

# Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling



**DOCKET**

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California Environmental Protection Agency

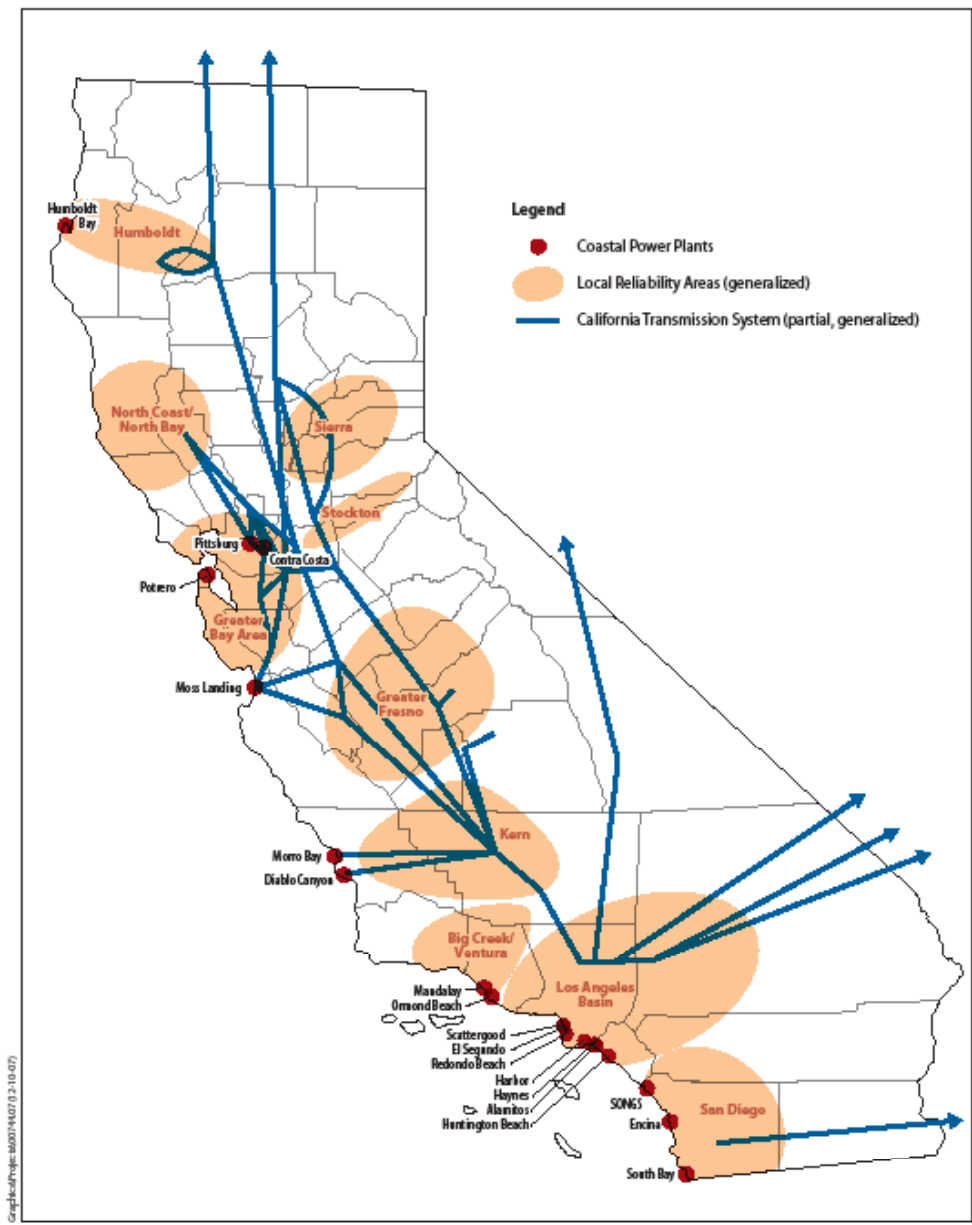
**STATE WATER RESOURCES CONTROL BOARD**

# Existing Coastal Power Plants



19 active plants with approximately 15 billion gallons per day sent through the once-through cooling water systems.

