Aligning Seawater Desalination in California with Key State Policies

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What I'll Cover

- Brief overview.
- Key policy components for planning and permitting seawater desal.
- Importance of coordinating project design with policy requirements.

Water Issues in California –

History of:

- Complexity
- Controversy
- Contentiousness
- Connections between water, development, environment, growth, quality of life, etc.

– Desal is no different.

Coastal Commission Perspective on Seawater Desalination

- **Acknowledges the role of seawater desalination in California's water portfolio:**
  - Commission has approved over 30 projects, including full-scale facilities, test and pilot projects, geotech and hydrogeologic studies for site selection, etc.
- **Requires case-by-case review to ensure projects conform to policies and protect coastal resources:**
  - Based on intake and discharge designs, selection of appropriate site, necessary mitigation, etc.

Key Coastal Act Policies

- **Marine Biology/Water Quality:** will project avoid/ mitigate effects of intake and discharge?
- **Growth-Inducement:** will it induce growth beyond coastal resource capacity?
- Is it the "**least environmentally harmful feasible alternative?**"
- Does it ensure **public access** to and along the shoreline?
- Is it subject to **coastal/seismic hazards**?
- How will it mitigate its **energy use & greenhouse gas emissions?**
- Will it protect coastal **scenic and visual** qualities?

Key Components of 2015 State Board Desal Policy

The Policy covers:

- Siting;
- Design;
- Technology; and
- Mitigation measures

– of a project's intake and discharge. Also establishes minimum mitigation requirements and provides definitions.

Shared Goals: Protect Marine Life by Minimizing Entrainment to the Extent Feasible

Key Coastal Act policy:

Maintain, enhance, and where feasible, restore marine life populations by minimizing the adverse effects of entrainment.

Key Water Code policy:

Use the best available and feasible **site**, **design**, **technology**, and **mitigation measures** to minimize the intake and mortality of all forms of marine life.

Shared Goals: Siting

Shared Coastal Act and Desal Policy Goals:

- **For Intake –** Avoid sensitive habitat (e.g., kelp, reefs)
- **For Discharge –** Keep brine away from sensitive habitat
- **For Facility –** Consider proximity to, and availability of, existing infrastructure (for example, consider co-location with WWTP or other existing discharges).

Coastal Act:

- Avoid upland sensitive habitat areas (e.g., dunes, wetlands, etc.).
- Address sea-level rise, coastal erosion, coastal and seismic hazards.
- Ensure adequate public services available to support project.

Shared Goals: Best Alternative

Key consideration: Does a proposed project represent the "least environmentally damaging and feasible alternative" to provide the needed water supply?

Coastal Commission review can include a three-part test:

- Is the facility coastal-dependent?
- Does it include all feasible mitigation measures?
- Are there no less environmentally-damaging and feasible alternatives?

Desal Policy: Evaluates the best combination of site, design, technology, and mitigation measures to minimize intake and mortality of marine life.

Shared Goals: Water Supply Considerations

Coastal Act:

- Will project induce growth beyond coastal resource or public service capacity?

Desal Policy:

- Is proposed water supply consistent with approved Urban Water Management Plan?

Consider:

