



CWA Section 316(b) Workshop State Water Resources Control Board

September 26, 2005

Laguna Beach, California

Presented by

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Existing Coastal Power Plants



It is estimated that about **16 billion gallons per day** are sent through the cooling water systems of coastal power plants

Once-Through Cooling Water Intakes



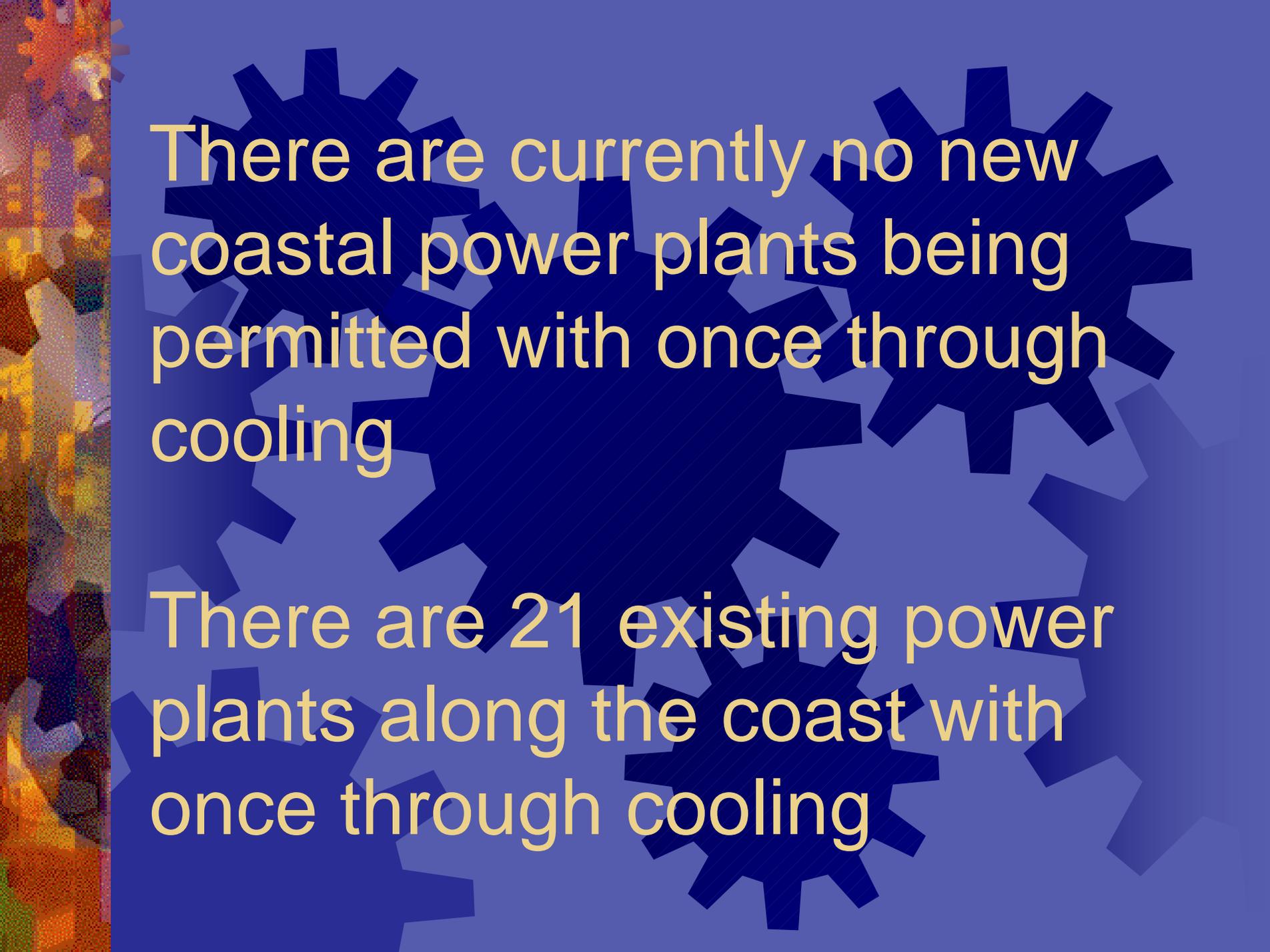
NPDES Permit Renewals

- ★ Regional Water Boards issue and renew permits
- ★ EPA's 316(b) rules are to be implemented in these permits
- ★ Up until now each Regional Board has been independently addressing entrainment and impingement in their NPDES renewal processes.