Humboldt Bay, RB1  
 Contra Costa, RB5  
 Pittsburg, RB2  
 Hunter's Point, RB2  
 Potrero, RB2  
 Moss Landing, RB3  
 Morro Bay, RB3  
 Diablo Canyon, RB3  
 Alamitos, RB4  
 El Segundo, RB4  
 Harbor, RB4  
 Haynes, RB4  
 Long Beach, RB4  
 Mandalay, RB4  
 Ormond, RB4  
 Redondo, RB4  
 Scattergood, RB4  
 Huntington, RB8  
 Encina, RB9  
 San Onofre, RB9  
 South Bay, RB9



Jones & Stokes

Figure 1  
Locations of Power Plants, Local Reliability Areas, and California's Major Transmission System

# Impacts to aquatic life from Once-through Cooling

- **Thermal Discharges:**  
waste heat and in-plant wastes (e.g., chlorine, treated human wastes, etc.)
- **Impingement** in intakes:  
adult fish and other large organisms, including mammals and turtles
- **Entrainment** through the plant:  
larval fish and other plankton, 100% mortality assumed

# Estimated Impacts to Marine Life

- Impingement mortality (fish and macroinvertebrates) is about **9 million** annually = 97,000 pounds/yr
- Marine wildlife impacted – minimum of **57** annually (seals, sea lions, sea turtles)
- Entrainment mortality is about **80 billion** fish larvae, eggs, and selected invertebrates annually
- Thermal discharges



waste.

To put this in perspective, these levels of mortality would not be allowed if resulting from a discharge of

# Our Goal

**To develop a statewide policy to protect marine life from the impacts of once-through cooling**



We are working with energy agencies and other stakeholders to ensure continuity of the State's electrical grid when implementing this policy.

# The LAW

- **Clean Water Act Section 316(b):**  
requires “that the location, design, construction, and capacity of cooling water intake structures reflect the Best Technology Available for minimizing adverse environmental impact.”
- **California Water Code Section 13142.5:**  
requires new or expanded coastal power plants to use “the best available site, design, technology, and mitigation measures feasible . . . To minimize the intake and mortality of all forms of marine life.”

# Background

- 316(b) rules are implemented through NPDES permits
- No state or federal regulations issued to implement 316(b) for existing facilities
- Regional Water Boards must currently apply Best Professional Judgment when renewing permits for existing power plants



# History



- USEPA issues Phase I Rule for **new** power plants in November 2001
- USEPA issues Phase II Rule for **existing** power plants in July 2004
- US Court of Appeals remands Phase II Rule in RiverKeeper II case in January 2007
- USEPA suspends Phase II Rule in July 2007
- US Supreme Court issues RiverKeeper II decision on April 1, 2009

# State Water Board Action

- Early CEQA Scoping Meetings:  
September 26, 2005 in Laguna Beach  
December 7, 2005 in Oakland
- Scoping Document released in June 13, 2006
- CEQA Scoping Meeting on July 31, 2006
- Revised Scoping Document released in March 2008
- Later CEQA Scoping Meetings:  
May 8, 2008 in San Pedro  
May 13, 2008 in Sacramento

# Working Groups

- **Expert Review Panel**

Reviewed the scientific aspects of the proposed Policy and provided final findings in August 2008 on questions related to the March 2008 Scoping Document

- **Inter-Agency Working Group**

Formed in June 2008 to assure electric reliability when implementing Policy. Includes the State Water Board, Energy Commission, Public Utilities Commission, Independent System Operator, Coastal Commission, State Lands Commission, and Air Resources Board

# Next Steps

- **Proposed Policy and supporting Substitute Environmental Document**  
Expected released at the end of the summer for public comment
- **Informational Workshop**  
Expected at the end of August
- **Public Hearings/Adoption**  
Expected at the end of the year

