

MITIGATION MONITORING AND REPORTING PROGRAM
FOR
TIJUANA RIVER VALLEY REGIONAL PARK TRAILS AND HABITAT
ENHANCEMENT PROJECT

State Clearinghouse # 2004091159

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**MITIGATION MONITORING AND REPORTING PROGRAM
TIJUANA RIVER VALLEY REGIONAL PARK TRAILS AND HABITAT ENHANCEMENT
PROJECT**

Mitigation measures have been identified in the Final Environmental Impact Report for the Tijuana River Valley Regional Park Trails and Habitat Enhancement Project to reduce or eliminate potential environmental impacts. The County of San Diego (County) is required to implement all adopted mitigation measures. In order to ensure compliance, the following mitigation monitoring and reporting program has been formulated. This program consists of a checklist followed by a detailed description of the mitigation measures.

These improvements will benefit the public by creating, enhancing and restoring natural habitats within Tijuana River Valley Regional Park while optimizing the recreational use of the site and accommodating ongoing border patrol activities.

A mitigation checklist has been prepared for the project. Table 1 summarizes the mitigation measures for the Tijuana River Valley Regional Park Trails and Habitat Enhancement Project. Information contained within the checklist clearly identifies the mitigation measure, delineates the monitoring schedule, and defines the conditions required to verify compliance. Following is an explanation of the eight columns that constitute the checklist.

Column 1 Impact: An inventory of each impact is numbered and provided with a brief description.

Column 2 Mitigation Measure: Each measure is numbered and provided with a brief description of mitigation to reduce the impact to a below a level of significance.

Column 3 Monitoring Activity: Identifies the County department or other public agency that is responsible for determining compliance with the mitigation measure and for informing DPW about compliance.

Column 4 Timing: The monitoring schedule depends upon the progression of the overall project. Therefore, specific dates are not used within the "Timing" column. Instead, scheduling describes a logical succession of events (e.g., prior to construction, annual) and if necessary, delineates a follow-up program.

Column 5 Responsibility: Party responsible for ensuring the mitigation measure is completed within the correct timing period.

Exhibit 4: Mitigation Monitoring and Reporting Program

- Column 6** **Initial:** The monitor verifies completion of the particular mitigation measure by initialing and dating in this column. Where the "Timing" column indicates annual or other ongoing mitigation measures, verification of compliance may not occur until completion of the project. Provision of all required signatures within the Verification of Compliance column signifies conclusion of the monitoring program.
- Column 7** **Date:** The monitor dates the completion of the mitigation measure, which is the same date that Column 6 is initialed.
- Column 8** **Remarks:** The status of ongoing and cumulative mitigation measures is to be documented during each visit. The space provided for remarks is obviously too small for the inclusion of the remarks. It is intended that this space be used to indicate whether there are specific comments pertaining to the status of the mitigation measure. If there are additional comments they are to be attached to the checklist. Progress reports are required for the revegetation program. Information provided within progress reports will be helpful in the development of future mitigation programs.

This program is to be adopted by the lead and responsible agencies upon formulation of findings in order to comply with the requirements set forth by Assembly Bill 3180 (Public Resources Code Section 21081.6).

Exhibit 4: Mitigation Monitoring and Reporting Program

Impact	Mitigation Measures	Monitoring Activity	Timing	Responsibility	Initial	Date	Remarks
<p><u>Cultural Resources</u> Significant impacts to sensitive cultural resources from ground disturbing trail restoration activities and trail widening construction activities</p>	<ul style="list-style-type: none"> • Contract with a County certified archaeologist (and Native American Observer) to implement a flagging, grading monitoring and data recovery program. This program shall include, but not be limited to, the following actions: <ul style="list-style-type: none"> ○ Prior to restoration of the trails within Sites (SDI-8595, SDI-8597, SDI-8602, SDI-8603, SDI-8604, SDI-8773, SDI-11097, SDI-11099, SDI-11945, SDI-11946, SDI-15099, TR-8, and the New Trees Site), a County certified archaeologist will flag the site boundaries in addition to a 10 meter buffer, to ensure that the sites will not be impacted by ground disturbing activities. Ripping of the trail surface to agitate the soil or any other ground disturbing activities in the flagged areas will be prevented and impacts to these resources avoided. When ground disturbing activities approach the buffer areas an archaeological monitor will be present to observe these activities. Fencing and sign placement is also limited to areas outside the buffer zone. ○ Prior to widening the trails in the location of Sites SDI-10967 and SDI-10487 a County certified archaeologist will re-survey the site, flag the site boundaries based on the surface expression of artifacts and an additional 20 meter buffer. Not trail widening or ground disturbing activities will occur within the buffer areas unless a significance evaluation of the site takes place beforehand. ○ With respect to SDI-4933, it is recommended that during trail widening, an archaeological monitor should be present to observe the work on the 211-foot long trail segment that is to be widened to ensure that impact do not occur. ○ The County certified archaeologist/historian (and Native 	<p>County of San Diego Department of Parks and Recreation (DPR)</p> <p>DPR</p> <p>DPR</p> <p>DPR</p>	<p>Before and during construction</p> <p>Before and during construction</p> <p>Before and during construction</p> <p>Before and during construction</p>	<p>DPR Project Archeologist</p> <p>DPR Project Archeologist</p> <p>DPR Project Archeologist</p> <p>DPR Project Archeologist</p>			