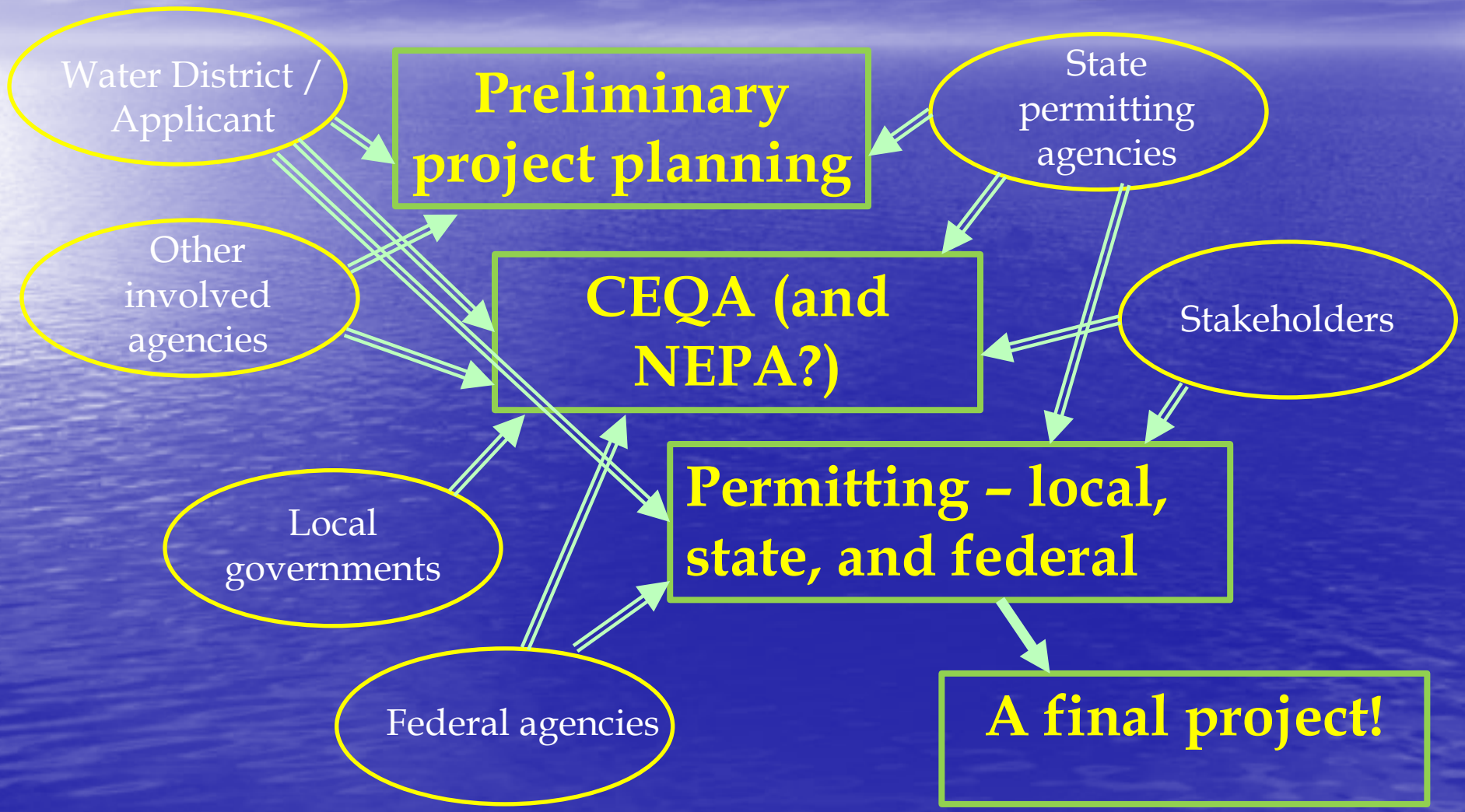
- Other supply options – maximizing conservation? is additional recycling feasible?
- What's desal's role in overall water portfolio – reliability? baseload? growth?

Effective & Comprehensive Permit Review

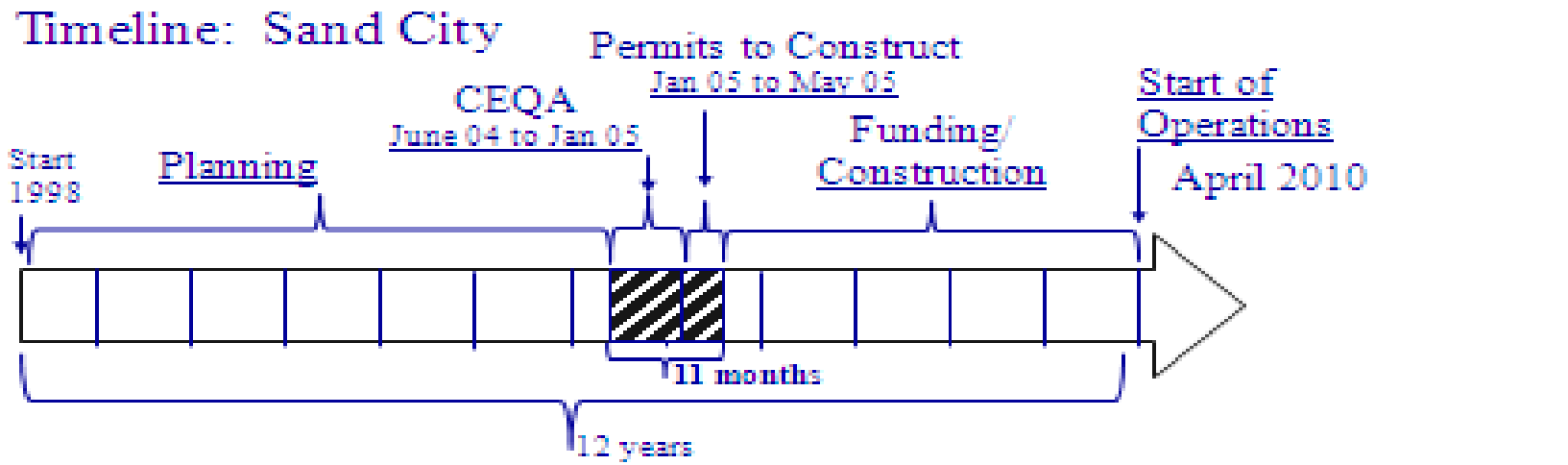
Seawater desal generally requires the following State approvals:

