

EXHIBIT "EIR-B"

CITY OF CARLSBAD

RESOLUTION NO. _____

**CALIFORNIA ENVIRONMENTAL QUALITY ACT
MITIGATION MONITORING AND REPORTING
PROGRAM**

for the

**FINAL ENVIRONMENTAL IMPACT REPORT
(EIR 03-05) (SCH No. 2004041081)**

**PRECISE DEVELOPMENT PLAN AND DESALINATION
PLANT PROJECT**

EXHIBIT B: MITIGATION, MONITORING, AND REPORTING PROGRAM

The following environmental mitigation measures for this project were incorporated into the Conditions of Approval in order to mitigate identified environmental impacts to a level of insignificance. A completed and signed checklist for each measure indicates that this measure has been complied with and implemented, and fulfills the City’s monitoring requirements with respect to Assembly Bill 3180 (Public Resources Code Section 21081.6). The City recognizes that it does not have authority to mitigate impacts in other jurisdictions; other jurisdictions will be required to adopt the applicable mitigation measures herein and/or adopt other mitigation measures as necessary to mitigate identified environmental impacts to a level of insignificance.

SUMMARY OF MITIGATION MEASURES

MITIGATION MEASURE	RESPONSIBLE MONITORING PARTY	TIMING OF COMPLIANCE	DATE OF & SIGNATURE INDICATING COMPLIANCE
<i>Aesthetics</i>			
<p>AES-1: Replacement planting for trees that are removed along the railroad corridor shall be provided to screen views from the rail line 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, and the vegetative character of the Agua Hedionda Lagoon to the extent that the species are compatible with existing vegetation. Planting shall be sufficient to provide screening when mature. Verification of the adequacy of the proposed plantings will occur through City review and approval of the project's landscape plan. The project landscape plan shall also be sent to the North County Transit District for review and comment to ensure that replacement planting poses no potential rail hazards.</p>	<p>City of Carlsbad Planning Department; North County Transit District</p>	<p>Prior to issuance of grading or building permits, whichever occurs first</p>	
<p>AES-2: Desalination Plan exterior mechanical equipment and facilities, including tanks, heating, air conditioning, refrigeration equipment, plumbing lines, duct work and transformers, shall be screened from view on all sides visible to the public. The design and material used for screening shall be architecturally compatible with the building.</p>	<p>Construction Contractor, City of Carlsbad Planning Department and Building Department</p>	<p>Prior to issuance of grading or building permits, whichever occurs first; prior to City approval of plant occupancy</p>	
<p>AES-3: 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 Blvd. shall be provided to screen views from Carlsbad Blvd.</p>	<p>Construction Contractor, City of Carlsbad Planning Department</p>	<p>Prior to issuance of grading or building permits, whichever occurs first</p>	

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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.			
AES-4: 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 City Planning Director or his/her designee for review and approval.	Construction Contractor, City of Carlsbad Planning Department	Prior to issuance of grading or building permits, whichever occurs first	
AES-5: 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.	City of Carlsbad Planning Department	Prior to issuance of building permits; prior to City approval of plant occupancy	
AES-6 Building elevations, including those visible from the NCTD railroad, shall substantially conform to plans approved for the desalination plant pursuant to PDP 0002.	City of Carlsbad Planning Department, Construction Contractor	Prior to issuance of grading or building permits, whichever occurs first; prior to City approval of plant occupancy	
Biological Resources			
BIO-1: Proposed mitigation for temporary impacts to sensitive habitats shall be based on the ratios listed below in <i>Table 4.3-9</i> . With the exception of temporary impacts on habitats designated as Groups E and F by the HMP (<i>i.e.</i> , disturbed lands, eucalyptus and agricultural lands) mitigation shall consist of, at a minimum, 1:1 revegetation of in-kind habitats at the location of impact, and, for the portion of ratios greater than 1:1, off-site purchase or acquisition as	Cities of Carlsbad, Oceanside; California Department of Fish and Game; United States Fish and Wildlife Service; and United States Army Corps of Engineers, as applicable	Prior to approval of improvement plans	

