, CA 92504

P 951.782.0330

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

ORGANIZATIONS

Riverside County agencies:



BEAUMONT-CHERRY VALLEY WATER DISTRICT

Eric Fraser, General Manager
General Information

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

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

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
rcrcd@rcrcd.com

P 951.683.7691

P 951.683.7691

4500 Glenwood Drive, Building A
Riverside, CA 92501

P 951.683.7691

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

ORGANIZATIONS

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

P 951.845.2577

Ken Falls, Operations & Maintenance Mgr

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

P 951.654.7733

950 North Ramona Blvd., Suite 6

P 951.654.7733

San Jacinto, CA 92582

ORGANIZATIONS

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
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
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

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

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

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

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

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

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

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

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

P 909.384.5095

San Bernardino, CA 92418

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

ORGANIZATIONS

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

P 909.584.4018



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

P 909.267.3220

4594 San Bernardino Street
Montclair, CA 91763

P 909.626.2711

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

ORGANIZATIONS

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

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

P 909.336.7100

Customer Service 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@sbvmwd.com

P 909.387.9226

P 909.387.9200

380 E. Vanderbilt Way
San Bernardino, CA 92408

P 909.387.9200

Website: www.sbvmwd.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

P 909.793.2503

P 909.793.2503

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

P 909.793.2503

Website: <http://www.sbvwcdd.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@vwwra.com

gperez@vwwra.com

P 760.948.9849

P 760.948.9849

15776 Main Street, Suite 3
Hesperia, CA 92345

P 760.948.9849

Website: <http://www.vwwra.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
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

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

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

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

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

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

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

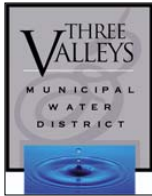
Los Angeles, CA 90017

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

P 909.621.5568

Kirk Howie, Assistant General Manager

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

P 916.444.6240

Jean Nordmann, Contributions Director

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

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

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

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

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

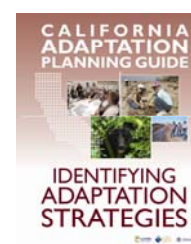
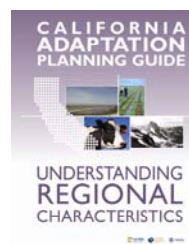
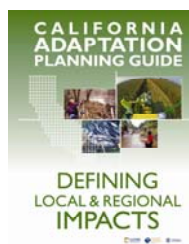
Cal EMA, California Energy
Commission, California Natural
Resources Agency, FEMA

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>

Tijuana River National Estuarine Research Reserve

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.

Urban Planning Tools for Climate Change Mitigation

Lincoln Institute of Land Policy

2009

https://www.lincolnst.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

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 mils/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

California Sustainability Alliance

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

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

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

Water Conversion Table

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.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.

Summary

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 acres 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)

Summary

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.

Summary

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

Summary

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

Summary

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:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally-undertaken, financed, or assisted construction and improvements; and
- conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

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.

Summary

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"

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

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.
<p>Summary</p> <p>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</p>		
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
<p>Summary</p> <p>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:</p> <ul style="list-style-type: none"> • Some marine mammal species or stocks may be in danger of extinction or depletion as a result of human activities; • These species or stocks must not be permitted to fall below their optimum sustainable population level ("depleted"); • Measures should be taken to replenish these species or stocks; • There is inadequate knowledge of the ecology and population dynamics; and • Marine mammals have proven to be resources of great international significance. 		
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
<p>Summary</p> <p>The MPRSA or Ocean Dumping Act 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.</p>		

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
<p>Summary</p> <p>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.</p>		
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

Summary

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.

Summary

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.

Summary

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
California Code of Regulations	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.
California Health & Safety Code	State Water Resources Control Board	The official Health & Safety Code on the California Legislative Counsel Website, which contains provisions relating to underground storage tanks.
California Water Code	State Water Resources Control Board	The official Water Code on the California Legislative Counsel Website
CPUC Water Standard Practices	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
Porter-Cologne Water Quality Control Act	State Water Resources Control Board	Excerpts of California Water Code, Division 7 (Water Quality)
Timberland Conservation Program	California Department of Fish and Wildlife	Permits
Title 23 (Waters)	California Office of Administrative Law	
Title 23 (Waters) - Division 3	California Office of Administrative Law	Excerpts pertaining to Water Rights
Title 23 (Waters) - Meeting Regulations	California Office of Administrative Law	Excerpts pertaining to meetings before the water boards.

RESOURCES



CALIFORNIA STATE LAWS

Law	Lead Agency	Required Actions
Title 27 (Environmental Protection)	California Office of Administrative Law	Title 27, Division 2, Subdivision 1 Consolidated Regulations or Treatment, Storage, Processing or Disposal of Solid Waste.
Title 27 (Environmental Protection) - Solid Waste	California Office of Administrative Law	Excerpts pertaining to Consolidated Regulations or Treatment, Storage, Processing or Disposal of Solid Waste.
Various Water Quality Control Policies	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

AWWARF

American Water Works Association Research Foundation

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

CO₂

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 Floatation

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

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

EW

Emergency Watershed Protection

EWPCA

European Water Pollution Control Association

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

MPA

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)

NOx

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

OCS

Orange County Sanitation District

OCWD

Orange County Water District

OECD

Organization for Economic Cooperation and Development (www.oecd.org)

OEHA

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

RCS

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

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

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

WEPP

Water Erosion Prediction Project

WEPS

Wind Erosion Prediction Project

WATER SECTOR ACRONYMS

WEQ

Wind Erosion Equation

WERF

Water Environment Research Foundation
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