Exhibit 4: Mitigation Monitoring and Reporting Program

Impact	Mitigation Measures	Monitoring Activity	Timing	Responsibility	Initial	Date	Remarks
	<ul style="list-style-type: none"> ○ In the event that previously unidentified potentially significant cultural resources are discovered, the archaeologist shall have the authority to divert or temporarily halt ground disturbance operation in the area of discovery to allow evaluation of potentially significant cultural resources. The archaeologist shall contact the County Archaeologist at the time of discovery. The archaeologist, in consultation with County staff archaeologist, shall determine the significance of the discovered resources. The County Archaeologist must concur with the evaluation before construction activities will be allowed to resume in the affected area. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the consulting archaeologist and approved by the County Archaeologist, then carried out using professional archaeological methods. If any human bones are discovered, the County Coroner shall be contacted. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the Native American Heritage Commission, shall be contacted in order to determine proper treatment and disposition of the remains. 	DPR	During construction	DPR Project Archaeologist			

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Impact	Mitigation Measures	Monitoring Activity	Timing	Responsibility	Initial	Date	Remarks
	<ul style="list-style-type: none"> ○ Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods. The archaeological monitor(s) (and Native American Observer) shall determine the amount of material to be recovered for an adequate artifact sample for analysis. ○ In the event that previously unidentified cultural resources are discovered, all cultural material collected during the grading monitoring program shall be processed and curated according to current professional repository standards. The collections and associated records shall be transferred, including title, to an appropriate curation facility within San Diego County, to be accompanied by payment of the fees necessary for permanent curation. ○ In the event that previously unidentified cultural resources are discovered, a report documenting the field and analysis results and interpreting the artifact and research data within the research context shall be completed. The report will include Department of Parks and Recreation Primary and Archaeological Site forms. 	DPR	During construction	DPR Project Archaeologist			
		DPR	During and after construction	DPR Project Archaeologist			
		DPR	After construction	DPR Project Archaeologist			

Exhibit 4: Mitigation Monitoring and Reporting Program

Impact	Mitigation Measures	Monitoring Activity	Timing	Responsibility	Initial	Date	Remarks
<p>Significant impacts to paleontological resources from ground disturbing trail restoration activities and trail widening construction activities</p>	<ul style="list-style-type: none"> The County certified paleontologist shall attend the pre-grading meeting with the contractors to explain and coordinate the requirements of the monitoring program to evaluate the presence of fossils. The County shall approve all persons involved in the monitoring program prior to any pre-construction meetings. 	DPR	Before construction	DPR Project Paleontologist			
	<ul style="list-style-type: none"> Paleontology monitor(s) shall be onsite full-time to perform periodic inspections of the excavations. The frequency of inspections will depend on the rate of excavation, the materials excavated, and the presence and abundance of paleontological resources. 	DPR	During construction	DPR Project Paleontologist			
	<ul style="list-style-type: none"> In the event that previously unidentified potentially significant paleontological resources are discovered, the paleontologist shall have the authority to divert or temporarily halt ground disturbance operation in the area of discovery until such time that the sensitivity of the resource can be determined and the appropriate mitigation implemented. 	DPR	During construction	DPR Project Paleontologist			
	<ul style="list-style-type: none"> In the event that previously unidentified paleontological resources are discovered, a report documenting the field and analysis results and interpreting the research data within the research context shall be completed and submitted to the satisfaction of the County prior to the issuance of any building permits. 	DPR	During and after construction	DPR Project Paleontologist			
	<ul style="list-style-type: none"> In the event that previously unidentified paleontological resources are discovered during the grading monitoring program, fossils collected, along with copies of field notes, photos, and maps shall be deposited in a scientific institution such as the San Diego Natural History Museum. 	DPR	During and after construction	DPR Project Paleontologist			

