

## **Appendix I**

### **Mitigation Monitoring and Reporting Program**

The California Environmental Quality Act (CEQA; California Public Resources Code §21081.6) requires public agencies to adopt a monitoring and reporting program for the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. In order to ensure implementation of the mitigation measures and design features identified in the Subsequent Mitigated Negative Declaration (MND), SANDAG shall adopt a Mitigation Monitoring and Reporting Program (MMRP). This MMRP has been prepared in accordance with the proposed San Marcos-to-Vista segment of the Inland Rail Trail Project, the environmental effects of which have been evaluated in a Subsequent MND prepared in compliance with CEQA and the CEQA Guidelines.

This MMRP identifies the mitigation measures and design features that shall be implemented by SANDAG as the responsible party and the timing of implementation. SANDAG may delegate the reporting or monitoring responsibilities identified below to another entity that accepts the delegation (such as a construction contractor). However, until the mitigation measures and design features included in the MMRP have been completed, SANDAG remains responsible for ensuring that implementation occurs in accordance with the adopted program (CEQA Guidelines §15097[a]).

Design Feature or Mitigation Measure	Timing	Responsible Party	Completed	Initials	Notes (optional)
<b>Aesthetics - Design Features</b>					
Any riparian and/or upland vegetation removal necessary in order to provide space for construction activities will be replaced. The planting palette and/or revegetation plan shall be developed in coordination with Caltrans, the City of San Marcos, City of Vista, City of Oceanside, and County of San Diego. Preference will be given towards native species. Species native to Buena Creek shall be used when revegetating Buena Creek.	Prior to construction (prepare plans) / During construction (implement)	SANDAG	<input type="checkbox"/>	_____	
If night-time work or lighting is necessary, a lighting plan shall be developed that requires project lighting to be appropriately shielded. If required, the lighting plan shall be developed by the construction contractor and submitted to SANDAG for approval prior to commencement of any work involving lighting. The project's lighting design shall, where feasible, be consistent with the corresponding City or County lighting guidelines and standards, and it will be developed in coordination with City or County staff.	Prior to construction (prepare plans) / During construction (implement)	SANDAG	<input type="checkbox"/>	_____	
Relevant design guidelines identified in City of Vista, City of San Marcos, City of Oceanside, and County of San Diego General Plans and ordinances would be incorporated into design of the proposed project where feasible, including but not limited to guidelines related to lighting, architecture, and signage. Lighting would comply with City of San Marcos, City of Vista, and County of San Diego's policies and regulations where feasible. Lighting shall be designed to minimize light pollution and glare.	Prior to construction	SANDAG	<input type="checkbox"/>	_____	
Fencing and walls will incorporate City of San Marcos, City of Vista, City of Oceanside, and County of San Diego's policies and regulations where feasible. Pursuant to City of Vista's LUCI Policy 6.6, perimeter walls within the City of Vista shall incorporate graffiti-resistant materials, construction techniques, or other techniques to minimize the potential for vandalism.	Prior to construction	SANDAG	<input type="checkbox"/>	_____	

Design Feature or Mitigation Measure	Timing	Responsible Party	Completed	Initials	Notes (optional)
For any slopes greater than 15 percent, the project shall be designed to minimize grading requirements by conforming to natural contours whenever feasible. Slopes shall be landscaped with natural vegetation to stabilize slopes, reduce erosion, and enhance visual appearance.	Prior to construction	SANDAG	<input type="checkbox"/>	_____	
Where feasible, SANDAG and the construction contractor shall preserve healthy mature trees (defined as trees equal to or larger than 15-inch circumference or approximately 5-inch diameter at breast height); where removal is necessary, trees shall be replaced at a ratio of 1:1 (this measure also is identified as mitigation measure BIO-17 for biological resources).	Prior to construction (prepare plans) / During construction (implement)	SANDAG	<input type="checkbox"/>	_____	
<b>Biological Resources – Design Features</b>					
Except for areas within 500 feet of thread-leaved brodiaea Critical Habitat and Buena Creek, landscaping shall utilize a native drought tolerant plant palette to the maximum extent practicable and shall not include species considered invasive by the California Invasive Plant Council (see mitigation measures BIO-2 and BIO-16 for landscaping requirements within 500 feet of thread-leaved brodiaea Critical Habitat and Buena Creek, respectively).	Prior to construction (prepare plans) / During construction (implement)	SANDAG	<input type="checkbox"/>	_____	
Except what is permitted to eradicate arundo, the contractor shall not apply rodenticides or herbicides in the project area during construction activities.	During construction	SANDAG	<input type="checkbox"/>	_____	
The contractor shall dispose of all food-related trash in closed containers, and shall remove it from the project area each day during the construction period. Construction personnel shall not feed or otherwise attract wildlife to the project area.	During construction	SANDAG	<input type="checkbox"/>	_____	
In the unlikely event a worker inadvertently injures or kills a special-status species or finds one dead, injured, or entrapped, the Resident Engineer shall immediately report the incident to the project biologist.	During construction	SANDAG	<input type="checkbox"/>	_____	
Project-related vehicles and construction equipment shall be restricted to designated work areas by the Resident Engineer.	During construction	SANDAG	<input type="checkbox"/>	_____	

