Mitigation Monitoring & Reporting Program
- Bolsa Chica ER- Warner Avenue Pedestrian Bridge Project

Mitigation Measure	Timing of Action	Reporting Methods & Standards	Monitoring Reporting Party	Check Off & Date
BIOLOGICAL RESOURCES **MITIGATION MEASURES BIO-1** A biological resource monitor shall be present throughout construction, during the initial preparation of bridge footings and clearing/leveling for the access ramps. Biological monitors shall be Department staff or shall be hired and trained by the Department prior to construction and shall be responsible for pre-construction surveys, staking and marking of resources, on-site monitoring, documentation of violations and compliance, coordination with contract compliance inspectors, and post-construction documentation. Biological monitors shall be familiar with the wildlife species and other sensitive biological resources known to occur in the general project area and be qualified to recognize potential construction effects on these resources.	Prior to and during construction	Biological Monitoring Report	DFG Reserve Manager	
MITIGATION MEASURES BIO-2 To ensure the protection of sensitive biological resources, the Department shall conduct the following sensitive species surveys, and implement the following recommended avoidance measures prior to ground disturbance:	Prior to, during construction	Biological Monitoring Report	DFG Reserve Manager	
o A qualified biologist shall conduct a reconnaissance-level survey of the project site to ensure that rare plants (i.e., southern tarplant and sea blite), which may not have germinated or been in flower during previous sensitive species surveys, will not be impacted by construction activities. If rare plants are identified during pre-construction surveys, the population will be flagged. The locations of the southern tarplant and sea blite will be marked with orange stakes, and orange flagging will mark an area 10' around all known southern tarplant and sea blite locations. These areas will be "no equipment zones" and will be monitored to ensure crews and equipment stay outside the zones. If southern tarplant or sea blite is identified within the construction footprint, the plants	Prior to, during construction	Biological Monitoring Report	DFG Reserve Manager	

Exhibit B

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will be counted. Southern tar plant seeds will be collected from these or nearby plants as available and will be broadcast in a suitable habitat adjacent to the project site, during the next appropriate growing season following completion of construction. The sea blite is small and will transplanted to a suitable habitat adjacent to the project site. A qualified biologist through fencing and appropriate signage will exclude public access to the site of any seeding or planting and monitor southern tarplant and sea blite growth. Plant growth will be monitored to verify that plants have established at a minimum ratio of 4:1. If southern tarweed or sea blite does not establish at this rate, plants will be grown from the local seed stock and transplanted to meet the minimum 4:1 ratio.	During and post construction	Biological Monitoring Report And Revegetation Report	DFG Reserve Manager	
Where identified, sensitive resources shall be avoided by limiting the removal of habitat, relocating animals or plants, or rescheduling activities to avoid disturbance to breeding wildlife. Avoidance measures and buffer distances may vary for each species and shall be determined by the biological monitor.	Prior to, during construction	Biological Monitoring Report	DFG Reserve Manager	
MITIGATION MEASURES BIO-3 The contractor shall avoid all jurisdictional wetland habitat areas, and shall adhere to all terms and conditions of the Coastal Development Permit (CDP) issued for the project. All permits shall be maintained at the construction site at all times for review by project personnel.	Prior to, during and post construction per permits	Construction Log	Construction Manager and Reserve Manager	
MITIGATION MEASURES BIO-4 The Department shall implement a Worker Environmental Awareness Training Program (WEAP) for all construction personnel. All construction crews and contractors shall participate in WEAP training prior to starting work on the project. WEAP training shall include a brief review of special-status species and other sensitive resources that could exist in the project area (including their life history and habitat requirements), the locations of sensitive biological resources, and their legal status and protection	Pre construction	WEAP document and list of attendees	DFG Reserve Manager and Construction Manager	