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<p>described in mitigation measure 4.3-2. Temporary impacts on non-native habitats designated as Groups E and F by the HMP are expected to recover on their own and therefore are not included in revegetation efforts; however, impacts to these habitat groups are subject to payment of a fee pursuant to the Habitat Management Plan Mitigation Fee Program. Mitigation acreages for disturbed and undisturbed habitats have been added together. It should be noted that acreage figures are based on estimated "worst case" impacts. Actual impacts may be less and would be subject to the same mitigation ratios, but the mitigation acreages could change as a result.</p>							
Habitat Type	Impacts (acres)			Mitigation Ratio	Mitigation (acres) @ ratio		
	In Coastal Zone	Outside Coastal Zone	Total		In Coastal Zone	Outside Coastal Zone	Total
Coastal Sage Scrub	0.90	3.6	4.5	2:1	1.80	7.20	9.00
Coyote Bush Scrub	0.00	0.03	0.03	2:1	0.00	0.06	0.06
Herbaceous Wetland	0.00	0.06	0.06	3:1	0.00	0.18	0.18
Open Channel	0.00	0.07	0.07	1:1	0.00	0.07	0.07
Southern Willow Scrub	0.00	0.44	0.44	3:1	0.00	1.32	1.32
Annual (non-native) grassland	0.68	3.71	4.39	Fee	0.00	0.00	0.00
Agriculture/ disturbed/ ruderal	3.12	4.53	7.65	Fee	0.00	0.00	0.00
<p>Sensitive vegetation communities shall be restored to the pre-existing vegetation type. Restoration of wetlands shall be described 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</p>							

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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 identified in <i>Section 4.3-4</i> to a level less than significant			
BIO -2: Mitigation ratios identified in Mitigation Measure BIO-1, above, 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 	Cities of Carlsbad and Oceanside; California Department of Fish and Game; United States Fish and Wildlife Service; and United States Army Corps of Engineers, as applicable	Prior to approval of improvement plans	
BIO-3: Indirect impacts including dust, soil erosion, pollution, siltation, and runoff shall be reduced through implementation of construction best management practices (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 onsite 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. • 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. • Temporary fencing of the Nuttall's scrub oak population located adjacent to 	Project Biologist; cities of Carlsbad, Oceanside, and Vista; and Regional Water Quality Control Board, as applicable	Prior to approval of improvement plans and issuance of permit by RWQCB; during construction	

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<p>the work area and northeast of the intersection of El Camino Real and Palomar Airport Road to avoid impacts.</p> <p>In order to assure that these measures are adequately protecting adjacent biological resources, construction activity shall be monitored by a qualified biologist familiar with the sensitive flora and fauna of the area. Biological monitoring shall be of a frequency and duration necessary to reasonably assure that indirect impacts are minimized. This shall include implementation of a contractor education program, verification of proper construction and maintenance of staking/fencing, full-time monitoring of vegetation removal, periodic monitoring of construction activity adjacent to sensitive resource areas, and reporting of contractor compliance and impact minimization measures on a monthly basis. These measures shall ensure that indirect impacts on vegetation communities, including dust, erosion, sedimentation, pollution, siltation, and runoff are reduced to level below significant.</p>			
<p>BIO-4: The potential for direct impacts on coastal California gnatcatcher individuals shall be mitigated by restricting the clearing of coastal sage scrub within the project alignment to outside of the gnatcatcher breeding season (August 16 through February 14).</p>	<p>Project Biologist; cities of Carlsbad and Oceanside, as applicable</p>	<p>Prior to approval of improvement plans;</p>	
<p>BIO-5: The potential short-term increase in noise related to construction shall be mitigated through avoidance of construction during the gnatcatcher breeding season or maintenance of noise levels below 60 dBA Leq at occupied nest locations if construction takes place during the breeding season (<i>i.e.</i>, February 15 through August 15). The maintenance of appropriate noise levels shall be confirmed through protocol gnatcatcher surveys to determine presence of all gnatcatcher within 500 feet of project construction and noise measurements at nest locations during peak construction activity by a qualified acoustician.</p>	<p>Project Biologist; Project Acoustician; cities of Carlsbad, Oceanside, and Vista, as applicable</p>	<p>Prior to approval of improvement plans;, during construction</p>	
<p>BIO-6: To avoid potential adverse effects from hydro-fracturing that could occur as a result of horizontal directional drilling or micro-tunneling, the applicant shall provide evidence to the local jurisdiction that demonstrates that the design of the drilling operation provides sufficient horizontal distance and depth from sensitive habitat areas. Information provided shall provide appropriate engineering calculations to demonstrate to the local jurisdiction's satisfaction that surface rupture will not occur within sensitive habitat areas.</p>	<p>Cities of Carlsbad, Oceanside, and Vista, as applicable</p>	<p>Prior to approval of improvement plans</p>	
<p>BIO-7: The operator of the desalination plant shall continuously monitor the</p>	<p>City of Carlsbad Engineering</p>	<p>During operations</p>	