Phase I: New Facilities

- Regulations established for cooling water intake structures at new facilities under section 316 (b) of the Clean Water Act.
- Essentially prohibits the use of once-through cooling



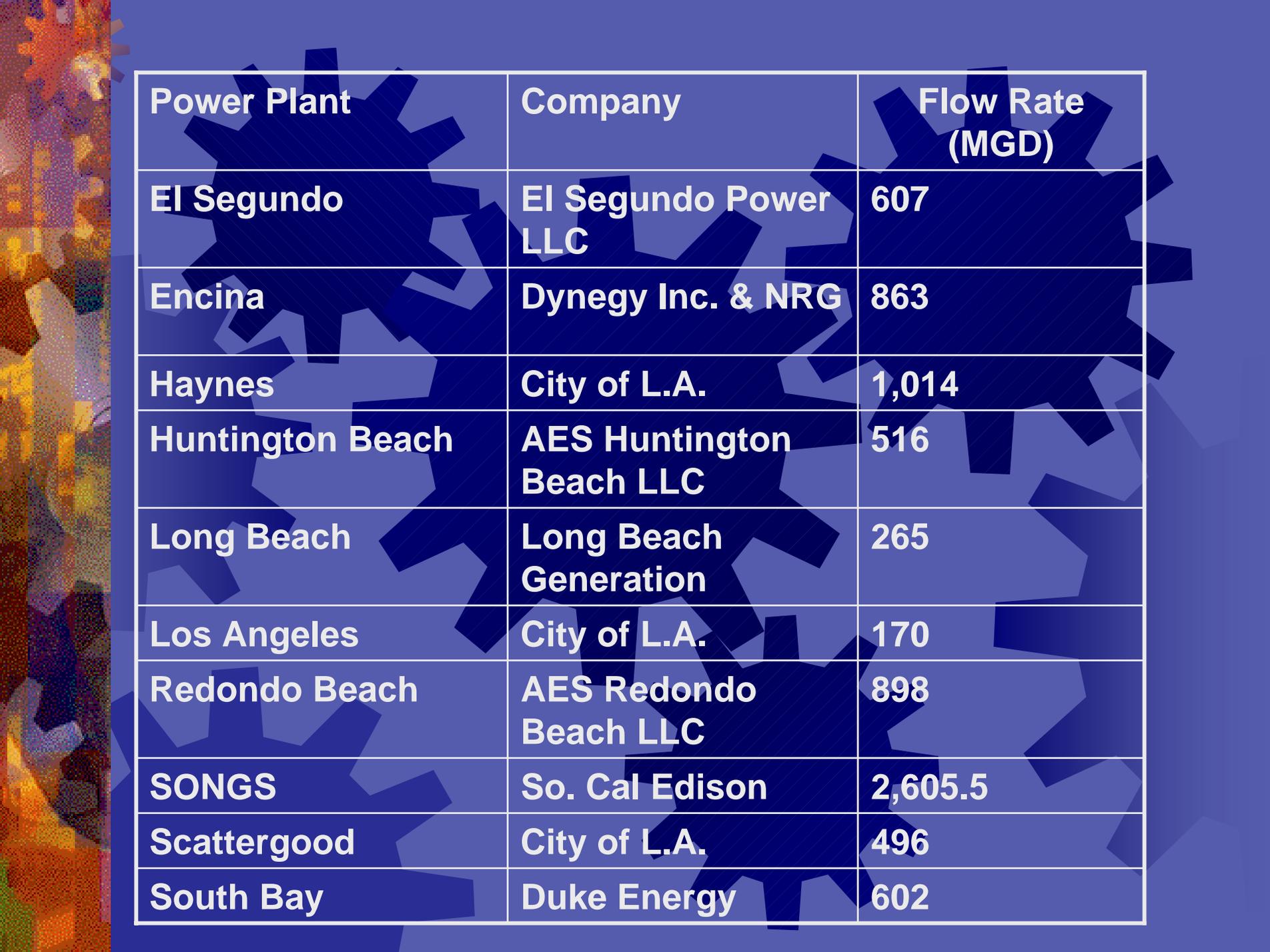


There are currently no new coastal power plants being permitted with once through cooling

There are 21 existing power plants along the coast with once through cooling

Existing plants

Power Plant	Company	Flow Rate (MGD)
Humboldt Bay	PG&E	78.3
Contra Costa	Mirant Delta	341
Pittsburg	So. Energy CA	1,000
Potrero	So. Energy Delta LLC	111.1
Hunters Point	PG&E	412.3
Moss Landing	Duke Energy	1,224
Morro Bay	Duke Energy Morro Bay LLC	725
Diablo Canyon	PG&E	2,540
Mandalay Bay	Reliant Energy	255.3
Ormond Beach	Reliant Energy	688.2
Alamitos	AES Alamitos	1,283



Power Plant	Company	Flow Rate (MGD)
El Segundo	El Segundo Power LLC	607
Encina	Dynegy Inc. & NRG	863
Haynes	City of L.A.	1,014
Huntington Beach	AES Huntington Beach LLC	516
Long Beach	Long Beach Generation	265
Los Angeles	City of L.A.	170
Redondo Beach	AES Redondo Beach LLC	898
SONGS	So. Cal Edison	2,605.5
Scattergood	City of L.A.	496
South Bay	Duke Energy	602

Phase II: Existing Facilities



Impingement requirements: Reduce impingement mortality for all life stages of fish and shellfish by 80 to 95 percent from the calculation baseline.

Section 125.94, paragraph (ii)(b)(1) of part (F)

Phase II: Existing Facilities

Entrainment requirements: Reduce entrainment of all life stages of fish and shellfish by 60 to 90 percent from the calculation baseline.

Section 125.94, paragraph (ii)(b)(2) of part (F)



Phase II: Existing Facilities

Application requirements

Data necessary to renew a NPDES permit:

- Data to characterize the source water body in the vicinity where the cooling water intake structures are located.
- Data to characterize the design and operation of the cooling water intake structures
- Cooling water system data

Section 122.21, paragraphs (r)(2),(3),and (5) and applicable provisions of Section 125.95