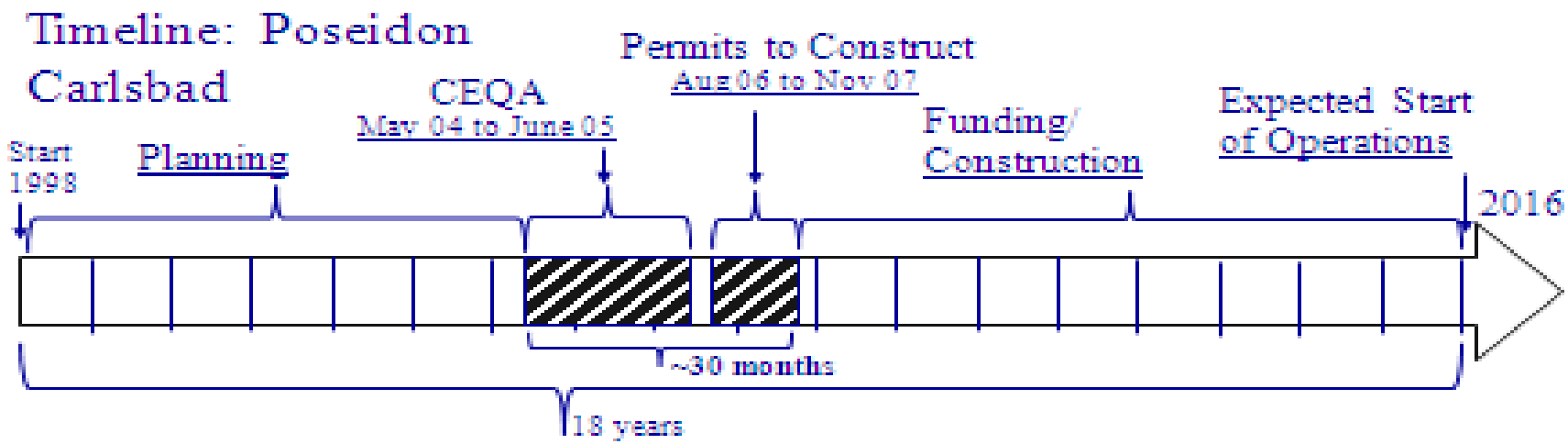
- **CEQA review:** (sometimes by local gov't).
- **State Lands Commission:** tidelands lease.
- **Coastal Commission:** coastal permit.
- **State/Regional Water Boards:** NPDES/ Waste Discharge permit.
- **Public Health:** drinking water permit.

Decision-making – much more than a State permit process!



