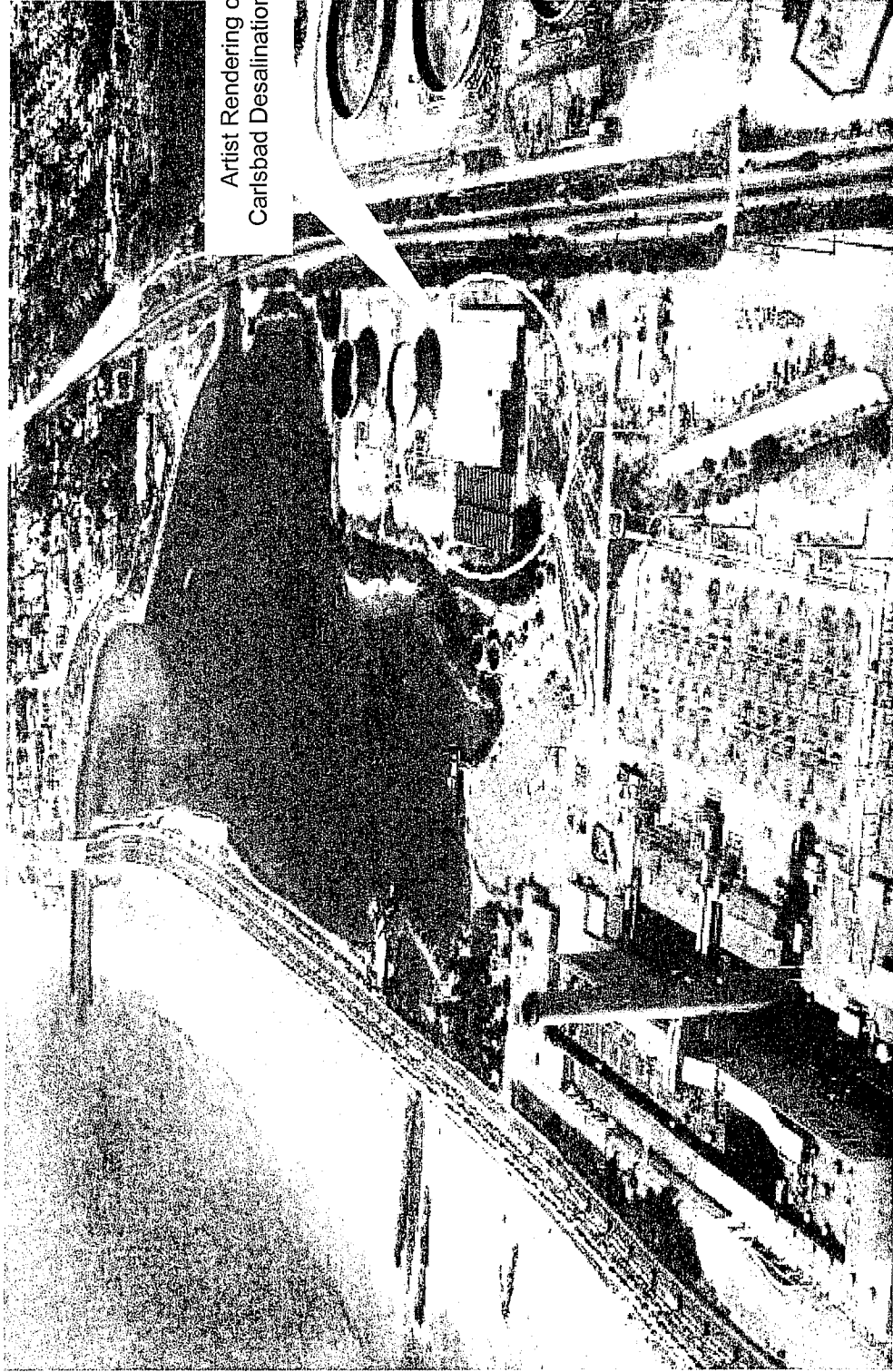


*Carlsbad Desalination Project
Marine Life Mitigation Plan*

February 11, 2008

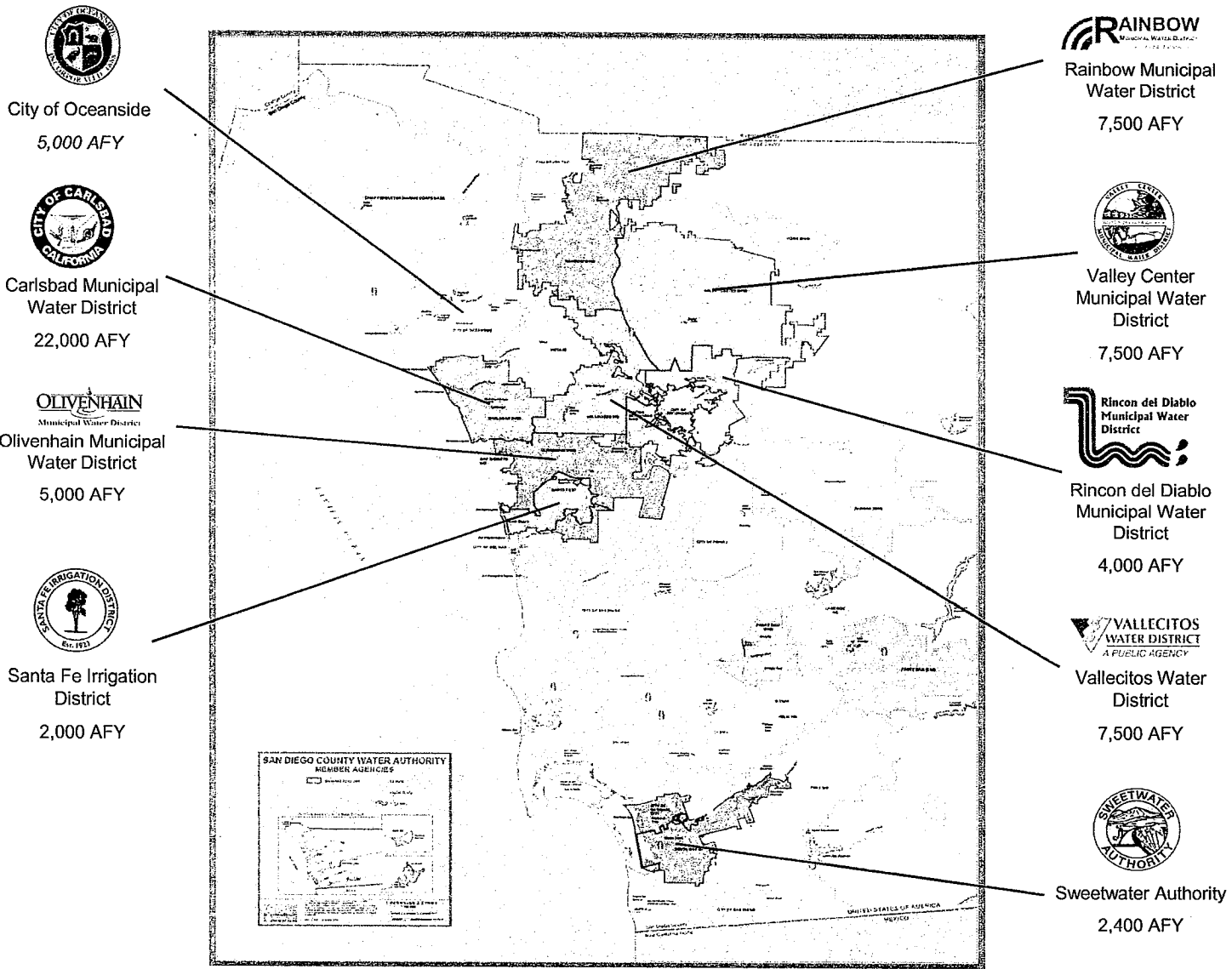


Carlsbad Desalination Project

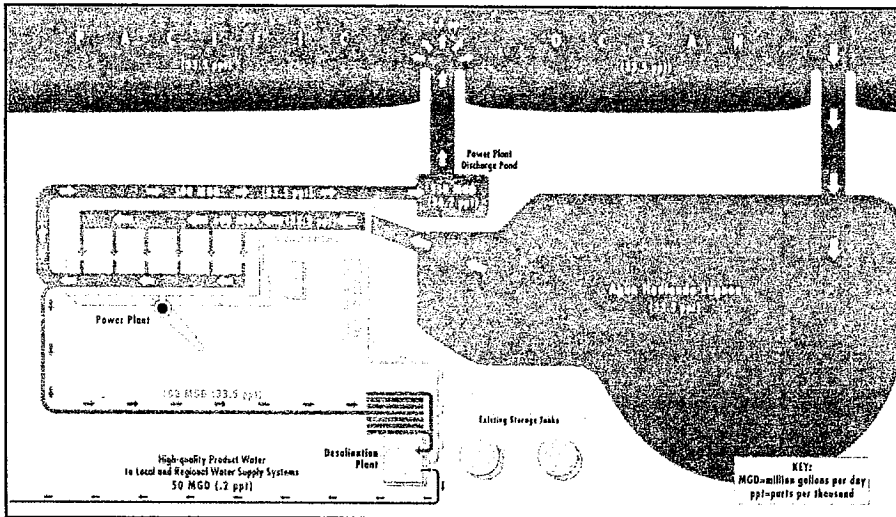


Artist Rendering of the
Carlsbad Desalination Project

Water Agency Partners



Project Location



➤ Primary Advantages

- Existing infrastructure
- Compatible zoning
- EPS provides over 60% of seawater needed

- Two Operating Scenarios
 - With power plant
 - Without power plant
- With Power Plant Operating
 - De minimis marine impacts
- Without Power Plant Operating
 - Less water circulated
 - No significant impacts
 - Net increase in marine habitat productivity after mitigation

Project Milestones

- ☑ Plant Output Fully Subscribed for 30 Years
- ☑ Environmental Impact Report Certified
- ☑ Local Land Use Permits Approved
- ☑ NPDES Permit Approved
- ☑ Drinking Water Permit Approved
- ☑ Coastal Development Permit and Mitigation Plans Approved
- ☑ State Lands Commission Lease and Mitigation Plans Approved
- ☑ Selected Engineering and Construction Team
- ☐ Approval of Regional Board Mitigation Plan
- ☐ Start Construction 2009
- ☐ Begin Project Operations 2011

Flow, Entrainment and Impingement Minimization Plan (Minimization Plan)

August 16, 2006, the Regional Board adopted Order R9-2006-0065, which, among other things, directed Poseidon:

*“to prepare a Flow, Entrainment, and Impingement Minimization Plan [to] **assess the feasibility** of site-specific plans, procedures, and practices to be implemented and/or **mitigation measures** to minimize the impacts to marine organisms when the CDP intake requirements exceed the volume of water being discharged by the EPS. The Regional Board review and approval of the Plan will address any additional review required by Water Code Section 13142.5(b).”*

It is important to note:

- The Permit requires Poseidon prepare a Plan to **assess the feasibility of mitigation**; and
- It **does not** limit Poseidon’s Marine Life Mitigation Plan to a single site.

Marine Life Mitigation Plan (MLMP)

- Since the purpose of both the Regional Board-ordered mitigation plan and the Coastal Commission's MLMP is to address the potential intake of marine organisms during desalination facility operations, Poseidon prepared one combined plan called the MLMP.
- The Coastal Commission approved the MLMP on August 6, 2008. the findings from that hearing include the following statement:

“implementation of the Plan will ensure the project’s entrainment-related impacts will be fully mitigated and will enhance and restore the marine resources and biological productivity of coastal waters....”

- The State Lands Commission Approved the MLMP August 22, 2008
- Regional Board approval of the MLMP this Spring is necessary to keep the desalination facility moving forward.

Plan Improvements Since April 2008

- Interagency Process Significantly Improved the MLMP:
 - Restoration of up to 55.4 acres of marine wetlands in two phases