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<p>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>	<p>Department; Regional Water Quality Control Board (RWQCB); and Applicant</p>	<p>throughout project life or as amended by RWQCB</p>	
Cultural Resources			
<p>CULT-1: Where project construction will impact cultural resources that have been determined to be significant, mitigation shall include either avoidance, or if avoidance is not feasible, then a data recovery program shall be completed to recover a large enough sample of cultural material so that information of importance in addressing regional research questions will not be irretrievably lost. The data recovery program shall be developed by a qualified archaeologist and approved by the City of Carlsbad.</p>	<p>City of Carlsbad; Project Archeologist</p>	<p>Prior to approval of improvement plans; during construction; within three months following the completion of archaeological monitoring</p>	
<p>CULT-2: In cases where the precise alignment of the pipeline is not available, and therefore the potential to affect cultural resources cannot be specifically determined, the applicant shall be required to retain a qualified archaeological monitor during construction so that buried cultural resources can be identified in the field. The archaeological monitor shall meet the minimum qualifications as required by the City of Carlsbad. If significant resources are identified within the areas that could be affected by construction, the resources shall be tested (pursuant to the mitigation measure CULT-1, above) to determine significance with appropriate mitigation measures employed as necessary.</p>	<p>Cities of Carlsbad, Oceanside, and Vista; Project Archeologist; Project Construction Contractor or Manager</p>	<p>As applicable: Prior to approval of improvement plans; at preconstruction meeting; during construction; within three months following the completion of archaeological</p>	

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<p>Monitoring Program Requirements</p> <p>The evaluation and monitoring program will be used for cultural resources within the project study area that are located within developed areas where surface evaluation is precluded and specific mitigation cannot be determined at this time. For these sites, a monitoring program is required if construction is to occur within or adjacent to the cultural resource site. Components of such a monitoring program would include, but not be limited to the following:</p> <p>Prior to Preconstruction (Precon) Meeting</p> <p><i>Planning Department (PD) Plan Check:</i> Prior to the first Precon Meeting, the Planning Director of the appropriate jurisdiction or his/her designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring, if applicable, have been noted on the appropriate construction documents.</p> <p><i>Submit Letter of Qualification to Planning Director:</i> Prior to the first Precon Meeting, the applicant shall provide a letter of verification to the Planning Director or his/her designee stating that a qualified Archaeologist has been retained to implement the monitoring program.</p> <p><i>Records Search Prior to Precon Meeting:</i> At least thirty days prior to the Precon Meeting the qualified Archaeologist shall verify that a records search has been completed and updated as necessary and be prepared to introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities. Verification includes, but is not limited to, a copy of a confirmation letter from South Coast Information Center or, if the search was in-house, a letter of verification from the Archaeologist stating that the search was completed.</p> <p>Precon Meeting</p> <p><i>Monitor Shall Attend Precon Meetings:</i> Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall</p>		monitoring	

