

**Imperial Irrigation District
Bureau of Land Management, El Centro Field Office
230 kV Transmission Imperial Valley to Dixieland “ID” Line and
Expansion of Substations Project
(SCH# 2010121019; EA # 2009-082; Case File # CACA-50661)**

**APPENDIX G
MITIGATION MONITORING AND REPORTING PROGRAM**

Prepared for:

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and

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MITIGATION MONITORING AND REPORTING PROGRAM

#	Resources Impacted	Mitigation Measure/Standard Measure	Timing Requirement	Responsible Party/Parties	Completed
1	Special-Status Plants	BIO-A: Conduct preconstruction surveys to confirm the presence or absence of special-status plants within areas that would be affected during construction. If special-status plant populations are found in the vicinity of the project, a mitigation plan will be prepared and implemented that includes provisions for marking the populations as avoidance areas during construction, modifying pole and access road footprints if possible, conducting awareness training for construction personnel, and identifying actions to be taken to compensate for the loss of plant populations in the event they cannot be avoided.	Prior to Construction	Contractor and IID	<input type="checkbox"/>
2	Burrowing Owl (BUOW)	BIO-B: Implement the following measures to minimize potential impacts to BUOW: If preconstruction surveys indicate the possibility of direct impacts to active burrows, construction practices and/or pole placement will be modified such that no direct impact occurs, or owls occupying these burrows will be passively relocated, upon approval by California Department of Fish and Game (CDFG), in the non-breeding season before construction begins. Any pole placement modification would be coordinated with the project archaeologist and BLM field office to avoid additional sensitive resources.	Prior to Construction	IID, BLM, and CDFG	<input type="checkbox"/>
3	Burrowing Owl	<ul style="list-style-type: none"> All occupied burrows within 160 feet of all project activities during the non-breeding season, and within 250 feet during the breeding season (February 1 through August 31) will be barricaded with hay bales to a distance of 10 feet on either side of the burrow and stacked to a height two-bales-high as a noise/disturbance mitigation barrier. The non-disturbance buffer would be established with flagging by the biological monitor prior to any project related activities. 	Prior to and During Construction	Contractor and IID	<input type="checkbox"/>
4	Burrowing Owl	<ul style="list-style-type: none"> The qualified monitor shall establish and mark all non-disturbance buffer circles around the occupied burrows during both breeding and non-breeding seasons. The buffer shall be staked and roped-off prior to initiating any activity onsite including power line construction. No activity shall take place within the avoidance buffer area to ensure that disturbance to nesting birds does not occur to ensure compliance with the Migratory Bird Treaty Act. 	Prior to and During Construction	Contractor and IID	<input type="checkbox"/>

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5	Burrowing Owl	<ul style="list-style-type: none"> Disturbance to nesting BUOW that may cause changes of behavior, plugging the burrow entrance or causing the burrow to collapse could effectively destroy the nest, and as such, require a state permit. 	During Construction	IID and CDFG	<input type="checkbox"/>
6	Burrowing Owl	<ul style="list-style-type: none"> If it is not feasible to avoid direct impact to an active burrow, construction in the area of active burrows will be delayed until owls using these burrows can be passively relocated during the non-breeding season (September 1 to January 31). Due to the presence of agricultural fields to the east of the Proposed Action, any owls that are passively relocated could disperse to these adjacent fields. Suitable foraging and burrow habitat exists nearby (less than 0.25 mile away) where these owls could disperse. 	During Construction	Contractor and IID	<input type="checkbox"/>
7	Burrowing Owl	<ul style="list-style-type: none"> All burrows that are located within 160 feet of all project activities during the non-breeding season and within 250 feet during the breeding season (February 1 through August 31) are barricaded as a mitigation measure and will be monitored weekly for activity or signs of owls vacating burrows. Owl numbers and locations of burrows known to have been vacated during construction, as well as any owls that are passively relocated as mitigation for project impacts, will be reported to CDFG. The non-disturbance buffer would be established with flagging by the biological monitor prior to any project related activities. 	Prior to and During Construction	IID and CDFG	<input type="checkbox"/>
8	Burrowing Owl	<ul style="list-style-type: none"> Any disturbance to nesting BUOW would require prior consultation, approval and mitigation in accordance with CDFG requirements. If these measures may cause passive relocation or other detrimental effects to owls then barricading BUOW burrows shall be an alternative based upon CDFG approval. 	Prior to and During Construction	IID and CDFG	<input type="checkbox"/>
9	Burrowing Owl	<ul style="list-style-type: none"> Status reports, including all burrowing owl survey reports, owl mitigation actions, and monitoring results, will be submitted to CDFG. 	During Construction	IID and CDFG	<input type="checkbox"/>
10	Burrowing Owl	<ul style="list-style-type: none"> Design features of the transmission line facilities using the Avian Power Line Interaction Committee (ALPIC) guidelines to avoid avian electrocution. Install anti-electrocution devices on top of existing transmission line facilities to prevent harm to raptors and other protected bird species. 	Prior to and During Construction	Contractor and IID	<input type="checkbox"/>

