



***Appendix NN
Mitigation Monitoring
and Reporting Program***

***Renewal of NPDES CA0109223
Carlsbad Desalination Project***

MITIGATION MONITORING AND REPORTING PROGRAM

**SUPPLEMENT TO THE FINAL EIR
PRECISE DEVELOPMENT PLAN
AND DESALINATION PLANT PROJECT (03-05) INTAKE
AND DISCHARGE MODIFICATIONS**

**State Clearinghouse Number 2004041081 and 2015091060
EIR Certified June 13, 2006**

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**MMRP - Supplement to the Final EIR
PDP and CDP Intake and Discharge Modifications**

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SECTION 1.0 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that public agencies adopting environmental impact reports (EIRs) take affirmative steps to determine that approved mitigation measures and project design features are implemented subsequent to project approval. The lead or responsible agency must adopt a reporting and monitoring program for the mitigation measures incorporated into a project or included as conditions of approval. The program must be designed to ensure compliance with the EIR during project implementation (Public Resources Code, Section 20181.6(a)(1)).

The Mitigation Monitoring and Reporting Program (MMRP) will be used by the San Diego County Water Authority (Water Authority) to ensure compliance with adopted mitigation measures associated with the Supplement to the Precise Development Plan and Desalination Plant Project with incorporation of modifications to the intake and discharge facilities Final EIR (FEIR). This MMRP addresses measures applicable to project changes addressed in the Supplement to the EIR, and mitigation measures from the Carlsbad Precise Development Plan and Desalination Plant FEIR (City of Carlsbad 2006). Pursuant to Section 15097 (a) of the CEQA Guidelines, until mitigation measures have been completed the lead agency (the Water Authority) is responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program. The City of Carlsbad, as Responsible Agency, will ensure that all mitigation measures under their purview are carried out, and will coordinate with the lead agency in implementation of the MMRP.

This MMRP includes minimization measures that are included as permitting conditions from the Regional Water Quality Control Board (RWQCB) and the California Coastal Commission (CCC), to further protect marine resources. Implementation of the project design features, minimization measures, and mitigation measures would reduce impacts to below a level of significance for aesthetics, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise and vibration, and transportation and traffic.

The remainder of this MMRP consists of the checklist that identifies the project design features, minimization measures, and mitigation measures by resource applicable for the proposed modifications. The table identifies the mitigation monitoring and reporting requirements, including the person(s) responsible for verifying implementation of the design feature or mitigation measure, timing of verification (prior to, during, or after construction) and responsible party. Space is provided for sign-off following completion/implementation of the design feature or mitigation measure.

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SECTION 2.0 MMRP CHECKLIST

Measure No.	Mitigation Measure/Minimization Measure/Design Feature	Method of Verification	Timing of Verification			Responsible Party	Completed		Comments
			Pre Const.	During Const.	Post Const.		Initials	Date	
AESTHETICS									
4.1-4 (FEIR)	To the extent practical, the existing mature landscape on the slope facing Carlsbad Boulevard adjacent to the desalination plant site shall remain in place and be protected from construction impacts through the use of fencing and signage. Replacement planting for trees and shrubs that are removed along the slope facing Carlsbad Boulevard shall be provided to screen views from Carlsbad Boulevard towards the facility. Tree or other plant species, quantity, and size shall be in keeping with the adopted City of Carlsbad Scenic Corridor Guidelines, City Landscape Manual, the vegetative character of the Agua Hedionda Lagoon area and shall be sufficient to provide screening from the ground up when mature. Verification of the adequacy of the proposed plantings will occur through City review and approval of the project's landscape plan.	Civil Engineer, Construction Contractor		X		City of Carlsbad			
4.1-4 (FEIR)	Exterior lighting for the desalination facilities shall serve the purpose of operations, security and safety only. The applicant shall submit for approval a lighting plan for the proposed facilities prior to building permit issuance. The lighting plan shall demonstrate that project lighting is shielded from surrounding areas, and that only the minimum amount of lighting required for safety purposes is provided to avoid adverse effects on surrounding areas. In general, lighting fixtures shall be shielded downward and away from the adjacent Agua Hedionda Lagoon and adjacent properties. Construction of the desalination plant and related facilities and improvements shall be in conformance with the approved plan.	Civil Engineer, Construction Contractor		X		City of Carlsbad			
4.1-4 (FEIR)	Construction staging areas within the PDP area shall be screened from public view or located in an area away from direct public view. Plans showing the staging area locations and screening shall be submitted to the Planning director or his/her designee for review and approval.	Civil Engineer, Construction Contractor		X		City of Carlsbad			