Design Feature or Mitigation Measure	Timing	Responsible Party	Completed	Initials	Notes (optional)
If any wildlife is encountered during construction, said wildlife shall be allowed to leave the construction area unharmed.	During construction	SANDAG	<input type="checkbox"/>	_____	
Prior to arrival at the project site and prior to leaving the project site, the construction contractor shall clean all construction equipment that may contain invasive plants or seeds to reduce the spreading of noxious weeds.	During construction	SANDAG	<input type="checkbox"/>	_____	
<b>Biological Resources – Mitigation Measures</b>					
<b>BIO-1:</b> Prior to initiating construction, the construction contractor shall install ESA fencing along the project limits to avoid encroachment into thread-leaved brodiaea Critical Habitat, and to avoid identified thread-leaved brodiaea specimens. During the construction period, the project biologist shall inspect the construction limits monthly adjacent to thread-leaved brodiaea Critical Habitat areas to ensure sensitive locations remain undisturbed.	Prior to construction / During construction	SANDAG	<input type="checkbox"/>	_____	
<b>BIO-2:</b> SANDAG shall ensure that within 500 feet of thread-leaved brodiaea Critical Habitat, any landscaping installed as part of the project shall consist of a biologist approved plant palette from native, locally adapted species. Any landscaping for the remainder of the project shall utilize a native drought tolerant plant palette to the maximum extent practicable and shall not include species considered invasive by the California Invasive Plant Council.	Prior to construction (prepare plans) / During construction (implement)	SANDAG	<input type="checkbox"/>	_____	
<b>BIO-3:</b> All onsite unpaved roads and off-site unpaved access roads, land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities within 500 feet of thread-leaved Critical Habitat shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.	During construction	SANDAG	<input type="checkbox"/>	_____	

Design Feature or Mitigation Measure	Timing	Responsible Party	Completed	Initials	Notes (optional)
<b>BIO-4:</b> SANDAG shall conduct environmental awareness training prior to the onset of project work in proximity to thread-leaved brodiaea Critical Habitat for construction personnel discussing thread-leaved brodiaea and its Critical Habitat.	Prior to construction	SANDAG	<input type="checkbox"/>	_____	
<b>BIO-5:</b> Where feasible, the construction contractor shall install ESA fencing with a minimum 2 foot setback of all thread-leaved brodiaea specimens prior to any ground disturbance or vegetation removal activities. The project biologist shall be present during the installation of thread-leaved brodiaea ESA fencing.	Prior to construction / During construction	SANDAG	<input type="checkbox"/>	_____	
<b>BIO-6:</b> Where installation of a minimum 2 foot setback is not feasible, SANDAG and the project biologist shall coordinate relocation of thread-leaved brodiaea specimens to a conservation area located adjacent to the project area, or at another CDFW and USFWS-approved location.	During construction	SANDAG	<input type="checkbox"/>	_____	

