

Clean Water Act Section 316(b) Once-Through Cooling Statewide Policy

CEQA Scoping Meetings

May 8 and 13, 2008



State Water Resources Control Board
Division of Water Quality
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Agenda

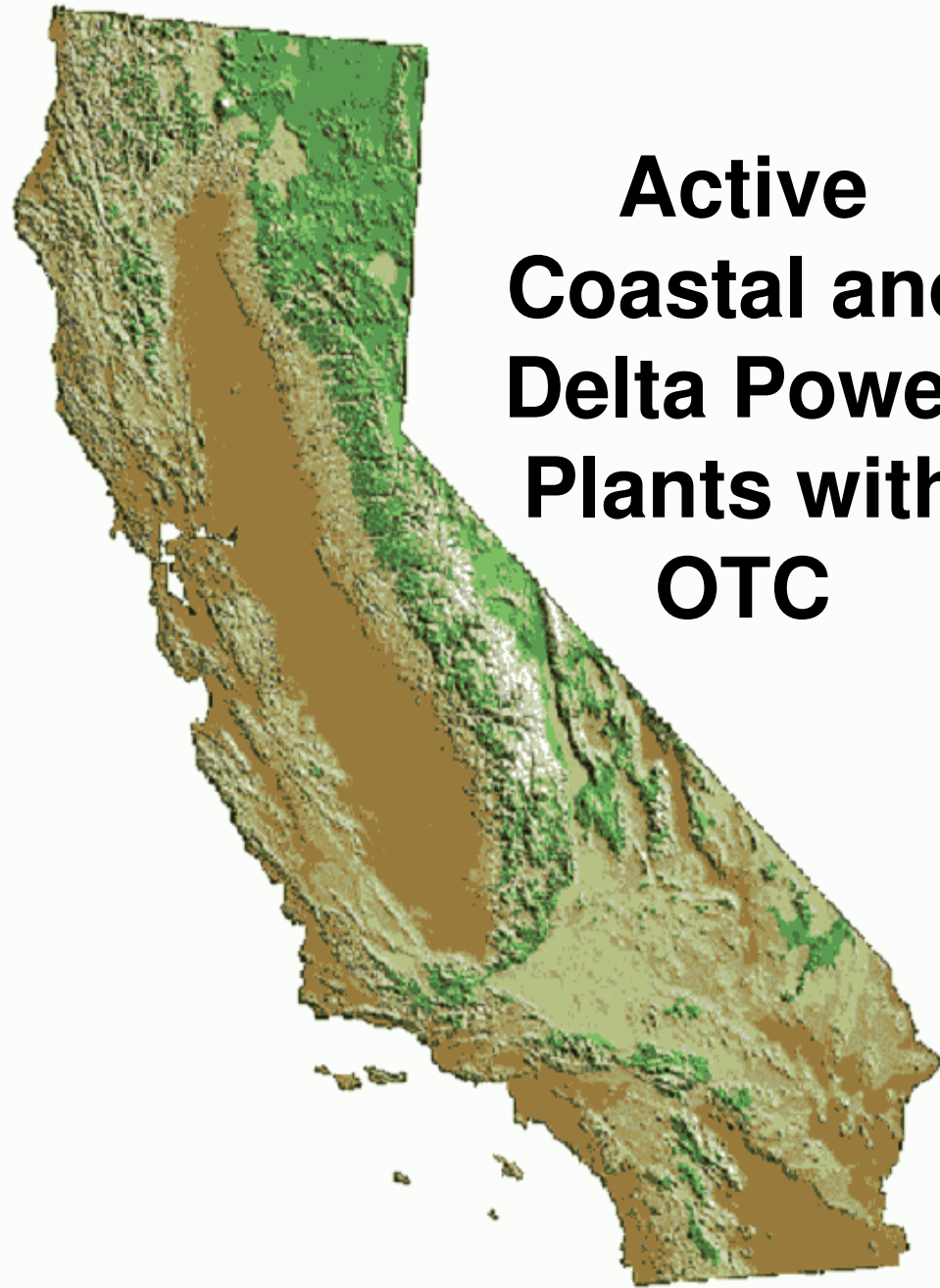
- Welcome and opening comments
- Brief staff presentation
- Public comments
- Expert Review Panel report
- Wrap-up and closing remarks

Existing Coastal Power Plants



19 active plants with approximately 16 billion gallons per day permitted once-through cooling water flows.

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



Active Coastal and Delta Power Plants with OTC

Estimated Impacts to Marine Life

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

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

Impinged fish



Entrainment: fish larvae



Traveling (intake) screen



Impinged organism disposal



Clean Water Act 316(b)

- “Any standard established pursuant to section [301] of this title or section [306] of this title and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the BTA for minimizing adverse environmental impact.”

California Water Code

- CWC 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.”

Water Board Objectives

- Develop a statewide policy to protect marine life from the impacts of once-through cooling.
- While implementing this policy we will work with energy agencies and stakeholders to ensure continuity of the State's electrical grid.

Scoping Document

- Released March 21, 2008
- Provides some initial environmental analysis, issues and alternatives
- Includes a Preliminary Draft Policy
- May be accessed at
http://www.waterboards.ca.gov/water_issues/programs/npdes/cwa316.shtml

Preliminary Draft Policy - Best Technology Available (BTA)

- Track 1- Reduce flow & velocity at least to a level commensurate with closed-cycle cooling system

if closed cycle cooling is not feasible, given the plant's site specific conditions (e.g., space issues), then:

- Track 2 - Reduce adverse impacts from OTC intake structure to a comparable level to that achievable under Track 1, using operational and structural controls.

Preliminary Draft Policy - Proposed Implementation Steps

- Plant operators develop implementation plan and submit to Regional Board
- Implementation plans of all plants reviewed by Statewide Task Force*
- Staggered compliance schedule:
 - Load Following Low Capacity Utilization 2015
 - Load Following High Capacity Utilization 2018
 - Base Load Nuclear Plants 2021

* Task Force includes energy agencies

Preliminary Draft Policy - Interim Requirements

- Interim period between adoption of Policy and Final Compliance Dates.
- Large Organism Exclusion Devices
 - For offshore intakes, 4” mesh
 - To prevent impingement of wildlife
- Reduced flows (to less than 10% of the permitted daily flow) when not generating electricity for 2 or more days
- Restoration to offset interim impacts

Closed Cycle Cooling

Some Environmental Considerations

- Water quality
- Air quality
- Noise
- Permitting
- Aesthetics and coastal issues
- Grid reliability during implementation

Next Steps

- Final Expert Review Panel Report, May 2008
- Public scoping workshop/public comments
 - Comment deadline May 20, 2008
- Release Draft Staff Report and Policy, Summer 2008
- Public Hearing, Fall 2008
- Response to Comments, Final Draft Report & Policy
- SWRCB Meeting to adopt Policy, December 2008