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Impact	Mitigation Measures	Monitoring Activity	Timing	Responsibility	Initial	Date	Remarks
	<ul style="list-style-type: none"> In the event that no paleontological resources are discovered, a brief letter to that effect shall be sent to the County by the consulting paleontologist that the grading monitoring activities have been completed. 	DPR	After construction	DPR Project Paleontologist			
Land Use and Planning							
Significant impact from the Eastern Staging Area not having the required 100 foot wetland buffer required in the Coastal Zone.	<ul style="list-style-type: none"> The County will construct fencing between the existing wetland area and the proposed staging area. 	DPR	During construction	DPR Project Manager			
	<ul style="list-style-type: none"> The Eastern Staging Area will be included in the County's cowbird trapping, manure management, and regular ranger patrols. No lighting will be allowed in this area. The nighttime use of the facility will be prohibited. 	DPR DPR DPR	During and after construction After construction After Construction	DPR Project Manager and Biologist DPR Project Manager DPR Project Manager			
Biological Resources							
Significant direct impact to 0.08 acre of riparian forest, 0.29 acre of riparian scrub, 0.17 acre of uplands (non-native grasslands) from trail widening	<ul style="list-style-type: none"> Impacts from trail widening and construction of new trail segments will be more than offset and mitigated by the 60 acre habitat restoration site, by the narrowing of trail and by the revegetation of existing dirt paths by encouraging native species to establish, and by controlling exotics and invasive plants. 	DPR	During and after construction	DPR Project Biologist			

Exhibit 4: Mitigation Monitoring and Reporting Program

Impact	Mitigation Measures	Monitoring Activity	Timing	Responsibility	Initial	Date	Remarks
	<ul style="list-style-type: none"> <li>• The County will draft a formal long-term habitat management plan for the TRVRP, detailing management responsibilities and area-specific management directives, including a regular cowbird trapping program; manure removal program; sensitive species monitoring program as directed by the MSCP; regular ranger patrols; restoration as directed by the MSCP; and recreational user education. <li>• Areas that are proposed to be closed and are adjacent to coastal sage scrub, maritime chaparral, and riparian habitat should be managed by active prescriptive management and restoration to encourage the establishment of natives and prevent the re-invasion of noxious plants in sensitive riparian and upland habitats. Closed areas that traverse non-native grassland, fields, or row crop vegetation communities could be passively managed. <li>• Recommended species for the restoration of closed areas and the rehabilitation of habitats on the mesa's include: California sagebrush (<i>Artemisia californica</i>), California buckwheat (<i>Erigonum fasciculatum</i>), laurel sumac (<i>Malosma laurina</i>), lemonade berry (<i>Rhus integrifolia</i>), toyon (<i>Heteromeles arbutifolia</i>), and white sage (<i>Salvia apiana</i>). San Diego County Viguiera (<i>Viguiera laciniata</i>) should be added to the planting palette at appropriate locations on south facing slopes of both mesas and bladderpod (<i>Isomeris arborea</i>) should be added to restored areas in the maritime succulent shrub community on the southwest face of Spooner's Mesa. Scarifying compacted mesa trails may be required. Biological barriers such as cacti and thorny plants could be used as entrance points. 	<p>DPR</p> <p>DPR</p> <p>DPR</p>	<p>Before construction</p> <p>During and after construction</p> <p>During construction</p>	<p>DPR Project Manager and Biologist</p> <p>DPR Project Manager and Biologist</p> <p>DPR Project Manager and Biologist</p>			

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Impact	Mitigation Measures	Monitoring Activity	Timing	Responsibility	Initial	Date	Remarks
	<ul style="list-style-type: none"> • Closed areas on top of the mesa should be restored in the future, requiring decompaction and planting with upland scrub and grassland species. A weed abatement program to curtail garland chrysanthemum propagation would be needed. Additional plants to be added to the palette for restoration of the mesas may include coast goldenbush (<i>Isocoma menziesii</i>), rattleweed (<i>Astragalus trichopodus</i>), golden tarweed (<i>Hemizonia fasciculata</i>), wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>), golden-spined cereus (<i>Bergerocactus emoryi</i>), and deerweed (<i>Lotus scoparius</i>). Native xeric grasses such as melic grass (<i>Melica imperfecta</i>) and purple needlegrass (<i>Nasella pulchra</i>), should also be included in the seed mix for the mesa tops. • A qualified biologist will delineate the boundaries of the project footprint with orange snow fencing to avoid surface disturbance to the surrounding areas. Movement of vehicles and equipment will be confined within these delineated areas. The limits of the project footprint will be clearly delineated upstream and downstream of the project footprint. • Prior to any on site construction work, the limits of the Project Impact Area (including access and staging) will be surveyed, staked, and fenced. • Jurisdictional wetlands and sensitive habitats should be protected from construction activities using silt fencing and orange snow fencing. If trail widening and associated project components in the floodplain or in riparian wetlands require dredging or filling of wetlands or seasonal streambeds, permits from ACOE, CDFG and RWQCB will be necessary. • A biological monitor (qualified biologist) will be present to monitor and enforce environmental protection measures, including the installation and maintenance of BMPs, maintenance of fences, and all construction-related provisions identified in this document to minimize and mitigate impacts. 	DPR	After construction	DPR Project Manager and Biologist			
		DPR	Before construction	DPR Project Biologist			
		DPR	Before construction	DPR Project Biologist			
		DPR	Before and during construction	DPR Project Biologist			
		DPR	During Construction	DPR Project Biologist			