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<p>include the Archaeologist, Construction Manager and/or Grading Contractor and Planning Director or his/her designee. The qualified Archaeologist shall attend any grading related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.</p> <p>Identify Areas to be Monitored: At the Precon Meeting, the Archaeologist shall submit to the Planning Director or his/her designee a copy of the site/grading plan (reduced to 11x17) that identifies areas to be monitored as well as areas that may require delineation of grading limits.</p> <p>During Construction</p> <p>Monitor Shall be Present During Grading/Excavation: The qualified Archaeologist shall be present full-time during grading/excavation native soils within or adjacent to a cultural site and shall document activity via the Consultant Monitor Record. This record shall be sent to the Planning Director or his/her designee, as appropriate, each month.</p> <p>Monitoring of Trenches Will Include Mainline, Laterals, and all Appurtenances: Monitoring of trenches is required for the mainline, laterals, services and all other appurtenances that impact native soils within or adjacent to a cultural site one foot deeper than existing as detailed on the plans or in the contract documents identified by drawing number or plan file number. It is the Construction Manager's responsibility to keep the monitor(s) up-to-date with current plans..</p> <p>Discoveries: In the event of a discovery, and when requested by the Archaeologist, or the Principal Investigator (PI) if the Monitor is not qualified as a PI, the Construction Manager (CM), as appropriate, shall be contacted and shall divert, direct or temporarily halt ground disturbing activities in the area of discovery to allow for preliminary evaluation of potentially significant archaeological resources. The PI shall also immediately notify the Planning Director or his/her designee of such findings at the time of discovery.</p> <p>Determination of Significance: The significance of the discovered resources</p>			

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<p>shall be determined by the PI. For significant archaeological resources, a Research Design and Data Recovery Program shall be prepared, approved by the City and carried out to mitigate impacts before ground-disturbing activities in the area of discovery will be allowed to resume.</p> <p>Minor Discovery Process for Pipeline Projects: For all projects: The following is a summary of the criteria and procedures related to the evaluation of small cultural resource deposits during excavation for pipelines.</p> <p>Coordination and Notification: Archaeological Monitor shall notify PI, CM and the Planning Director or his/her designee, as appropriate.</p> <p>Criteria Used to Determine if it is a Small Cultural Resource Deposit</p> <ol style="list-style-type: none"> a. The deposit is limited in size both in length and depth; and, b. The information value is limited and is not associated with any other resources; and, c. There are no unique features/artifacts associated with the deposit. d. A preliminary description and photographs, if available, shall be transmitted to the Planning Director or his/her designee. <p>The information will be forwarded to the Planning Department for consultation and verification that it is a small historic deposit.</p> <p>Procedures for documentation, curation and reporting: The following constitutes adequate mitigation of a small historic deposit to reduce impacts due to excavation activities to below a level of significance.</p> <ol style="list-style-type: none"> a. 100% of the artifacts within the trench alignment and width shall be documented in-situ, to include photographic records, plan view of the trench and profiles of sidewalls, recovered, photographed after cleaning and analyzed and curated. b. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact. c. The Final Results Report shall include a requirement for monitoring of any future work in the vicinity. 			

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<p>Human Remains: If human remains are discovered, work shall halt in that area and procedures set forth in the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) as follows:</p> <p>a. Notification</p> <p>(1) Archaeological Monitor shall notify the PI, CM and the Planning Director or his/her designee.</p> <p>(2) The PI shall notify the County Coroner after consultation.</p> <p>b. Stop work and isolate discovery site</p> <p>(1) CM/ the Planning Director or his/her designee, as appropriate, shall stop work immediately and overlay adjacent human remains until a determination can be made by the County Coroner in consultation with the PI concerning the origin of the remains and the cause of death.</p> <p>(2) The County Coroner, in consultation with the PI, shall determine the need for a field investigation to examine the remains and establish a cause of death.</p> <p>(3) If a field investigation is not warranted, the PI, in consultation with the County Coroner, shall determine if the remains are of Native American origin.</p> <p>c. If Human Remains are Native American</p> <p>(1) The Coroner shall notify the Native American Historic Commission (NAHC). (By law, ONLY the Coroner can make this call.)</p> <p>(2) NAHC will identify the person or persons it believes to be the Most Likely Descendent (MLD).</p> <p>(3) The MLD may make recommendations to the landowner or PI responsible for the excavation work to determine the treatment, with appropriate dignity, of the human remains and any associated grave goods (PRC 5097.98).</p> <p>d. If Human Remains are not Native American</p> <p>(1) The PI shall contact the NAHC and notify them of the historical context of the burial.</p> <p>(2) NAHC will identify the person or persons it believes to be the MLD.</p> <p>(3) The MLD may make recommendations to the landowner or PI responsible for the excavation work to determine the treatment of the human remains (PRC 5097.98).</p>			