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11	Burrowing Owl	<ul style="list-style-type: none"> The project's lighting system will provide the minimum illumination required to meet safety and security objectives and will be oriented to minimize additional illumination in areas not pertinent to the facility. If lighting is adjacent to sensitive habitat it will be directed or shielded away from the habitat. No permanent lights are proposed to be installed within sensitive habitat. Light glare shields may also be used to reduce the extent of illumination into adjoining areas. 	During Construction	Contractor and IID	<input type="checkbox"/>
12	Burrowing Owl	<ul style="list-style-type: none"> During project operation, the disturbance area will be maintained free from nonnative invasive species. This can be accomplished through physical or chemical removal and prevention. Application of an approved herbicide (not toxic to wildlife) will be applied or directly supervised by a State licensed applicator following the label instructions, including application rates and protective equipment. Herbicide will be applied only when wind speeds are less than 5 miles per hour. 	During Operation	IID	<input type="checkbox"/>
13	Burrowing Owl	<ul style="list-style-type: none"> IID shall develop a project-specific habitat restoration plan to encourage native species, control noxious weeds, and provide for erosion control. 	Prior to Operation	IID	<input type="checkbox"/>
14	Flat-tailed Horned Lizard (FTHL)	<p>BIO-C: Compensate for the loss and/or degradation of FTHL habitat</p> <p>266.03 acres of compensatory mitigation must be provided for loss and/or degradation of FTHL habitat for the Preferred Alternative. Pursuant to Title 43 Code of Federal Regulations and the Federal Land Policy and Management Act of 1976, federal land management agencies may permit actions that result in FTHL habitat loss on their lands. To mitigate such losses both within and outside Management Areas (MAs), compensation is charged if residual effects would occur after all reasonable on-site mitigation has been applied. Compensation funds may be used to acquire, protect, or restore FTHL habitat, as determined by the FTHL Management Oversight Group. Thus, IID may be required to pay the compensation fee based on the desert land value in the immediate vicinity of the project.</p>	Prior to Construction	IID and BLM	<input type="checkbox"/>

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15	Flat-tailed Horned Lizard	<p>BIO-D: Implement the following measures to minimize potential impacts to FTHL</p> <ul style="list-style-type: none"> Project activities shall occur outside any approved FTHL MA to the extent possible and occur at times of the year to minimize mortality. An approved field contact representative shall be designated to ensure compliance with the Flat-tailed Horned Lizard Rangewide Management Strategy (FTHLRMS) and protective measures for the FTHL. The representative shall have authority and responsibility to halt activities that are in violation of these terms and conditions. 	During Construction	IID and BLM	<input type="checkbox"/>
16	Flat-tailed Horned Lizard	<ul style="list-style-type: none"> All project work areas shall be clearly flagged at the outer boundaries to define work limits (at the 140-foot ROW), and all disturbance shall be limited to designated sites within that area. Construction and restoration workers shall restrict their activities and vehicles to flagged areas to reduce impacts to FTHL and its habitat. All work shall be performed outside of the MA to the greatest extent possible to limit impacts within the ROW that lie within the MA. Any pole placement modification would be coordinated with the project archaeologist and BLM field office to avoid additional sensitive resources. The use of existing roads, pull sites, and best management practices (BMPs) shall be shown on final plans to limit disturbance within the MA. 	During Construction	Contractor, IID, and BLM	<input type="checkbox"/>
17	Flat-tailed Horned Lizard	<ul style="list-style-type: none"> Within FTHL habitat, the area of disturbance of vegetation and soils shall be the minimum required for the project and vegetation removal and grading minimized to the greatest extent possible. To the extent possible, previously disturbed areas shall be used (existing roads shall be used for travel and equipment storage) and surface soils shall be stockpiled and replaced following construction to facilitate habitat restoration. Laydown yards or other disturbance area within the MA shall be cleared of FTHL and fenced prior to disturbance (Appendix 7 of the FTHLRMS). Additionally, any unavoidable disturbance of the MA will be identified in advance in the Plan of Development (POD), and mitigated per the FTHLRMS. 	Prior to and During Construction	Contractor, IID, and BLM	<input type="checkbox"/>