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under the U.S. Endangered Species Act of 1973 (6 USC 1536) and the California Endangered Species Act (Sections 2080-2080.5 of the California Fish and Game Code). The education program shall include materials describing sensitive resources, resource avoidance, permit conditions, and possible fines for violations of State or federal environmental laws. The program shall cover the mitigation measures, environmental permits, proposed project plan, and any other required plans. The contractor shall be responsible for ensuring that all project personnel and subcontractors adhere to the projects guidelines and restrictions. Training shall be conducted as needed—including morning "tailgate" sessions—to update crews as they advance into sensitive areas, and to educate new personnel brought on the job during the construction period. Project personnel will receive a hardhat sticker or be issued a card verifying compliance with the above mitigation measure. In addition, a record of all personnel trained during the project shall be maintained and made available for compliance verification.	During construction	Biological Monitoring Report	DFG Reserve Manager	
MITIGATION MEASURES BIO-5 The contractor shall confine construction equipment and associated activities to the approved work area at all locations. The limits of construction shall be clearly delineated with flagging or other marking by qualified biologists or resource specialists prior to ground disturbance. Equipment staging shall remain outside of sensitive habitats in approved areas, with an adequate buffer to avoid potential impacts to sensitive resources. Equipment staging shall remain outside of sensitive habitats in the Interpretive Center parking lot to avoid potential impacts to sensitive resources.	During construction	Biological Monitoring Report and construction logs	DFG Reserve Manager and Construction Manager	
MITIGATION MEASURES BIO-6 The Contractor shall implement best management practices (BMPs) to avoid and minimize erosion, sedimentation, and fuel spills (from equipment refueling). The Contractor shall utilize, as				

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appropriate, sedimentation fences, certified weed-free hay bales, sand bags, water bars, and or baffles to contain sediment around the construction areas and ensure the protection of waters of the State, sensitive habitat, and wetlands. In addition, the Department shall ensure that the Contractor takes the following measures: o Conduct all refueling activities more than 100 feet from waters of the State. o Remove plant material, debris, or soils during construction that are inadvertently deposited where they may pass into wetlands to reduce the transport of sediment or debris laden materials into waters of the State. o Avoid construction activities in saturated or ponded areas during the wet season (spring and winter). Where such activities are unavoidable, placement of temporary foot bridges shall be used as appropriate to minimize impacts. Unavoidable disturbance of such areas in the temporary impact zones will be returned to preexisting grade upon project completion.	During construction	Construction log	Construction Manager and Reserve Manager	
o Stabilize exposed slopes and stream banks immediately on completion of construction activities. Disturbed ground not designated as trails shall be planted with Pickleweed (common) Sarcocornia pacifica (=Salicornia virginica), Sea blite Suaeda esteroa and Saltgrass Distichlis spicata to provide plant coverage of 80% in order to reduce the effects of erosion on the drainage system. Disturbed slopes and banks will be monitored for one year post construction to insure that plant coverage of 80% is achieved and will replant and water as needed until plants become established and self sustaining.	Post construction	Revegetation Report	DFG Reserve Manager	
These measures shall be incorporated into contract specifications and implemented by the construction contractor. Additionally, the Department shall incorporate all permit conditions into construction specifications. The resource monitors shall routinely inspect construction activities to verify that the above protective measures and permit conditions have been implemented.	Prior to and during construction	Contract documents	DFG Reserve Manager and Project engineer	

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CULTURAL RESOURCES **MITIGATION MEASURES CULT-1** Discovery of Human Remains. In the unlikely event of the discovery or recognition of any human remains, the following steps shall be taken: (1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: (A) The Orange County Coroner is contacted to determine that no investigation of the cause of death is required, and (B) If the Coroner determines the remains to be Native American: 1. The Coroner shall contact the Native American Heritage Commission within 24 hours. 2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. 3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or (2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. (A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.	During construction	Construction log And letter reports from coroner, NAHC, or cultural experts as warranted.	Construction Manager and DFG Reserve Manager	