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<p>(4) If the remains are of historic origin, they shall be appropriately removed and conveyed to the Museum of Man for analysis. The decision for reinterment of the human remains shall be made in consultation with the Planning Director or his/her designee, the landowner, the NAHC and the Museum of Man.</p> <p>e. Disposition of Human Remains The landowner, or his/her authorized representative, shall reinter the Native American human remains and any associated grave goods, with appropriate dignity, on the property in a location not subject to further subsurface disturbance, IF:</p> <p>(1) The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 24 hours after being notified by the NAHC; OR;</p> <p>(2) The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner.</p> <p>Notification of Completion: The Archaeologist shall notify the Planning Director or his/her designee, in writing of the end date of monitoring.</p> <p>Post Construction</p> <p>Handling and Curation of Artifacts and Letter of Acceptance</p> <p>a. The Archaeologist shall be responsible for ensuring that all cultural remains collected are cleaned, catalogued, and permanently curated with an appropriate institution; that a letter of acceptance from the curation institution has been submitted to the Planning Development; that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.</p> <p>b. Curation of artifacts associated with the survey, testing and/or data recovery for this project shall be completed in consultation with the Planning Director or his/her designee and the Native American representative, as applicable.</p> <p>Final Results Reports (Monitoring and Research Design and Data Recovery Program)</p>			

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<p>a. Within three months following the completion of monitoring, two copies of the Final Results Report (even if negative) and/or evaluation report, if applicable, which describes the results, analysis, and conclusions of the Archaeological Monitoring Program (with appropriate graphics) shall be submitted to the Planning Director or his/her designee for approval.</p> <p>b. For significant archaeological resources encountered during monitoring, the Research Design and Data Recovery Program shall be included as part of the Final Results Report.</p> <p>Recording Sites with State of California Department of Park and Recreation. The Archaeologist shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Results Report.</p>			
<p>CULT-3: A qualified paleontological monitor shall be present at a pre-grading meeting with the construction contractor and environmental review coordinator. The purpose of the meeting would be to consult and coordinate the role of the paleontologist during construction. The paleontological monitor shall have adequate knowledge and experience with fossilized remains likely to be present to identify them in the field. The paleontological monitor shall be adequately experienced to remove paleontological resources for further study.</p>	City of Carlsbad, Project Paleontologist	Preconstruction meeting	
<p>CULT-4: The paleontological monitor shall be present during the applicable stages of grading and construction (including trenching) as determined at the pre-grading meeting. The paleontological monitor shall have the authority to temporarily direct, divert, or halt grading in the area of an exposed fossil to facilitate evaluation and, if necessary, salvage. At the discretion of the monitor, recovery may include washing and picking of soil samples for microvertebrate bone and teeth. The contractor shall be aware of the random nature of fossil occurrences and the possibility of a discovery of such scientific and/or educational importance which might warrant a long-term salvage operation or preservation. All fossils collected shall be donated to a museum with a systematic paleontological collection, such as the San Diego Natural History Museum. The City of Carlsbad Engineering Division shall ensure the grading contractor is aware of this provision. Conflicts regarding the role and authority of the monitor shall be resolved by the Planning</p>	City of Carlsbad Engineering Department and Planning Department; Project Paleontologist; Project Construction Contractor	Preconstruction meeting; during construction	