Phase II: Existing Facilities

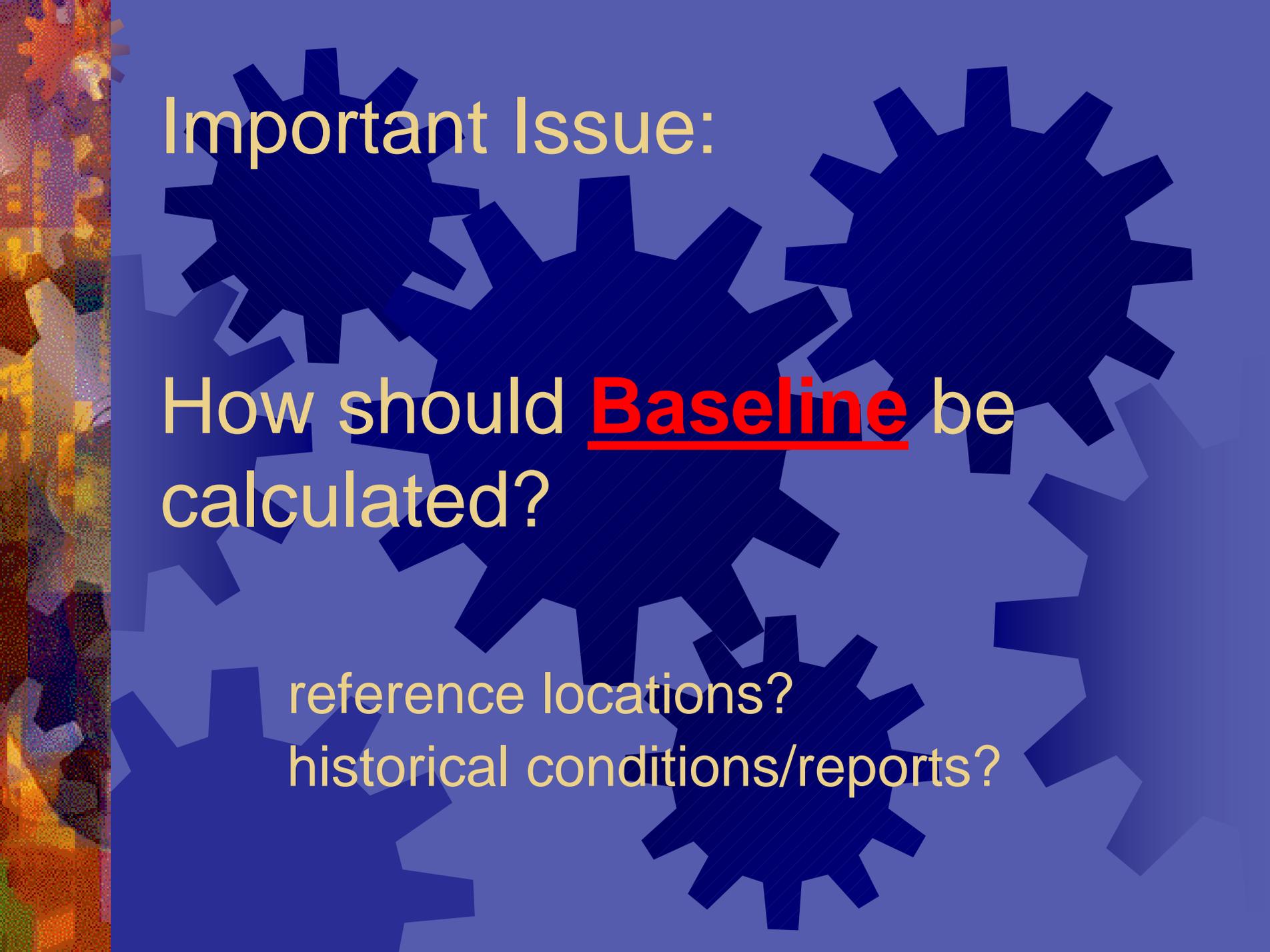
Mitigation requirements:

- ☀ **Determination that the use of restoration measures is appropriate due to:**
 - greater feasibility,
 - higher cost effectiveness, or
 - higher environmental desirability**than the use of design and construction technologies and/or operational measures alone.**
- ☀ **Restoration measures will produce ecological benefits in the facility's water body or watershed, at a level substantially similar to the level achieved by meeting performance standards.**

Section 125.94, paragraph (c) of part (F)(4)



Moss Landing Power Plant and Elkhorn Slough



Important Issue:

How should Baseline be calculated?

reference locations?

historical conditions/reports?



Important Issue:

Mitigation

what species?
how?
where?
how much?

Ecosystem approach

Presentation by Dr. Michael Foster



Presentation by Tetra Tech



Statewide 316(b) Policy ?

- ✦ Would provide consistency and guidance to Regional Boards
- ✦ Where will it go ?
 - ✦ Stand-alone or Thermal Plan ?
- ✦ How long will it take ?
 - ✦ CEQA Functional Equivalent Document required