Design Feature or Mitigation Measure	Timing	Responsible Party	Completed	Initials	Notes (optional)
<p><b>BIO-7:</b> Where plant relocation is required, the corms shall be relocated by a licensed landscape contractor experienced in brodiaea translocation using corms and soil block or clump translocation per the following:</p> <p>During the fall dormant season (September 1 –November 30) large clumps of soil (approximately 4 square feet) containing the brodiaea corms shall be removed to a depth of 8 to 12 inches. Soil clumps shall be immediately moved to a prepared, USFWS and CDFW approved site and installed in a manner that replicates the surface elevation of the donor site. The clumps shall be carefully transported to ensure that they are not fragmented or impacted during the move. Any corms found on the margins of the blocks or which fall out during the excavation process shall be transplanted by hand.</p> <p>After installation, the spaces between the blocks shall be filled with native soils, gently compacted, and irrigated to prevent the formation of cracks or air pockets. Three inches of weed seed-free mulch shall be laid over the installed soil to prevent drying out of the corms or invasion by exotics, where appropriate. A locally native seed mix shall be applied in September 1 –December 15 to the transplantation area no more than 2 weeks after the completion of relocation activities. The seed mix shall contain species compatible with thread-leaved brodiaea and shall include species attractive to native pollinators. All relocation activities shall be monitored by the project biologist. Transplantation shall be coordinated with CDFW and USFWS prior to initiation.</p>	During construction	SANDAG	<input type="checkbox"/>	_____	

Design Feature or Mitigation Measure	Timing	Responsible Party	Completed	Initials	Notes (optional)
<p><b>BIO-8:</b> SANDAG shall use the mitigation ratios for impacts to sensitive biological habitats established in the Draft North County MSCP. The 2009 Draft North County MSCP establishes a mitigation ratio of 1:1 for all riparian forest (e.g. south coast live oak riparian forest) and freshwater marsh habitats in the Buena Creek area.</p>	Prior to construction	SANDAG	<input type="checkbox"/>	_____	
<p><b>BIO-9:</b> SANDAG and the construction contractor shall mark the Buena Creek and all associated riparian and wetland vegetation as ESA and it shall be either staked or fenced with orange snow fencing to ensure the construction areas will not encroach further than the work limits designated in the environmental permits. During the construction period, the project biologist shall inspect the construction limits monthly, or less as warranted, in proximity to Buena Creek to ensure sensitive locations remain undisturbed.</p>	Prior to construction (prepare plans) / During construction (implement)	SANDAG	<input type="checkbox"/>	_____	
<p><b>BIO-10:</b> At construction completion, SANDAG shall ensure that the portion of Buena Creek within the project impact area will be revegetated with native riparian trees and understory. Species selected for the revegetation shall be selected from reference sites located along Buena Creek.</p>	During construction / After construction	SANDAG	<input type="checkbox"/>	_____	
<p><b>BIO-11:</b> The construction contractor shall avoid downing of riparian vegetation during the yellow warbler breeding season (April 1st-September 1st). Should work in proximity to Buena Creek occur within the nesting season, the project biologist shall conduct preconstruction nesting surveys within 100 feet of project construction limits for yellow warbler within 2 weeks before construction clearing and grubbing activities in proximity to Buena Creek begin.</p>	During construction	SANDAG	<input type="checkbox"/>	_____	
<p><b>BIO-12:</b> To protect nocturnal riparian species during construction, no night work (defined as the period between one hour prior to dusk and one hour after dawn) shall be permitted within 100 feet of the Buena Creek riparian corridor.</p>	During construction	SANDAG	<input type="checkbox"/>	_____	

Design Feature or Mitigation Measure	Timing	Responsible Party	Completed	Initials	Notes (optional)
<p><b>BIO-13:</b> To minimize permanent lighting within the Buena Creek riparian corridor, all trail lighting proposed to be established within 30 feet of Buena Creek shall be shielded and directed away from the creek. Project wide, all proposed trail lighting shall be in compliance with local lighting regulations.</p>	<p>Prior to construction (prepare plans) / During construction (implement)</p>	<p>SANDAG</p>	<p><input type="checkbox"/></p>	<p>_____</p>	
<p><b>BIO-14:</b> Prior to clearing and grubbing arundo infested areas, the construction contractor shall cut all arundo approximately 1 foot from the ground and the biomass removed from the area. The stumps shall then be cut to ground level (within two to four inches of the substrate) and full strength Glyphosate Rodeo (with a surfactant), approved for use in wetlands, shall be directly applied to the entire cut surface of the stem with a paint brush, sponge, finger trigger spray bottle, backpack sprayer or similar localized herbicide delivery method within one to two minutes after stem cutting. A wetland approved surfactant shall be included in the Glyphosate Rodeo in the amount directed by label recommendations.</p> <p>Care shall be taken to avoid application to adjacent vegetation. Dye shall be added to the Glyphosate Rodeo solution to mark treated stumps and ensure full coverage. The contractor is required to complete two or more rounds of arundo eradication to ensure plant material is dead, as determined by the project biologist. Each application shall be completed at least 2 weeks apart. Contractor shall allow a minimum of 14 days after the last Glyphosate Rodeo application prior to disturbing or removing underground roots. Rhizomes and roots easily break and separate during attempts at removal. All roots, rhizomes and parts thereof shall be completely removed from the project area by hand tools, backhoe or similar equipment; at no time shall arundo or parts thereof be allowed to enter the live stream.</p>	<p>During construction</p>	<p>SANDAG</p>	<p><input type="checkbox"/></p>	<p>_____</p>	