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(B) The descendant identified fails to make a recommendation; or (C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner. These requirements shall be incorporated into the approved Plans and Specifications and compliance shall be monitored and enforced by CDFG's construction manager.	Prior to bid	Contract Documents	Project engineer and Construction manager	
GEOLOGY AND SOILS **MITIGATION MEASURES GEO-1** Soils/Geology. Prior to final approval of plans and specifications, DFG shall ensure that the bridge design conforms to the recommendations contained in the Soils Report/Geotechnical Feasibility Study prepared by a Registered Geologist or Engineer.	Prior to bid	Contract Documents	DFG engineer	
MITIGATION MEASURES GEO-2 Water Quality/National Pollutant Discharge Elimination System (NPDES) All construction activities shall comply with California's General Permit for Stormwater Discharges Associated with Construction Activity. Prior to commencement of grading or construction, DFG or its contractor shall prepare an Erosion/Sediment Control Plan for the regulation and control of pollutant run-off by using Best Management Practices (BMPs). This plan shall show all temporary and permanent erosion control devices, effective planting of graded slopes, practical accessibility for maintenance purposes and proper precautions and fences to prevent public trespass onto certain areas where impounded water may create a hazardous condition. In order to control pollutant run-off, all water quality BMPs incorporated into the project shall be designed in accordance with NPDES standards.	Prior to Construction	Written Control Plan and construction log	Construction manager and Contractor	
These requirements shall be incorporated into the approved Plans	Prior to bid and during	Contract documents	Project engineer and	

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and Specifications and compliance shall be monitored and enforced by CDFG's construction manager.	construction	and construction log	Construction manager	
MITIGATION MEASURES HAZ-1				
Hazardous Materials Contamination. Construction activities shall be halted if any indication of hazardous materials contamination is discovered and a qualified professional shall be retained to conduct an investigation and recommend the appropriate response to protect human health and the environment as well as identify the agency with oversight responsibility. Any contaminants that may be discovered shall be remediated in compliance with California environmental regulations.	During Construction	Letter Report	Construction Manager	
If project construction requires soil export, appropriate sampling shall be required prior to disposal of the excavated soil. If the soil is contaminated, it shall be properly disposed of. Land Disposal Restrictions (LDRs) may be applicable to these soils. Also, if the project requires soil import to backfill excavated areas, proper sampling shall be required to ensure that the imported soil is free of contamination.				
These requirements shall be incorporated into the approved Plans and Specifications and compliance shall be monitored and enforced by CDFG's construction manager.	Prior to bid and during construction	Contract documents and construction log	Project engineer and Construction Manager	
HYDROLOGY AND WATER QUALITY				
MITIGATION MEASURES HYD-1				
Construction Procedures. The contractor shall design and implement appropriate procedures to ensure that no construction materials fall into the channel or are washed into the channel during rainstorms. Construction plans and specifications shall include a note to this effect, which shall be enforced by the construction manager and inspector. Prior to the commencement	Prior to and during construction	Contract documents and construction log	Project engineer and Construction	

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of construction, CDFG's project manager shall meet with the contractor to review construction procedures to ensure compliance with this requirement. **ALSO SEE GEO-2** **NOISE** **MITIGATION MEASURES N-1** Construction Noise. In order to minimize construction noise impacts on adjacent properties, all construction equipment shall be equipped with proper mufflers maintained in good working order, and construction shall be limited to the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday and 9:00 a.m. through 5:00 p.m. on Saturday. These requirements shall be incorporated into the approved Plans and Specifications and compliance shall be monitored and enforced by CDFG's construction manager. **TRANSPORTATION/TRAFFIC** **MITIGATION MEASURES T-1** Parking Management Plan. Prior to commencement of construction, a parking management plan shall be prepared describing how visitor and staff parking will be controlled in the existing Warner Avenue parking lot during construction staging. The Plan shall be designed to maintain public access to the greatest extent feasible, and shall be subject to review and approval of the Ecological Reserve Manager and enforced by CDFG's construction project manager.	Prior to and during construction Prior to and during construction	Contract documents and construction log Written Plan	Manager Project engineer and Construction Manager Constractor, DFG Reserve Manager, and Construction Manager	