

Buena Vista Water Storage District

Northern Area Project

MITIGATION MONITORING AND REPORTING PROGRAM

The Mitigation Monitoring and Reporting Program (MMRP) is a CEQA-required component of the Mitigated Negative Declaration (MND) process for the project. The results of the environmental analyses, including proposed mitigation measures, are documented in the Final MND. CEQA requires that agencies adopting MNDs take affirmative steps to determine that approved mitigation measures are implemented subsequent to project approval. As part of the CEQA environmental review procedures, Section 21081.6 requires a public agency to adopt a monitoring and reporting program to ensure efficacy and enforceability of any mitigation measures applied to a proposed project. The lead agency must adopt an MMRP for mitigation measures incorporated into the project or proposed as conditions of approval. The MMRP must be designed to ensure compliance during project implementation. As stated in Section 21081.6(a)(1):

The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead agency or a responsible agency, prepare and submit a proposed reporting or monitoring program.

Table 1 is the final MMRP matrix. The table lists each of the mitigation measures proposed in the Final MND and specifies the agency responsible for implementation of the mitigation measure and the time period for the mitigation measure.

Table 1. Mitigation Monitoring and Reporting Program, Northern Area Project

Potential Environmental Impact	Mitigation Measure	Responsible Agency	Timing
Air Quality			
Particulate Matter 10 emissions from ground disturbance during construction.	AQ-1 The BVWSD will develop a Dust Control Plan as prescribed and approved by the San Joaquin Valley Air Pollution Control Board to minimize and control fugitive dust during construction.	BVWSD and San Joaquin Valley Air Pollution Control Board	Prior to and during construction
Biological			
Several special status wildlife species have some potential, albeit low, to occur in the proposed project site. The occurrence of special status animal species cannot be discounted. There is potential for these species to occasionally pass through and/or to forage portions of the project site.	BIO 1- An Environmental Awareness Program will be presented to all personnel working in the field on the proposed project site. The program will consist of a brief presentation in which biologists knowledgeable of endangered species biology and legislative protection explain endangered species concerns. The program will include a discussion of special status plants and sensitive wildlife species. Species biology, habitat needs, status under the Endangered Species Act, and measures being incorporated for the protection of these species and their habitats will also be discussed.	BVWSD	Prior to and during construction
	BIO 2- As close to the beginning of project activities as possible, but not more than 14 days prior, a qualified biologist will conduct a final pre-construction biological survey of the proposed project site and buffer areas to verify that no special status species have become established in the project site or buffer areas.	BVWSD	Prior to construction
	BIO 3- Project site boundaries will be clearly delineated by stakes and/or flagging. Project activities are restricted to the project site to minimize inadvertent degradation or loss of adjacent lands during project construction.	BVWSD	Prior to construction

Potential Environmental Impact	Mitigation Measure	Responsible Agency	Timing
	BIO 4 -All small mammal burrows that may serve as potential refugia for special-status species will be avoided by 50 feet during all project activities.	BVWSD	During project construction
	BIO 5 - Off-road traffic outside of designated project site will be prohibited.	BVWSD	During project construction
	BIO 6 - Project-related traffic will observe a 10 mph speed limit in the project site except on county roads and state and federal highways to avoid impacts to special status and common wildlife species.	BVWSD	During project construction
	BIO 7 - When possible project activities will be scheduled to avoid evening hours to minimize potential impacts to special status wildlife species that are active in the nighttime.	BVWSD	During project construction
	BIO 8 - Hazardous materials, fuels, lubricants, and solvents that spill accidentally during project-related activities will be cleaned up and removed from the project as soon as possible according to applicable federal, state and local regulations.	BVWSD	During project construction
	BIO 9 - All excavated steep-walled holes or trenches in excess of three (3) feet in depth will be provided with one or more escape ramps constructed of earth fill to prevent entrapment of endangered species or other animals. Ramps will be located at no greater than 1,000-foot intervals (for pipelines etc.) and at not less than 45-degree angles. Trenches will be inspected for entrapped wildlife each morning prior to onset of project activities and immediately prior to the end of each working day. Before such holes or trenches are filled they will be inspected thoroughly for entrapped animals. Any animals discovered will be allowed to escape voluntarily without harassment before project activities related to the trench resume, or removed from the trench or hole by a qualified biologist and allowed to escape unimpeded.	BVWSD	During project construction

Potential Environmental Impact	Mitigation Measure	Responsible Agency	Timing
	<p>BIO 10 - All pipes, culverts, or similar structures stored at the proposed project site overnight having a diameter of four inches or greater will be inspected thoroughly for wildlife species before being buried, capped, or otherwise used or moved in any way. Pipes laid in trenches overnight will be capped. If during project implementation a wildlife species is discovered inside a pipe, that section of pipe will not be moved or, if necessary, moved only once to remove it from the path of project activity, until the wildlife species has escaped.</p>	BVWSD	During project construction
	<p>BIO 11 - All food-related trash items such as wrappers, cans, bottles or food scraps generated during project activities will be disposed of only in closed containers and regularly removed from the proposed project site. Food items may attract wildlife species onto the proposed project site, consequently exposing such animals to increased risk of injury or mortality. No deliberate feeding of wildlife will be allowed.</p>	BVWSD	During project construction
	<p>BIO 12 - To prevent harassment or mortality of wildlife species via predation, or destruction of their dens or nests, no domestic pets will be permitted on the project site.</p>	BVWSD	During project construction