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Impact	Mitigation Measures	Monitoring Activity	Timing	Responsibility	Initial	Date	Remarks
<p>Indirect impacts caused by the construction related noise above 60 decibels to sensitive birds species including the least Bell's vireo, southwestern willow flycatcher, light-footed clapper rail, and the coastal California gnatcatcher</p>	<ul style="list-style-type: none"> Prior to construction, focused surveys pursuant to USFWS protocols will be performed for all sensitive riparian and upland bird species, including the least Bell's vireo, southwestern willow flycatcher, light-footed clapper rail, and California gnatcatcher. Construction and vegetation clearing will take place outside the breeding season of the respective bird species, but protection of occupied habitat should be provided during construction. 	DPR	Before construction	DPR Project Biologist			
	<ul style="list-style-type: none"> A biological monitor (qualified biologist) will be present to monitor and enforce environmental protection measures, including the installation and maintenance of BMPs, maintenance of fences, and all construction-related provisions identified in this document to minimize and mitigate impacts. 	DPR	During construction	DPR Project Biologist			
	<ul style="list-style-type: none"> To meet the protection measures of the Migratory Bird Treaty Act, construction activities will be conducted outside of the bird breeding season (February 1 – September 15) whenever feasible. However, if such activities must occur within the breeding season, a qualified biologist will conduct a preconstruction survey of the project site and surrounding habitat to determine if there are active nests including raptors and ground nesting birds within the project area. The survey should begin not more than three days prior to the beginning of construction activities. It is recommended that if an active nest is observed in the Project area, a 300 foot buffer will be established between the construction activities (clearing, grubbing, building, etc.) and the nest so that nesting activities are not interrupted, and the buffers should be in effect as long as construction is occurring and/or until the nest is no longer active. 	DPR	Before and During construction	DPR Project Biologist			
	<ul style="list-style-type: none"> Personnel will be trained prior to the action by experienced biologists. All employees that will work on the project will be educated and instructed of the following: to limit and restrict their activities, vehicle and equipment use, and construction materials to the 	DPR	Before construction	DPR Project Manager and Biologist			

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	<p>designated construction/staging areas and routes of travel. Impact areas will be the minimal area necessary to complete the project.</p> <ul style="list-style-type: none"> The existing and ongoing brown-headed cowbird-trapping program has been very successful, along with riparian habitat restoration, in increasing the number of nesting vireos in TRVRP and should be continued. However, brown-headed cowbirds are attracted to manure as a food source for seeds, larvae and the insects typically associated with manure. Continuation of the existing successful trapping program and implementation of a manure management education program by equestrian user groups will minimize this potential impact. A manure management program is also recommended to reduce the potential introduction of exotic species from seeds carried in the manure. The County should continue to coordinate efforts with TSNWR, Border Field State Park, and the Tijuana River Valley Equestrian Association (TRVEA) to educate horse stable owners and equestrian users in proper manure management to minimize nuisance attraction of cowbirds. This would help reduce the annual effort required for the cowbird trapping program. 	<p>DPR</p>	<p>Before and after construction</p>	<p>DPR Project Biologist</p>			
		<p>DPR</p>	<p>Before and after construction</p>	<p>DPR Project Manager</p>			

