

*A Citizen Monitor's  
Introduction to the California  
Water Boards*



# *The State of California*

- ❖ Geography
- ❖ Climate
- ❖ Interaction with Other States
- ❖ Solution to Uneven Distribution of Water Resources

# *Geography of California*

- ❖ Borders Oregon to the North, Mexico to the South, Nevada and Arizona to the East, and the Pacific Ocean to the West.
- ❖ Third largest state covering approximately 163,700 square miles.
- ❖ Water covers approximately 7,700 square miles of California.
- ❖ Coastline of California is approximately 840 miles long.
- ❖ The highest point is Mt. Whitney at 14,494 feet and the lowest point is Death Valley at 282 feet below sea level.

## *Geography of California (cont'd)*

- ❖ Major Lakes: Lake Tahoe, Salton Sea, Owens Lake, and Searles Lake
- ❖ Major Rivers: Sacramento, San Joaquin and Colorado Rivers
- ❖ Eight Main Regions: Klamath Mountains, Coastal Ranges, Sierra Nevada, Central Valley, Cascade Mountains, Basin and Range, Los Angeles, and San Diego

# *Climate of California*

- ❖ The climate of California varies due to the large and diverse land area.
- ❖ The coast is usually mild, with cooler temperatures along the central and north coast. Southeastern California is usually dry and hot.
- ❖ California usually has two distinct seasons – dry and rainy. Rainy season runs from October to April in Northern California and from November to March or April in Southern California.
- ❖ Considering all land areas the average temperatures can range from a low of 14 degrees to a high of 92 degrees.

# *Government Structure*

- ❖ Federal
- ❖ State
- ❖ Local – Counties, Cities, Special Districts

# *History of Water Pollution Control*

- ❖ State Water Commission (early 1913)- authority to administer permits and licenses for surface water
- ❖ State Water Rights Board (late 1940s)
- ❖ CA Assembly Committee on Water Pollution & the Dickey Water Pollution Act (1949)
- ❖ 1950 Formation of the Concept Performance-Based Standards and Regional Regulation by Watershed Units
- ❖ The Make-up of the Regional Water Pollution Control Boards: Their Powers/Their Duties
- ❖ The State Water Pollution Control Board renamed to State Water Quality Control Boards in 1960
- ❖ 1967 – State Water Resources Control Board was formed (State Water Rights Board and State Water Resources Control Boards were merged)

# *History of Water Pollution Control (cont'd)*

- ❖ The Federal Government Enters the Picture in 1960. Emphasis of Development of Water Quality Standards
- ❖ The State modifies its system in 1968. Water Rights/Water Quality considerations merged.
- ❖ Porter-Cologne Act passed in 1969 (State)
- ❖ A New Federal Effort in 1972, Clean Water Act (Federal)

The New Millennium...

# *The New Millennium*

- ❖ Attack storm water and diffuse sources of pollution
  - a. Land Use: Agriculture, Forest practice
- ❖ State Funding
  - Aimed more at diffuse sources
  - Water resource management
- ❖ **California Water Quality Monitoring Council**  
(SB 1070; 2007)
- ❖ EPA- Endocrine disruptors

The background of the slide features a soft, muted landscape. In the upper right, a range of mountains is visible, with a prominent peak. In the lower right, a branch of a willow tree hangs down, adorned with small, dark, round buds. The overall color palette is a mix of light beige, tan, and muted green, creating a calm and naturalistic atmosphere.

*Performance-Based Standards  
and Regional Regulation*

# *Regional Water Pollution Control Boards*

- ❖ Responsible for protecting California's water resources (surface, ground and coastal waters)
  - Setting water quality standards
  - Issuing waste discharge requirements (WDRs)
  - Determine compliance and take appropriate enforcement actions)
- ❖ Divided into nine regional areas representing watershed boundaries
- ❖ Boards are comprised of nine gubernatorial appointed members

The background of the slide features a soft, sepia-toned landscape. In the upper portion, a range of mountains is visible, with a prominent peak on the right. In the lower right corner, a branch of a willow tree hangs down, adorned with clusters of small, dark berries. The overall aesthetic is natural and serene.

# *Emphasis of Development of Water Quality Standards*

- ❖ Biocriteria
- ❖ Sediment Quality Objectives
- ❖ and others

# *Funding of the State Water Pollution Program*

- ❖ Federal Funding
- ❖ General Fund
- ❖ Fees

# *The State's Water Quality Regulatory Program*

- ❖ Point Source Discharges to Surface Waters
- ❖ Nonpoint Discharges to Surface Waters
- ❖ Discharges to Groundwaters

## *Regulatory Program (continued)*

- ❖ **Porter-Cologne Water Quality Control Act:**  
...“Any person discharging or proposing to discharge waste within the region (except discharges into a community sewer system) that could affect the quality of waters of the state is required to file a Report of Waste Discharge.”
- ❖ Regional Board (RB) reviews and adopts Waste Discharge Requirements (WDRs) to protect the beneficial uses of waters of the state.