 - Mitigation site to be selected from 11 pre-approved candidate mitigation sites;
 - Minimum standards and objectives final mitigation site selection.
 - Enforceable schedule for completion
 - Strict standards for measuring performance
 - Monitoring, management and remediation
 - Allowance for substitution of entrainment reduction technology or dredging credit for phase II restoration project
 - Poseidon to fund:
 - Scientific, technical and administrative oversight
 - Science Advisory Panel to provide advice on design, implementation and monitoring
 - Annual report and bi-annual public workshops to review status
 - Posting of all scientific data collected on public website

Minimum Standards and Objectives

- **Minimum standards for final site selection:**
 - Tidal wetlands with extensive intertidal and sub-tidal areas similar to the habitats in Agua Hedionda Lagoon
 - Buffer zones of at least 100 feet
 - Site preservation is guaranteed in perpetuity
 - Protection of long-term wetlands values in perpetuity
 - Does not result in a loss of existing wetlands and
 - Does not impact endangered species
- **Objectives for final mitigation site selection:**
 - Provides maximum overall ecosystem benefits
 - Provides substantial fish habitat
 - Buffer zone of an average of 300 feet
 - Provides maximum upland transition area
 - Provides rare or endangered species habitat
 - Can be accomplished in reasonably timely fashion and
 - Proximity to the Carlsbad Desalination Project