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BIOLOGICAL RESOURCES									
4.3-3 (FEIR)	Restoration of wetlands shall be discussed in a Conceptual Wetlands Mitigation and Monitoring Plan which shall, at a minimum, include discussion of impact assessment, recording of pre-construction site conditions, post-construction site preparation, planting, irrigation, five-year maintenance and monitoring, and long-term preservation. Restoration of uplands shall be discussed in an Uplands Mitigation and Monitoring Plan which shall, at a minimum, include discussion of impact assessment, recording of pre-construction site conditions, post-construction site preparation, planting, irrigation, five-year maintenance and monitoring, and long-term preservation. These measures will reduce significant direct effects to a level less than significant.	Project Biologist, City Planner		X		City of Carlsbad			
4.3-3 (FEIR)	Mitigation ratios identified in <i>Table 4.3-9</i> that require more than 1:1 mitigation (e.g., 2:1) shall satisfy the mitigation that is in addition to the 1:1 in one or both of the following ways and in a manner acceptable to local, state, and federal agencies: <ul style="list-style-type: none"> • Through purchase of mitigation bank credits • Through acquisition and preservation of suitable habitat in the vicinity of the project 	Project Biologist, City Planner		X		City of Carlsbad			Habitat Restoration is underway
4.3-3 (FEIR)	Indirect impacts including dust, soil erosion, pollution, siltation, and runoff shall be reduced through implementation of construction BMPs and implementation of an approved SWPPP. At a minimum, implementation of these practices shall include the following. <ul style="list-style-type: none"> • Placement of stockpiles of soils and materials such that they cause minimal interference with on-site drainage patterns. • Hay bale barriers or gravel bags shall be placed along areas of exposed soil to help reduce sedimentation during grading operations. • Placement of a silt curtain or other drainage control device around construction areas shall be required to protect natural drainage channels from sedimentation. 	Project Biologist, City Planner		X		City of Carlsbad			

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	<ul style="list-style-type: none"> • Any dewatering that is needed shall be conducted in accordance with the standard regulations of the RWQCB. A permit to discharge water from dewatering activities will be required. • Use of paved roadways or designated staging areas (existing developed areas) for all equipment and vehicle refueling and maintenance. • Implementation of dust control measures such as watering. • Temporary fencing of the limits of the construction area with clearly visible orange construction fencing. 								
4.3-4 (FEIR)	<p>The operator of the desalination plant shall continuously monitor the desalination plant and EPS discharge flow rates and salinity levels. The operator of the desalination plant shall on at least a semi-annual frequency monitor and conduct testing to measure and evaluate the combined EPS/desalination plant discharge for compliance with Ocean Plan acute and chronic toxicity requirements. The operator of the desalination plant shall maintain records of the monitoring results to ensure compliance with Ocean Plan criteria and EPA guidelines. All semi-annual monitoring and testing required by this mitigation measure shall be summarized in a report and submitted to the RWQCB within 45 days of completion, and any noncompliance with Ocean Plan acute and chronic toxicity requirements shall be reported to the RWQCB. Such monitoring results shall be available for inspection by the City of Carlsbad and the RWQCB. Should the RWQCB adopt a permit requirement that is intended to provide equal or greater protection to the marine environment, the Planning Director is authorized to amend this mitigation measure to conform to the RWQCB order.</p>	City Planner, RWQCB, Water Authority			X	Water Authority			