Decision timeline examples





State review & coordination

Water District / Applicant

Other involved agencies

Preliminary project planning

State permitting agencies

Seawater Desalination Interagency Working Group

- California Coastal Commission
- Department of Fish and Wildlife
- Department of Public Health
- Department of Water Resources
- Ocean Protection Council
- Public Utilities Commission
- Regional Water Quality Control Boards
- State Coastal Conservancy
- State Lands Commission
- State Water Resources Control Board

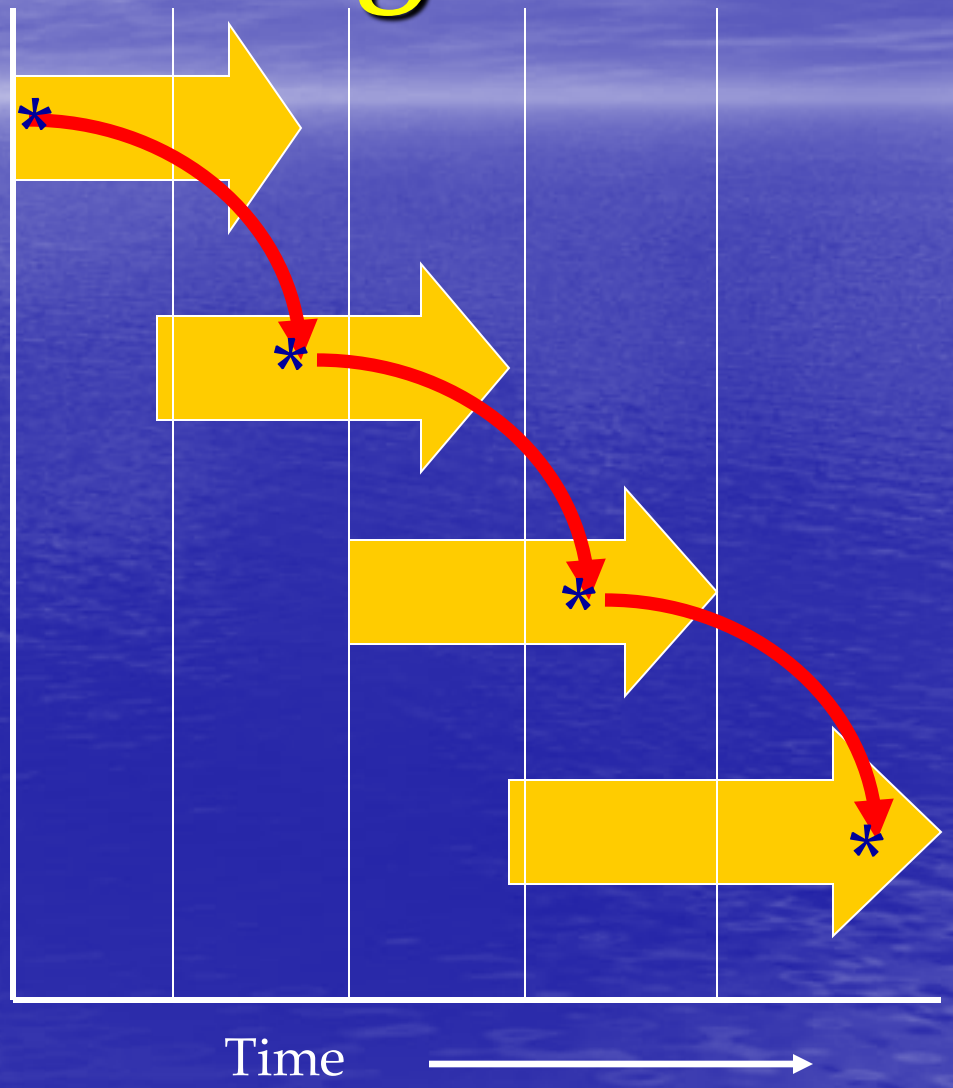
Project Review Flow & Permitting

CEQA Review

Local permits/landowner approval (State Lands Commission)

Coastal Commission

State/Regional Water Quality Board



Choosing "Easy" or "Difficult" Design & Review

"Easier" review:	"More difficult" review:
Away from shoreline.	On or next to shoreline.
Subsurface intake.	Open-water intake.
Public facility.	Private facility.
Defined service area with known level of build-out.	Unknown or extensive service area.
Consistent with UWMP and water portfolio includes significant conservation.	Not part of a local/regional plan; in an area without much effective conservation.
Early, extensive coordination w/agencies & stakeholders.	Poor or little coordination.

Agency Recommendations to Desal Applicants

- Use policies/regulations/guidelines to guide facility design and siting.
- Benefit from coordination during pre-application.
- Benefit from coordination throughout review.
- Coordinate, coordinate, **coordinate!**

Questions?