Enforceable Time Schedule

- Poseidon has ten months to submit final site for the phase I restoration project to the Coastal Commission Executive Director
- Within 24 months Poseidon must secure:
 - Landowner approvals
 - Certified Environmental Impact Report
 - Local agency approvals
 - Complete Coastal Development Permit application
- Six months after Commission approval of the mitigation project Poseidon must begin construction on phase I restoration project
- Within five years all performance criteria must be met or Poseidon is subject remediation and enforcement
- The same schedule is applicable to the phase II restoration project starting in the fifth year following issuance of the CDP for the phase I restoration

Strict Performance Standards

- Monitoring, management, maintenance, and remediation shall be conducted over the full operating life of the desalination facility
- Performance will be measured against four relatively undisturbed, natural tidal wetland reference sites
- Standard of comparison:
 - Within five years of the start of construction, the constructed wetlands must match habitat values found within the reference sites within 95% confidence level for:
 - Biological communities
 - Vegetation
 - Reproductive success
 - Food chain support
 - Density of fish, birds and habitat
 - Topography
 - Water Quality
 - Tidal Prism
 - Habitat areas

Poseidon's Commitment To Fully Implement The MLMP

- Poseidon is required to post a \$3,700,000 deposit with SLC to ensure implementation of MLMP.
- Budget for monitoring and management that includes funding for oversight by the Coastal Commission staff and SAP.
- Monitoring data is to be made available for public review.
- The Coastal Commission and SLC require annual progress reports.
- The Coastal Commission will convene public hearings to assess progress and success of the project.
- Coastal Commission Executive Director approves site selection, performance, and orders remediation to make up any deficiencies.
- The MLMP would be equally enforceable by the Regional Board's Executive Officer once it is approved by the Regional Board.
- SLC lease requires compliance with MLMP.
- Any amendments to MLMP must be approved by SLC.

Environmental Group's Response

“It would be improper to approve the...Plan without selection of the site or sites where mitigation will take place”

- Regional Board Order R9-2006-0065 required that Poseidon “***assess the feasibility of... mitigation measures.***” Clearly this provision does not limit the Board or Poseidon to the selection of a single site.
- Requiring a single-site will result in a 24 month delay in the start of construction of a critically needed water supply project during a period in California that the Director of the Department of Water Resources has described as “*the worst drought in modern history.*”
- The Coastal Commission concluded that “***implementation of the Plan [that identifies 11 candidate sites] will ensure the project's entrainment-related impacts will be fully mitigated and will enhance and restore the marine resources and biological productivity of coastal waters....***”

Hearing Record

The hearing record includes 48 documents containing thousands of pages of information supporting Poseidon’s position. The Board has received numerous written communications urging approval of the MLMP including:

Governor Arnold Schwarzenegger	“I am writing to urge your approval of the Marine Life Mitigation Plan for the Carlsbad Desalination Project at your February 11th meeting.”
Linda S Adams, Secretary of California Environmental Protection Agency	“It is our view that a process-based approach with criteria for the evaluation of mitigation site options satisfies the objectives of the Resolution.”
Donald Koch, Director of California Department of Fish and Game	“The Department agrees that the mitigation measures the Coastal Commission determined to be appropriate are adequate to mitigate the impacts of the Project.”
Mike Chrisman, Secretary of the California Natural Resources Agency	“...the MLMP includes all the elements necessary to ensure a high likelihood of success.”

Poseidon Expert Testimony

- **Dr. David Mayer, Ph.D.** – Dr. Mayer of Tenera Environmental is one of the nation's foremost experts on assessment and mitigation of entrainment and impingement impacts. His work was peer reviewed by Dr. Pete Raimondi at the direction of the Coastal Commission, and also the Commission's Science Advisory Panel. Dr. Mayer will bring the Board up to date on the evolution of the mitigation requirements set forth in the MLMP, and will also address its conservative nature and assumptions.
- **Chris Nordby** – Mr. Nordby is a biologist specializing in coastal wetland restoration. He has studied wetlands restoration opportunities throughout the region and will address the site selection process and the stringency of the performance standards included in the MLMP approved by the Coastal Commission.
- **John Balletto** – Mr. Balletto is a wetlands ecologist specializing in assessment and mitigation of entrainment and impingement impacts. He is an expert in the field who Poseidon asked to provide an independent peer review of the MLMP.