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Special Provision VI.C.2.e (RWQCB Order No. R9-2006-0065)	Poseidon has submitted an amended report of waste discharge for stand-alone operations and the project will need to comply with the amended order issued by the RWQCB	RWQCB			X	Operator			
Special Condition 8 (CCC permit)	<p>Implementation of the Marine Life Mitigation Plan (Plan) The Plan was approved by the Regional Water Board pursuant to Order R9-2009-0038 satisfies the Expanded CDP's mitigation needs pursuant to chapter III.M.2.e.(3) and III.M.2.e.(7). (The Plan includes the following:</p> <ul style="list-style-type: none"> a. Documentation of the project's expected impacts to marine life due to entrainment and impingement caused by the facility's intake of water from Agua Hedionda Lagoon. This requirement was satisfied by submitting a full copy of the Permittee's Entrainment Study conducted in 2004-2005 for this project. b. To the maximum extent feasible, the mitigation shall take the form of creation, enhancement, or restoration of aquatic and wetland habitat. The EIS for habitat restoration in Chula Vista is in preparation. c. Goals, objectives and performance criteria for each of the proposed mitigation sites. It shall identify specific creation, restoration, or enhancement measures that will be used at each site, including grading and planting plans, the timing of the mitigation measures, monitoring that will be implemented to establish baseline conditions and to determine whether the sites are meeting performance criteria. The Plan shall also identify contingency measures that will be implemented should any of the mitigation sites not meet performance criteria. d. Requires submittals of "as-built" plans for each site and annual monitoring reports for no less than five years or until the sites meet performance criteria. 	RWQCB and CCC			X	Operator			Revisions MAY be necessary pending RWQCB and CCC review.

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	<p>e. Defines legal mechanism(s) proposed to ensure permanent protection of each site – e.g., conservation easements, deed restriction, or other methods.</p> <p>The Permittee shall comply with the approved Plan. Prior to implementing the Plan, the Permittee submitted a proposed wetlands restoration project that complies with the Plan in the form of a separate coastal development permit application for the planned wetlands restoration project.</p>								
CULTURAL RESOURCES									
SEIR	The Water Authority is committed to respecting the tribe's request for Native American monitoring and will ensure that the project proponent, Poseidon, provides the opportunity to monitor soil stockpiles during construction. The opportunities shall include on-site access afforded by Poseidon to the stockpiles throughout excavation activities. The Native American Monitor shall notify the Water Authority of intended access and the Water Authority shall inform Poseidon and ensure that access.	Tribal Monitor		X		Water Authority			
GREENHOUSE GASES									
Special Condition 10 (CCC permit)	Continued implementation of the Energy Minimization and Greenhouse Gas Reduction Plan. The RWQCB and CCC findings were specific to the co-located and temporary shutdown of the EPS operations condition and applicable to permanent stand-alone conditions, CCC may re-evaluate as part of consideration of their permits for the proposed modifications and standalone operations.	CCC			X	Operator			
HAZARDS AND HAZARDOUS MATERIALS									
4.6-3 (FEIR)	<p>All hazardous materials shall be handled and stored in accordance with all applicable federal, state and local codes and regulations. Specific requirements of the California Fire Code that reduce the risk of fire or the potential for a release of hazardous materials that could affect public health or environment include:</p> <ul style="list-style-type: none"> • Provision of an automatic sprinkler system for indoor 								

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	<p>hazardous material storage areas;</p> <ul style="list-style-type: none"> • Provision of an exhaust system for indoor hazardous material storage areas; • Separation of incompatible materials by isolating them from each other with noncombustible partition. • Location of incompatible materials as far away from each other as practical. • Spill control in all storage, handling and dispensing areas; • Adequate storage shall be provided inside the RO building to hold the water for the fire suppression system that could be used for fire protection for a period of 20 minutes in the event of a catastrophic spill. The secondary containment of the chemical storage tanks located outside the RO building shall have extra storage capacity to hold precipitation from a 25-year, 24-hour event. • Use of chlorine in liquid form (sodium hypochlorite) to mitigate concerns associated with accidental toxic gas plume releases and potential odor emissions from the chlorine storage facility; • Use of aqua ammonia of concentration below the regulatory threshold limit of 20 % and amount below the regulatory threshold of 20,000 gallons to mitigate concerns associated with accidental release of significant toxic ammonia gas plume releases. • All liquid chemical storage tanks shall be equipped with a pressure relief valve, vapor equalization, a carbon filter vent, and vacuum breaker. Any potential vapor fume releases from the storage tanks shall be absorbed by the carbon filter vent, thereby providing an effective odor control for volatile chemicals, such as ammonia and chlorine. <p>Appropriate safety programs shall be developed addressing hazardous materials storage locations, emergency response procedures, employee training requirements, hazard recognition,</p>								