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Director or his/her designee.			
CULT -5: A paleontological monitoring report shall be submitted to the City of Carlsbad. The report shall describe the materials recovered by the monitoring program.	City of Carlsbad Planning Department, Project Paleontologist	Three months following termination of paleontological monitoring program	
<i>Geology and Soils</i>			
GEO-1: To provide a uniform bearing for the proposed facility, the fill/residual soils beneath the desalination facility site shall be removed and recompact. As an alternative, all the building footings may be deepened through the compacted fill soils and be founded into the formational materials of the Santiago Formation, in accordance with the recommendations contained in the geotechnical report (GeoLogic Associates 2004).	City of Carlsbad Building Department and Engineering Department,	Prior to issuance of grading or building permits, whichever occurs first	
GEO-2: A pre-construction geotechnical investigation shall be prepared to address geotechnical considerations related to constructing and operating all of the offsite project components including water delivery pipelines, the pump station, and surge control facilities. The report shall contain all necessary requirements to address any adverse soils conditions that may be encountered in final design of the facilities. The project will be required to adhere to all such requirements. The report shall include a discussion of site-specific geology, soils and foundational issues, a seismic hazards analysis to determine the potential for strong ground acceleration and ground shaking, potential groundwater issues, and structural design recommendations. The soil engineer and engineering geologist shall review the grading plans prior to finalization to verify the plans' compliance with the recommendations of the report. A third party review of the geotechnical report and final grading plans shall be conducted by the Engineering Department of the appropriate local jurisdiction (e.g., the City of Carlsbad) prior to issuance of grading permits and encroachment permits. Compliance with this measure shall be verified by the local jurisdiction.	Cities of Carlsbad, Oceanside, and Vista, as applicable	Prior to approval of improvement plans	
<i>Hazards and Hazardous Materials</i>			

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<p>HAZ-1: To mitigate the potential for exposure of existing contamination during construction of offsite pipelines, construction monitoring will be provided in areas identified as having the potential for such risks, and appropriate actions, as determined by the City's construction inspector shall be taken if such materials are encountered. Such actions may include avoidance or removal of contaminated materials, or special handling measures to avoid exposure to materials.</p>	<p>Cities of Carlsbad, Oceanside, and Vista; County of San Diego Dept. of Public Health and Construction Contractor</p>	<p>Prior to approval of improvement plans; during construction</p>	
<p>HAZ-2: In accordance with all applicable federal, state and local regulations, plant personnel shall regularly inspect all hazardous materials handling facilities for compliance with applicable regulations and shall ensure that any deficiencies are promptly repaired. In addition, the facility shall be subject to regular inspections by the County Department of Public Health and City's Fire Department, which will ensure compliance with appropriate regulatory requirements for hazardous materials and regulated substances handling.</p>	<p>County of San Diego Dept. of Public Health; City of Carlsbad; Applicant</p>	<p>During operations throughout project life</p>	
<p>HAZ-3: All hazardous materials shall be handled stored, transported and disposed 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 hazardous material storage areas; • 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; • Separate secondary containment for each liquid chemical storage system. The secondary containment shall be designed to hold 110 % of the entire contents of the tank. . Adequate storage shall be provided inside the RO building to hold 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- 	<p>County of San Diego Dept. of Public Health; City of Carlsbad; Applicant</p>	<p>Prior to issuance of grading or building permits, whichever occurs first; during operations throughout project life</p>	