Potential Environmental Impact	Mitigation Measure	Responsible Agency	Timing
	<p>BIO 13 - The following measures (a-g) will be implemented by BVWSD to ensure protection and avoid take of blunt-nosed leopard lizards during project implementation:</p> <p>a. A final clearance survey will be conducted to ensure that no blunt-nosed leopard lizards are present and no burrows have become established in the project site and a 50 foot avoidance buffer. All burrows suitable for potential use by blunt-nosed leopard lizards will be avoided by project activities.</p> <p>b. If suitable burrows that may serve as potential refugia for blunt-nosed leopard lizard cannot be avoided within the project site and a minimum 50-foot avoidance buffer cannot be maintained, then additional surveys to detect the species will be completed in accordance with CDFW's Approved Survey Methodology For The Blunt-Nosed Leopard Lizard (CDFG 2004).</p> <p>c. If no individual blunt-nosed leopard lizards are observed and no burrows are identified within the project site and a 50-foot avoidance buffer during the final clearance survey, then project activities may proceed.</p> <p>d. When possible, conduct project activities when lizards are inactive (generally when temperatures are below 77° F and/or above 95° F).</p> <p>e. All vehicle operators will check under vehicles and equipment prior to operation, or if left idle.</p> <p>f. If a blunt-nosed leopard lizard is observed during project pre-construction or clearance surveys, the USFWS and CDFW will be notified for further guidance.</p>	BVWSD	Before and during project construction

Potential Environmental Impact	Mitigation Measure	Responsible Agency	Timing
	<p>BIO 14 - If San Joaquin kit foxes become established within the proposed project site prior to project implementation, BVWSD will implement the following measures (measures 14-19) contained in the USFWS's Standardized Recommendations For Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011):</p> <p>a. For kit fox dens within 200 feet of proposed construction area(s), protective exclusion zones will be established prior to construction by a qualified biologist. Exclusion zones will be roughly circular with a radius of the following distances measured outward from the entrance:</p> <p>Potential den 50 feet Atypical den 50 feet Known den 100 feet Natal/pupping den UWFWS and CDFW must be contacted (occupied and unoccupied)</p>	BVWSD	During project construction
	<p>BIO 15 - If a natal/pupping den is discovered within the project site or within 200 feet of the project boundaries, the USFWS and CDFW will be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the pre-construction biological surveys reveal an active natal pupping den or new information, BVWSD should contact the USFWS and CDFW immediately to obtain the necessary take authorization/permit.</p>	BVWSD to notify USFWS/CDFW	During project construction
	<p>BIO 17 - Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the USFWS. Consultation with USFWS and CDFW is required prior to any activities that may result in the loss of a potential or known natal/pupping den. Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed:</p>	BVWSD and USFWS/CDFW	During project construction

Potential Environmental Impact	Mitigation Measure	Responsible Agency	Timing
	<p>a. Known dens occurring within the footprint of the project must be monitored for three (3) consecutive days with tracking medium or an infra-red camera beam to determine the current use. If no kit fox activity is observed during this period, the den(s) should be destroyed immediately to preclude subsequent use.</p> <p>b. If kit fox activity is observed at the den(s) during this period, the dens) should be monitored for at least five (5) consecutive nights from the time of the observation to allow any resident animal to move to another den during its normal activity. Only when the den(s) are determined unoccupied may the den(s) be excavated.</p> <p>c. Destruction of the den(s) should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den(s) should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter to use the den(s) during the construction period. If at any point during excavation, a kit fox is discovered inside the den(s), the excavation activity will cease immediately and monitoring the den as described above should resume. Destruction of the den(s) may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den(s).</p>		
	<p>BIO 18 - If any kit fox den is considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities will cease and the USFWS and CDFW will be notified immediately.</p>	<p>BVWSD to notify USFWS/CDFW</p>	<p>During project construction</p>

Potential Environmental Impact	Mitigation Measure	Responsible Agency	Timing
	<p>BIO 20 - If ground disturbing activities occur during the breeding season of migratory avian or raptor species (February through mid-September), surveys for active nests will be conducted by a qualified biologist no more than 10 days prior to start of activities. Pre-construction nesting surveys will be conducted for nesting migratory avian and raptor species in the project site and buffer areas. Pre-construction biological surveys will occur prior to the proposed project implementation, and during the appropriate survey periods for nesting activities for individual avian species. Surveys will follow required CDFW and USFWS protocols, where applicable. A qualified biologist will survey suitable habitat for the presence of these species. If a migratory avian or raptor species is observed and suspected to be nesting, a buffer area will be established to avoid impacts to the active nest site. Identified nests should be continuously surveyed for the first 24 hours prior to any construction-related activities to establish a behavioral baseline. If no nesting avian species are found, project activities may proceed and no further mitigation measures will be required. If active nesting sites are found, the following exclusion buffers will be established, and no project activities will occur within these buffer zones until young birds have fledged and are no longer reliant upon the nest and parental care for survival:</p>	BVWSD	Prior to and during construction