Design Feature or Mitigation Measure	Timing	Responsible Party	Completed	Initials	Notes (optional)
<b>BIO-15:</b> If active yellow warbler nests are found within the survey area, a minimum no disturbance buffer of 100 feet shall be established as ESA by the project biologist. Exact buffer distance and sound restrictions will be established through coordination with CDFW. ESA buffer restrictions shall remain until the project biologist determines the juveniles have fledged.	During construction	SANDAG	<input type="checkbox"/>	_____	
<b>BIO-16:</b> Within 500 feet of Buena Creek, SANDAG shall ensure that all landscaping installed as part of the project shall consist of a biologist approved plant palette from native, locally adapted species.	Prior to construction (prepare plans) / During construction (implement)	SANDAG	<input type="checkbox"/>	_____	
<b>BIO-17:</b> Where feasible, SANDAG and the construction contractor shall preserve healthy mature trees (defined as trees equal to or larger than 15” in circumference or approximately 5” diameter at breast height); where removal is necessary, trees shall be replaced at a minimum ratio of 1:1.	During construction	SANDAG	<input type="checkbox"/>	_____	
<b>BIO-18:</b> Within the boundaries of the MHCP, SANDAG shall use the mitigation ratios for impacts to non-native grassland habitats established in the 2003 MHCP. The 2003 MHCP establishes a mitigation ratio of 0.5:1 for impacts to non-native grassland. As the project occurs outside the boundaries of designated focused planning areas, mitigation shall occur at an offsite location through purchase of mitigation credits at an agency approved ratio from an agency approved conservation bank, or through the purchase and permanent conservation of habitat lands inside a focused planning area. Conserved habitat may be out-of-kind, if it is shown to be a viable addition to the regional preserve system.	Prior to construction	SANDAG	<input type="checkbox"/>	_____	

Design Feature or Mitigation Measure	Timing	Responsible Party	Completed	Initials	Notes (optional)
<b>Cultural Resources</b>					
<p><b>CUL-1:</b> Prior to the start of construction, a qualified archaeologist will be retained with an on call contract and the resident engineer will ensure that emergency contact information is retained at the job site throughout construction. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find and determine if additional cultural or Native American consultation is necessary.</p>	<p>Prior to construction / During construction</p>	<p>SANDAG</p>	<p><input type="checkbox"/></p>	<p>_____</p>	
<b>Hazards and Hazardous Materials</b>					
<p><b>HAZ-1:</b> A brush management plan shall be incorporated during project construction. Construction within areas of dense foliage during dry conditions should be avoided. In cases where avoidance is not feasible, necessary brush fire prevention and management practices shall be incorporated. Specifics of the brush management program will be determined as site plans for the project are finalized.</p>	<p>Prior to construction (prepare plans) / During construction (implement)</p>	<p>SANDAG</p>	<p><input type="checkbox"/></p>	<p>_____</p>	
<b>Hydrology and Water Quality</b>					
<p><b>WQ-1:</b> Due to regulation of these water bodies by the U.S. Army Corps of Engineers and California Department of Fish and Wildlife, a nationwide permit pursuant to Section 404 of the Clean Water Act and Streambed Alteration Agreement pursuant to Section 1602 of the Fish and Game Code would be obtained. In addition, SANDAG would obtain water quality certification pursuant to Section 401 of the Clean Water Act from the San Diego Regional Water Quality Control Board.</p> <p>Mitigation for any impacts to jurisdictional waters or wetlands not covered by the mitigation credits purchased by City of San Marcos in 2001 (as determined through consultation among SANDAG, USACE and CDFW) shall be provided either through the purchase</p>	<p>Prior to construction</p>	<p>SANDAG</p>	<p><input type="checkbox"/></p>	<p>_____</p>	