MITIGATION MEASURE	RESPONSIBLE MONITORING PARTY	TIMING OF COMPLIANCE	DATE OF & SIGNATURE INDICATING COMPLIANCE
<p>year, 24-hour event.</p> <ul style="list-style-type: none"> • 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>HAZ-4: Each of the liquid chemicals used on site shall be stored in a tank with a concrete secondary containment surrounding the tank. The containment area shall have a sloped floor, which shall direct the liquid to a drain centered below the tank. This drain shall lead to a covered sump. Each of the chemical storage tanks shall be equipped with continuous level monitors, automated leak detection system, temperature and pressure monitors and alarms, and excess flow and emergency block valves. All storage tanks shall be constructed of appropriate, non-reactive materials, compatible with the recommendations of the supplier of the hazardous material.</p>	<p>County of San Diego Dept. of Public Health; City of Carlsbad</p>	<p>Prior to issuance of grading or building permits, whichever first occurs; during operations throughout project life</p>	
<p>HAZ -5: In the event of an accidental liquid chemical spill, the chemical shall be contained within the concrete containment structure and evacuated through an individual drainage system, and pumped into hazardous waste containment trucks and transported off-site for disposal at an appropriate facility accepting such waste. This operation shall be completed by a specialized contractor licensed in hazardous waste handling and disposal. Appropriate agencies, such as the City of Carlsbad Fire and Police Departments, shall also be contacted if necessary.</p>	<p>County of San Diego Dept. of Public Health; City of Carlsbad; Applicant</p>	<p>During operations throughout project life</p>	
<p>HAZ -6: The chemical conveyance piping system connecting chemicals from their storage areas to their points of application shall be protected from leaks utilizing one of the following leak protection measures:</p>	<p>County of San Diego Dept. of Public Health; City of Carlsbad</p>	<p>Prior to issuance of grading or building permits, whichever</p>	

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<ul style="list-style-type: none"> • Use of piping with double containment walls to prevent potential chemical leaks from reaching the soil or groundwater; and • Installation of chemical conveyance and feed pipelines in designated plastic or concrete trenches that will contain potential leaks and drain the leaking chemical(s) to a designated containment sump or tank, from where the chemical(s) will be evacuated and disposed of in compliance with all applicable federal, state, and local codes. 		first occurs	
<p>HAZ -7: Appropriate safety programs shall be developed addressing hazardous materials storage locations, emergency response procedures, employee training requirements, hazard recognition, 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.</p>	County of San Diego Dept. of Public Health; City of Carlsbad; Applicant	During operations throughout project life	
Hydrology and Water Quality			
<p>HYDRO-1: Prior to issuance of a grading permit, building permit or demolition permit, whichever occurs first, 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, Oceanside and Vista). 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. The SWPPP shall also be sent to the North County Transit</p>	Cities of Carlsbad, Oceanside, and Vista; Regional Water Quality Control Board; North County Transit District, Construction Contractor	Prior to issuance of a grading permit, building permit or demolition permit, whichever occurs first; during construction	

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<p>District for review and comment.</p> <p>The following best management practices shall be adhered to during construction:</p> <ul style="list-style-type: none"> o Gravel bags, silt fences, etc. shall be placed along the edge of all work areas as determined appropriate by the City's construction inspector in order to contain particulates prior to contact with receiving waters. o All concrete washing and spoils dumping will occur in a designated location. o Construction stockpiles will be covered in order to prevent blow-off or runoff during weather events. o A pollution control education plan shall be developed by the General Contractor and implemented throughout all phases of development and construction. o Severe weather event erosion control materials and devices shall be stored onsite for use as needed. <p>Other best management practices as determined necessary by the cities</p>			
<p>HYDRO-2: 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.</p>	City of Carlsbad City Engineer,	Prior to issuance of grading or building permits, whichever occurs first	
<p>HYDRO-3: 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.</p>	City of Carlsbad City Engineer,	Prior to issuance of grading or other permits or approval of improvement plans for the applicable pipeline, whichever occurs first	
<i>Land Use and Planning</i>			
<p>LAND USE-1: The applicant shall coordinate with and receive approval from the McClellan-Palomar Airport Operations Manager before constructing within the Airport</p>	City of Carlsbad Planning Department and Public Works	Prior to approval of improvement plans	