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18	Flat-tailed Horned Lizard	<ul style="list-style-type: none"> At the discretion of the lead agency, newly created access routes shall be restricted by constructing barricades, erecting fences with locked gates, and/or posting signs. These newly created routes of travel within the MA shall be fenced and cleared of FTHL during construction. The fence barriers shall be removed upon completion of the work. 	During Construction	Contractor, IID and BLM	<input type="checkbox"/>
19	Flat-tailed Horned Lizard	<ul style="list-style-type: none"> The BLM approved Project Biologist shall develop and implement a worker education program to ensure that project-related activities comply with these measures. The Project Biologist has the authority to halt activities that are in violation of these terms. He/she shall periodically examine areas of active surface disturbance for FTHL presence and take the necessary steps to ensure open trenches, holes, and excavation areas are inspected for FTHL prior to backfilling. 	Prior to and During Construction	Contractor, IID, and BLM	<input type="checkbox"/>
20	Flat-tailed Horned Lizard	<ul style="list-style-type: none"> Sites of permanent or long-term projects within MAs where activities could cause FTHL mortality (roads, laydown yard, pull sites) shall be cleared by qualified biologists and enclosed with FTHL barrier fencing according to standards outlined in the FTHLRMS. 	During and Post Construction	IID and BLM	<input type="checkbox"/>
21	Flat-tailed Horned Lizard	<ul style="list-style-type: none"> IID shall develop a project-specific habitat restoration plan to encourage native species, control noxious weeds, and provide for erosion control. 	Prior to and During Construction	IID	<input type="checkbox"/>
22	Avian Nesting Season	<p>BIO-E: Implement the following mitigation measures, outlined below, to reduce the magnitude of these impacts to a less-than-significant level.</p> <ul style="list-style-type: none"> An Avian and Bat Protection Plan (ABPP) will be prepared prior to the Decision Record that will outline conservation measures for construction and operations and maintenance activities that might reduce potential impacts to bird populations. These measures incorporate APLIC design guidelines for overhead utilities by incorporating recommended or other methods that enhance the visibility of the lines to avian species. The ABPP will also address disturbance minimization, timing of construction, minimization of activities that would attract prey and predators and incorporation of the Wildlife Mortality Reporting Program and Raven Control Plan. 	Prior to Construction	IID	<input type="checkbox"/>

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23	Avian Nesting Season	<ul style="list-style-type: none"> For work that must be performed during the avian nesting season, potential direct and indirect impacts to nesting raptors and other avian species shall be mitigated by performing preconstruction nest surveys and avoiding any active nests. 	Prior to and During Construction	Contractor and IID	<input type="checkbox"/>
24	Avian Nesting Season	<ul style="list-style-type: none"> Biologists shall conduct a preconstruction nesting survey in the project area that takes place during the breeding season (February to early July). If any active nest is located, the nest area will be flagged, and a 200-foot buffer zone will be delineated, flagged, or otherwise marked. Regular reporting and notification requirements shall be met. Under certain circumstances, FWS may agree a buffer reduction is warranted based on individual species biology and behavior. No work activity may occur within these avoidance buffer areas until an approved biologist determines that the fledglings are independent of the nest. This achieves compliance with the Migratory Bird Treaty Act. 	Prior to and During Construction	IID	<input type="checkbox"/>
25	Loggerhead Shrike	<ul style="list-style-type: none"> Implement the measures listed previously to reduce potential impacts to BUOW as a means of also reducing impacts to loggerhead shrike. 	Prior to and During Construction	IID	<input type="checkbox"/>
26	Avian Protection	<ul style="list-style-type: none"> IID shall ensure that the construction of the lines meets the Avian Protection Council recommendations. 	Prior to and During Construction	IID	<input type="checkbox"/>
27	Avian Nesting Season	<ul style="list-style-type: none"> Anti-electrocution devices shall be installed on top of transmission facilities to prevent harm to raptors and other protected bird species consistent with the Suggested Practices for Avian Protection on Power Lines. 	During Construction	Contractor and IID	<input type="checkbox"/>
28	Riparian Habitat	<p>BIO-F: Implement the following mitigation measures, outlined below, to reduce the magnitude of these impacts to a less-than-significant level.</p> <ul style="list-style-type: none"> The Project Biologist shall mark acceptable areas for construction-related activities. The Project Biologist shall mark with flagging any areas containing significant riparian vegetation that should be treated as exclusion areas during construction. The Project Biologist shall inspect all construction activities to ensure that exclusion areas are maintained. BMPs shall be employed to prevent loss of habitat due to erosion caused by project-related impacts. 	Prior to and During Construction	Contractor, IID, BLM, CDFG, USFWS, and Cal-IPC	<input type="checkbox"/>