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Impact	Mitigation Measures	Monitoring Activity	Timing	Responsibility	Initial	Date	Remarks
<p>Significant direct impacts to 0.38 acre of mulefat scrub, 0.06 acre of disturbed southern cottonwood willow riparian forest, and 0.001 acre of southern willow scrub habitats from the implementation of the eastern trailhead staging area.</p>	<ul style="list-style-type: none"> Mule fat scrub at the eastern trailhead staging area should be protected with exclusionary fencing and trailhead development confined to the highest two thirds (elevation) of the site. 	DPR	Before and during construction	DPR Project Manager and Biologist			
	<ul style="list-style-type: none"> Native landscaping and interpretive signage at the trailheads are recommended. 	DPR	After construction	DPR Project Manager			
	<ul style="list-style-type: none"> Areas adjacent to core habitats and sensitive riparian and upland vegetation communities should be buffered from recreational use through the planting of transitional vegetation adjacent to and outside of the sensitive vegetation communities, fencing, and signage. Active ranger patrols should provide education of trail users and should enforce environmental protection regulation. 	DPR	During and after construction	DPR Project Manager and Biologist			
	<ul style="list-style-type: none"> On the south bank of the river near the location of the proposed bridge, there is a large black willow, greater than 10 inches in diameter and approximately 60 feet tall, on the west bank. This willow and its large branch, which would arc about 15-20 high over the bridge, will need to be protected or well staked with exclusionary fencing. The giant reed that has to be removed to construct the bridge supports would be cut near the base and completely removed and disposed of properly. AquaMaster or a similar approved herbicide would be sprayed or painted immediately on the cut bases. Monitoring is recommended to identify new shoots that may need to be treated. 	DPR	Before and during construction	DPR Project Manager and Biologist			
	<ul style="list-style-type: none"> Sandbar willow and/or arroyo willow cuttings, mugwort, California blackberry (<i>Rubus ursinus</i>) and beardless wild ryegrass (<i>Leymus tritoides</i>) should be planted to stabilize the recontoured riverbank after bridge placement activities are complete. 	DPR	After construction	DPR Project Manager and Biologist			

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	<ul style="list-style-type: none"> • Personnel will be trained prior to the action by experienced biologists. All employees that will work on the project will be educated and instructed of the following: to limit and restrict their activities, vehicle and equipment use, and construction materials to the designated construction/staging areas and routes of travel. Impact areas will be the minimal area necessary to complete the project. • Prior to any on site construction work, the limits of the Project Impact Area (including access and staging) will be surveyed, staked, and fenced. • A qualified biologist will delineate the boundaries of the project footprint with orange snow fencing to avoid surface disturbance to the surrounding areas. Movement of vehicles and equipment will be confined within these delineated areas. The limits of the project footprint will be clearly delineated upstream and downstream of the project footprint. • Jurisdictional wetlands and sensitive habitats should be protected from construction activities using silt fencing and orange snow fencing. If trail widening and associated project components in the floodplain or in riparian wetlands require dredging or filling of wetlands or seasonal streambeds, permits from ACOE, CDFG and RWQCB will be necessary. 	DPR	Before construction	DPR Project Manager and Biologist			
		DPR	Before construction	DPR Project Manager and Biologist			
		DPR	Before construction	DPR Project Biologist			
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Impact	Mitigation Measures	Monitoring Activity	Timing	Responsibility	Initial	Date	Remarks
Air Quality							
Temporary impacts from construction emissions	<ul style="list-style-type: none"> • On-road trucks and other mobile equipment should be properly tuned and maintained to manufactures" specifications to ensure minimum emissions under normal operations • Apply water to unstabilized disturbed areas and/or unpaved roadways in sufficient quantities and frequency to maintain a stabilized surface. • All clearing and grading activities should be ceased during periods of high winds (greater than 20 mph averaged over 1hr). 	DPR	Before and during construction	DPR Project Manager			
		DPR	During Construction	DPR Project Manager			
		DPR	During Construction	DPR Project Manager			
Temporary impacts from grading activities	<ul style="list-style-type: none"> • The County shall prepare a Stormwater Pollution Prevention Plan (SWPPP) for the Proposed Project to include the 60-acre habitat restoration area, active and passive restoration areas, recreational trail bridge and eastern staging area. The SWPPP will establish BMP's to prevent and eliminate release of sediments (turbidity) from runoff of disturbed locations into the Tijuana River, local drains, culverts, waterways, and/or channels. • An Erosion Control Plan shall be prepared for the Proposed Project to identify specific measures to be implemented to reduce soil loss and water quality impacts. The Erosion Control Plan will include, at a minimum: <ul style="list-style-type: none"> ○ Confine all vehicular traffic associated with construction to designated rights-of-way, material yards, and access roads; ○ Limit disturbance of soils and vegetation removal to the minimum area necessary for access and construction; ○ Graded areas (i.e., the eastern staging area) should be sloped to sheet flow or bermed (water bars), where possible, to reduce concentrated surface water flows 	DPR	Before Construction	DPR Project Manager			
		DPR	Before construction	DPR Project Manager			