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Influence Area and particularly within any Flight Activity Zone and Runway Protection Zone or on airport property.	Department; Applicant	for applicable pipeline	
Traffic and Circulation			
<p>TRAFFIC-1: Prior to issuance of grading permits and/or encroachment permits for work within public rights-of-way, the Applicant shall provide the ultimate location of soil disposal sites to the appropriate city (if they are different from the disposal site identified in this analysis), and shall further demonstrate that transport of soil and materials to and from the proposed sites will not result in Levels of Service during peak hour periods on affected roadways and intersections falling below acceptable standards established by the affected cities.</p>	Cities of Carlsbad, Oceanside, and Vista,	Prior to issuance of a right of way permit or approval of improvement plans, whichever occurs first	
<p>TRAFFIC-2: Prior to improvement plan approval, a traffic control plan will be prepared for approval by each jurisdiction within which the project is proposed to be located. The traffic control plan will show all signage, striping, delineate detours, flagging operations and any other devices which will be used during construction to guide motorists safely through the construction zone and allow for adequate access and circulation, to the satisfaction of the city or agency with applicable jurisdiction. The traffic control plan will also include provisions for coordinating with local emergency service providers regarding construction times and locations of lane closures as well as specifications for bicycle lane safety. The Applicant's construction contractors will coordinate traffic diversions, street and lane closures, and obstruction of intersections with each jurisdiction's engineering department prior to commencing construction activities through the development of routing and detour plans.</p> <p>This Traffic Control Plan will be prepared in accordance with each jurisdiction's traffic control guidelines and will be prepared to ensure that access will be maintained to individual properties and businesses, and that emergency access will not be restricted. Additionally, the Plan will ensure that congestion and delay of traffic resulting from project construction are not substantially increased and will be of a short-term nature.</p> <p>The limits of construction work area(s) and suggested alternate traffic routes for through traffic will be published in a local newspaper periodically throughout the construction period. In addition, the Applicant's construction contractor shall provide not less than a 2-week written notice prior to the start of construction by</p>	Cities of Carlsbad, Oceanside, and Vista, Construction Contractor	Prior to issuance of a right of way permit or approval of improvement plans, whichever occurs first; during construction	

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<p>mailing to owners/occupants along streets to be impacted during construction.</p> <p>During construction, the Applicant's contractor will ensure that continuous, unobstructed, safe and adequate pedestrian and vehicular access to and from public facilities such as schools, parks, post offices and fire stations. If normal access to these facilities is blocked by construction for more than four hours in any given workday, alternative access will be provided. The Applicant's contractor will coordinate with each facility's administrators in preparing a plan for alternative access.</p> <p>During construction, the Applicant's contractor will ensure that continuous, unobstructed, safe and adequate pedestrian and vehicular access remains to commercial/ industrial establishments during regular business hours. If normal access to business establishments is blocked by construction for more than four hours in any given workday, alternative access will be provided. The Applicant's contractor, and possibly the city, will coordinate with the businesses in preparing a plan for alternative access.</p> <p>During construction, the Applicant's contractor will maintain continuous vehicular and pedestrian access to residential driveways from the public street to the private property line, except where necessary construction precludes such continuous access for reasonable periods of time. For example, when the pipeline is initially being excavated, access to individual driveways may be closed during the course of a workday. Access will be reestablished at the end of the workday. If a driveway needs to be closed or interfered with as described above, the Applicant's construction contractor shall notify the owner or occupant of the closure of the driveway at least five working days prior to the closure.</p> <p>Methods to maintain safe, vehicular and pedestrian access includes the installation of temporary bridge or steel plates to cross over unfilled excavations. Whenever sidewalks or roadways are removed for construction, the Applicant's contractor will place temporary sidewalks or roadways promptly after backfilling until the final restoration has been made.</p> <p>The traffic control plan will include provisions to ensure that the Applicant's construction contractor's work in any public street does not interfere unnecessarily</p>			

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with the work of other agencies such as emergency service providers, mail delivery, school busses and waste services.			
<i>Public Services and Utilities</i>			
<p>PS-1: The combined waste discharge from the desalination facility to the 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.</p>	City of Carlsbad City Engineer; Applicant	During operations throughout project life	