## *Regulatory Program (continued)*

### ❖ WDRs

- For individual discharge
- For Specific categories (general permit)
- RB may waive filing or issuing WDRs with conditions if not against public interest
- Review by RB in public process

# *Point Source Discharges to Surface Waters*

- ❖ NPDES – National Pollutant Discharge Elimination System
  - CWA requires NPDES permit for discharge to waters of the USA
  - SB/RBs issue permits on a 5-year cycle in the place of WDRs for surface water discharges

## *Point Source Discharges to Surface Waters (continued)*

- ❖ **NPDES Permits/WDRs** contain:
  - Discharge prohibitions
  - Effluent limitations
  - Specifications and provisions for proper treatment/storage/disposal
  - Monitoring program for outfall/receiving waters
  - Reviewed by RB in a public process

# *Point Source Discharges to Surface Waters (continued)*

## ❖ **Basin Plan**

- Planning document
- Public information
- Regulations
- Established in Porter-Cologne Act and Clean Water Act

# *Point Source Discharges to Surface Waters (continued)*

- ❖ Basin Plan Contains
  - List of regions waters
  - Beneficial Uses (BU's) of waters
  - Objectives to protect BU's
  - Implementation plans

## *Point Source Discharges to Surface Waters (continued)*

### ❖ **Beneficial Uses (24 in California)**

- Drinking water
- Aquatic habitat for fish/wildlife
- Fishing
- Swimming

# *Point Source Discharges to Surface Waters (continued)*

- ❖ Water Quality Objectives
  - Narrative
  - Numeric

## *Point Source Discharges to Surface Waters (continued)*

- ❖ Permit Compliance:
  - Ensured by discharger through Discharge Monitoring Reports (DMR's)
  - Control measures must satisfy water quality objectives in Basin Plan.
  - Periodic site inspections by Regional Board staff

# *Nonpoint Discharges to Surface Waters*

- ❖ Nonpoint Source (NPS) pollution most difficult to address
- ❖ Caused by discharge off land-use
- ❖ Porter-Cologne Act – All NPS discharges must be regulated
- ❖ Basin Plan Prohibition
- ❖ WDRs

# *Nonpoint Discharges to Surface Waters (continued)*

- ❖ **Conditional Waiver of WDRs**
- ❖ Implementation program
  - BU's/objectives to be protected
  - Identify management practices
  - Compliance schedule
  - Progress reporting
  - Water quality monitoring

# *Discharges to Groundwaters*

- ❖ Two Policies Apply

## **Anti-degradation Policy:**

Discharges must not degrade background water quality unless a Regional Board finds that it is to the maximum benefit of the people of the state to allow degradation. Regardless, such discharges must not result in water quality less than water quality objectives in basin plans.

# *Discharges to Groundwaters (continued)*

## ❖ Source of Drinking Water:

All surface water and ground water of the state are considered to be suitable, or potentially suitable, for municipal or domestic water supply and should be so designated by the Regional Boards....except if groundwater exceeds 3000 mg/l TDS or well yield is less than 200 gpd.

# *Discharges to Groundwaters (continued)*

- ❖ **Maximum Contaminant Levels (MCLs)** protect drinking water BUs
- ❖ Discharges to land (landfill leachate, industrial waste disposal, above ground soil treatment) regulated with WDRs
- ❖ Groundwater standards for cleanup of polluted groundwater (organic solvents, fuels, metals)

# *Discharges to Groundwaters (continued)*

- ❖ Individual septic tank systems
- ❖ Cleanup Program Areas
  - Underground storage tanks
  - Aboveground tanks
  - Federal superfund
  - Brownfields sites

# *Discharges to Groundwaters (continued)*

- ❖ Groundwater quality data recorded by electronic submittal
- ❖ Groundwater Ambient Monitoring and Assessment (GAMA)
  - Basins monitored and assessed
  - GIS system for data analysis

# *Current Financial Programs to Assist Local Agencies*

- ❖ Wastewater Construction Programs
- ❖ Water Recycling Programs
- ❖ Watershed Protection Programs
- ❖ Nonpoint Source Pollution Control Programs
- ❖ Groundwater Improvement and Protection Programs
- ❖ Agricultural Programs