Design Feature or Mitigation Measure	Timing	Responsible Party	Completed	Initials	Notes (optional)
<p>of credits at an existing authorized mitigation bank or in lieu fee program, or through project-specific mitigation. As explained in BIO-11, SANDAG shall perform on-site restoration for the less than 0.01 acre of permanent impact to freshwater marsh habitat anticipated due to the bridge proposed over Buena Creek, or otherwise perform mitigation as required by USACE and CDFW permit conditions. A minimum on-site mitigation/restoration ratio of 1:1 shall be provided for temporary impacts, unless USACE and CDFW determine otherwise higher ratio.</p> <p>A mitigation and monitoring plan completed per the requirements of USACE and CDFW shall be prepared for all impacts to jurisdictional waters. This plan shall include details regarding site appropriateness, preparation (e.g., grading), recontouring, planting specifications (including seed mixes and plant palettes), and irrigation design (if determined necessary), as well as maintenance and monitoring procedures (including monitoring period and reporting). Impacts to other sensitive vegetation communities that may occur as the result of implementing this measure include direct loss and indirect effects related to changes in hydrology and species composition. The plan shall also identify locally appropriate plant species for the mitigation/restoration plan, and outline yearly success criteria and remedial measures should the mitigation effort fall short of the success criteria. Success criteria shall be sufficient to create self-sustaining habitat providing the functions and values required to offset those lost to the impacts and meet the requirements of all applicable agency and adopted plans, ordinances, and policies. Remedial measures typically include, but are not limited to, replanting, reseeding, grading adjustments, supplemental irrigation, access control, increased weed control, and extended maintenance and monitoring periods.</p>					
<p><b>WQ-2:</b> Appropriate erosion control measures would be installed such as hay bales, sand bags, and silt curtains.</p>	During construction	SANDAG	<input type="checkbox"/>	_____	

Design Feature or Mitigation Measure	Timing	Responsible Party	Completed	Initials	Notes (optional)
<b>WQ-3:</b> Buffer zones would be established at the down gradient boundaries of disturbed areas to prevent wash-off into channels. Buffer zones may be vegetated (grass) or hay baled. Buffer zones serve to reduce overland flow velocities and trap eroded sediment that would otherwise migrate toward drainage channels.	During construction	SANDAG	<input type="checkbox"/>	_____	
<b>WQ-4:</b> If necessary, siltation basins would be constructed in drainage channels to capture sediment.	Prior to construction (prepare plans) / During construction (implement)	SANDAG	<input type="checkbox"/>	_____	
<b>WQ-5:</b> Storm water management plans, as required by state and local regulation for construction sites shall be prepared.	Prior to construction (prepare plans) / During construction (implement)	SANDAG	<input type="checkbox"/>	_____	
<b>WQ-6:</b> Right-of-way bridge piers and culverts constructed within channels would be designed to minimize disruption of flow regimes, channel scour and downstream deposition of sediment.	Prior to construction (prepare plans) / During construction (implement)	SANDAG	<input type="checkbox"/>	_____	
<b>Noise</b>					
<b>NOI-1:</b> All construction shall occur during times allowed by the noise ordinance of each local jurisdiction: <ul style="list-style-type: none"> <li>• <i>City of Vista:</i> Monday through Saturday, 7 a.m. to 7 p.m.</li> <li>• <i>City of San Marcos:</i> Monday through Friday, 7:00 a.m. to 6:00 p.m.; Saturday, 8:00 a.m. 5:00 p.m.</li> <li>• <i>City of Oceanside:</i> Monday through Friday, 7:00 a.m. to 6:00 p.m.</li> <li>• <i>County of San Diego:</i> Monday through Friday, 7 a.m. to 7 p.m. If weekend construction is required for the portion in unincorporated County of San Diego, SANDAG would be required to obtain prior approval from the County Department of Public Works.</li> </ul>	During construction	SANDAG	<input type="checkbox"/>	_____	