Potential Environmental Impact	Mitigation Measure	Responsible Agency	Timing
	<ul style="list-style-type: none"> • Minimum no disturbance of 250 feet around active nest of non-listed bird species and 250-foot no disturbance buffer around migratory birds; • Minimum no disturbance of 500 feet around active nest of non-listed raptor species; • A 0.5-mile no disturbance buffer from listed species and fully protected species until breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival; • Once work commences, all nests should be continuously monitored to detect any behavioral changes as a result of project activities. If behavioral changes are observed, the work causing that change should cease and the appropriate regulatory agencies (i.e., CDFW, USFWS, etc.) will be consulted for additional avoidance and minimization measures; and • A variance from these no disturbance buffers may be implemented when there is compelling biological or ecological reason to do so, such as when the project area would be concealed from a nest site by topography. Any variance from these buffers is advised to be supported by a qualified wildlife biologist and is recommended that CDFW and USFWS be notified in advance of implementation of a no disturbance buffer variance. 		

Potential Environmental Impact	Mitigation Measure	Responsible Agency	Timing
	<p>BIO 21 - The following measures included in the CDFW's Staff Report on Burrowing Owl Mitigation (CDFG 2012) will be implemented by BVWSD for the proposed project:</p> <p>a. If pre-construction biological surveys determine that burrowing owls are present in the project site and buffer areas, a burrowing owl mitigation plan will be prepared by a qualified biologist describing recommended site specific shelter-in-place measures, worker training, and/or other measures to ensure that project construction does not result in adverse impacts to the burrowing owls.</p> <p>b. Occupied burrows will not be disturbed during the burrowing owl nesting season (February 1 through August 31) unless a qualified biologist approved by the CDFW verifies through non-invasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.</p> <p>c. Burrowing owls present in the project site or within 500 feet (as identified during pre-construction biological surveys) will be moved away from the disturbance area using passive relocation techniques. Prior to commencement of relocation, a management plan will be prepared and approved by CDFW. Relocation will be completed between September 1 and January 31 (outside of breeding season). A minimum of one or more weeks is required to relocate the owls and allow them to acclimate to alternate burrows. Passive relocation techniques will follow the CDFG Staff Report on Burrowing Owl Mitigation Guidelines (2012) and include the following measures:</p>	<p>BVWSD in consultation with CDFW</p>	<p>During project construction</p>

Potential Environmental Impact	Mitigation Measure	Responsible Agency	Timing
	<p>i. Install one-way doors in burrow entrances. Leave doors in place for 48 hours to ensure owls have left the burrow.</p> <p>ii. Allow one or more weeks for owls to acclimate to off-site burrows. Daily monitoring will be required for the passive relocation period.</p> <p>iii. Once owls have relocated off-site, collapse existing burrows to prevent reoccupation. Prior to burrow excavation, flexible plastic pipe will be inserted into the tunnels to allow escape of any remaining owls during excavation. Excavation will be conducted by hand whenever possible.</p> <p>iv. Destruction of burrows will occur only pursuant to a management plan approved by CDFW.</p> <p>v. As an alternative (if approved by CDFW), all occupied burrows identified off-site within 500 feet of construction activities outside of nesting season (September through January) and during nesting season (February 1 through August 31) could be buffered by hay bales, fencing (e.g. sheltering in place) or as directed by a qualified biologist and the CDFW.</p>		
Groundwater			
Water quality (currently poor) in the perched aquifer would be impacted as a result of the proposed project.	GW -1: construct a new set of nested or clustered monitoring wells, with screens placed opposite the perched, shallow and deep aquifers to confirm the changes in water quality and water levels.	BVWSD	After project implementation

Potential Environmental Impact	Mitigation Measure	Responsible Agency	Timing
Implementation of the proposed project would decrease groundwater levels in the main aquifer by approximately 2 feet from baseline levels. There would be no change in groundwater levels of the perched aquifer.	GW -2: If monitoring of the main aquifer (as described in Mitigation Measure GW-1) detects that the water level is declining to a degree that potential impacts to water users may occur, then water conserved by construction of the NAP will be used to periodically provide additional groundwater recharge to the main aquifer. This recharge will be conducted where the A-clay is not present, as necessary to compensate for the loss of groundwater recharge from the perched aquifer. (Note: this impact is not anticipated based on the analysis of the report, but this mitigation measure is incorporated to address an unexpected outcome.)	BVWSD	After project implementation
	GW-3: The Brackish Groundwater Remediation Project will be implemented to lower water levels in the perched aquifer and control salinity in both the perched and main aquifer.	BVWSD	After project implementation