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	fire safety, first aid/emergency medical procedures, hazard communication training, and release reporting requirements. These programs shall include a Hazardous Materials Business Plan, worker safety program, fire response program, a plant safety program, and the facility's standard operating procedures. The project shall also be in compliance with all applicable hazardous material storage and management regulations and shall prepare all safety planning documentation associated with compliance with these regulations. For security purposes, the desalination facility would allow site access to authorized personnel only via a secured entry point with a 24-hour guard.								
HYDROLOGY AND WATER QUALITY									
4.7-1 (FEIR)	<p>Prior to issuance of grading permits or other permits, the project applicant shall demonstrate compliance with all applicable regulations established by the United States Environmental Protection Agency (USEPA) as set forth in the National Pollutant Discharge Elimination System (NPDES) permit requirements for urban runoff and storm water discharge and any regulations adopted by the city within which construction will take place, pursuant to the NPDES regulations or requirements of that city (Carlsbad). Further, the applicant shall file a Notice of Intent (NOI) with the State Water Resources Control Board to obtain coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction Activity and shall implement a Storm Water Pollution Prevention Plan (SWPPP) concurrent with the commencement of grading activities. The SWPPP shall include both construction and post-construction pollution prevention and pollution control measures and shall identify funding mechanisms for post-construction control measures.</p> <p>The following best management practices shall be adhered to during construction:</p> <ul style="list-style-type: none"> • Gravel bags, silt fences, etc. shall be placed along the edge of 	Construction Contractor		X	X	City of Carlsbad			

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	<p>all work areas as determined appropriate by the City's construction inspector in order to contain particulates prior to contact with receiving waters.</p> <ul style="list-style-type: none"> • All concrete washing and spoils dumping will occur in a designated location. • Construction stockpiles will be covered in order to prevent blow-off or runoff during weather events. • A pollution control education plan shall be developed by the General Contractor and implemented throughout all phases of development and construction. • Severe weather event erosion control materials and devices shall be stored on site for use as needed. <p>Other best management practices as determined necessary by the City.</p>								
4.7-2 (FEIR)	Prior to issuance of grading or building permits, whichever occurs first, the applicant shall submit for City approval a Storm Water Management Plan (SWMP). The SWMP shall demonstrate compliance with the city of Carlsbad Standard Urban Storm water Mitigation Plan (SUSMP), Order 2001-01, issued by the San Diego Region of the California Regional Water Quality Control Board and City of Carlsbad Municipal Code.	Construction Contractor	X	X		City of Carlsbad			
4.7-3 (FEIR)	Construction within any area the City of Carlsbad identifies as a 100-year flood hazard shall occur only during dry months (May 1 – September 30). The City may waive this restriction if the applicant satisfactorily demonstrates, as determined by the City, that construction would not impede or redirect flood flows and would not expose people or structures to flooding. Such demonstration shall occur before the City issues grading or other permits to permit construction in the flood hazard area in the wet months and may require the applicant to submit plans and details regarding the type, location, quantities and duration of construction equipment and materials as well as any other information that the City may require.	Construction Contractor	X	X		City of Carlsbad			

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PUBLIC SERVICES									
4.6-3 (FEIR)	The combined waste discharge from the desalination facility to the Encina Water Pollution Control Facility (EWPCF) shall not exceed an instantaneous maximum of 300 gpm and a daily maximum of 200,000 gpd. The combined total suspended solids discharged to the EWPCF shall not exceed 500 pounds per day. Should the project operations cause the monthly average TDS of the effluent at the local water recycling facilities to exceed 1,000 mg/L, or contribute to the monthly average TDS at the local water recycling facilities exceeding 1,000 mg/L, the Applicant shall take steps to reduce the TDS increase or reimburse the operators of local water recycling plants for its proportional share of the cost to reduce the increase in TDS resulting from project operations. In addition, the applicant shall provide the City a minimum 2 years' worth of data that establishes a baseline water quality and TDS levels of the effluent at the local water recycling facilities prior to commencement of project operations. Upon commencement of operations, the applicant shall establish a monitoring program which regularly reports the TDS contribution of the desalination plant. The City shall determine monitoring program parameters, including the frequency of monitoring and duration of the program.	Operator			X	City of Carlsbad/ Water Authority			

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