#	Resources Impacted	Mitigation Measure/Standard Measure	Timing Requirement	Responsible Party/Parties	Completed
		<ul style="list-style-type: none"> • Fueling of equipment shall take place within existing paved roads and not within 300 feet of or adjacent to drainages or sensitive native desert habitats. • Contractor equipment shall be checked for leaks prior to operation and repaired as necessary. • Wildfires shall be prevented by exercising care when driving and by not parking vehicles where catalytic converters could ignite dry vegetation. In times of high fire hazard (e.g., high wind or drought conditions), trucks may need to carry water and shovels or fire extinguishers in the field, or high-fire-risk installations (e.g., electric lines) may need to be delayed. The use of shields, protective mats, or other fire prevention equipment shall be used during grinding and welding to prevent or minimize the potential for fire. No smoking or disposal of cigarette butts shall take place within vegetated areas. • The introduction of exotic plant species shall be avoided and controlled wherever possible, and may be achieved through physical or chemical removal and prevention. A weed prevention and control plan will be drafted to address impacts and measures to reduce and eliminate the spread of weeds. Preventing exotic plants from entering the site via vehicular sources shall include measures such as implementing Trackclean or another method of vehicle cleaning for vehicles coming and going from the site. Earth-moving equipment shall be cleaned prior to transport to the project site. Weed-free rice straw or other certified weed-free straw shall be used for erosion control. Weed populations introduced into the site during construction shall be eliminated by chemical and/or mechanical means approved by BLM, CDFG, USFWS, and the California Invasive Plant Council (Cal-IPC). 			
29	Wetlands	<p>BIO-G: Implement the following mitigation measures, outlined below, to reduce the magnitude of these impacts to a less-than-significant level.</p> <ul style="list-style-type: none"> • The Project Biologist shall mark acceptable areas for construction-related activities. • The Project Biologist shall mark with flagging any areas containing significant riparian vegetation that should be treated as exclusion 	Prior to and During Construction	Contractor and IID	□

#	Resources Impacted	Mitigation Measure/Standard Measure	Timing Requirement	Responsible Party/Parties	Completed
		<p>areas during construction.</p> <ul style="list-style-type: none"> • The Project Biologist shall inspect all construction activities to ensure that exclusion areas are maintained. • Fueling of equipment shall take place within existing paved roads and not within 300 feet of or adjacent to drainages. • Contractor equipment shall be checked for leaks prior to operation and repaired as necessary. 			
30	Air Quality During Construction	<p><u>Standard Mitigation Measures for Construction Equipment</u></p> <ol style="list-style-type: none"> a. Use alternative-fueled or catalyst-equipped diesel construction equipment, including all off-road and portable diesel-powered equipment. b. Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum. c. Limit, to the extent feasible, the hours of operation of heavy duty equipment and/or the amount of equipment in use. d. Replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set). 	During Construction	Contractor and IID	<input type="checkbox"/>
31	PM₁₀ During Construction	<p><u>Standard Mitigation Measures for Fugitive PM₁₀ Control</u></p> <ol style="list-style-type: none"> a. All disturbed areas, including bulk material storage that is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps, or other suitable material such as vegetative ground cover. b. All on-site and off-site unpaved roads will be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. c. All unpaved traffic areas 1 acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emission shall be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. d. The transport of bulk materials shall be completely covered unless 6 inches of freeboard space from the top of the container is maintained 	During Construction	Contractor and IID	<input type="checkbox"/>

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		<p>with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material.</p> <ul style="list-style-type: none"> e. All track-out or carry-out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area. f. Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water or chemical stabilizers, or by sheltering or enclosing the operation and transfer line. g. The construction of any new unpaved road is prohibited within any area with a population of 500 or more unless the road meets the definition of a temporary unpaved road. Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emission by paving, chemical stabilizers, dust suppressants, and/or watering. 			
32	Cultural Resources	<p>CR-A: There are cultural resources which may be impacted due to their proximity to construction areas. Because these sites are located near areas being impacted by project construction, archaeological monitoring including temporary fencing and/or flagging around their perimeters will be required to ensure that project impacts remain within the proposed impact area and that cultural resources are avoided by project personnel. An archaeological monitoring and inadvertent discovery plan will be developed subject to review and approval by the BLM. In addition, grading within the construction area shall be performed in a manner that incorporates sheet flow and water runoff diversion techniques to prevent surface water from damaging off-site cultural sites.</p> <p><u>CR-A1:</u> In the event that unknown historic or archaeological resources are encountered during construction or operational repairs, archaeological monitors will be authorized to temporarily divert construction work within 100 feet of the area of discovery until the significance and the appropriate mitigation measures are determined by the BLM</p>	Prior to, During, and Post Construction	IID and BLM	□

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		<p>and a Registered Professional Archaeologist familiar with the resources of the region. The BLM will be immediately notified if such discoveries occur. The Applicant shall notify the County within 24 hours. The Applicant shall provide contingency funding sufficient to allow for implementation of avoidance measures or appropriate mitigation.</p> <p><u>CR-A2:</u> A long term archaeological monitoring plan will be developed subject to review and approval of the BLM to ensure that archaeological sites within the APE that could be subject to post construction operations and maintenance activities are monitored and protected for the life of the project.</p>			
33	Cultural Resources – Human Remains	<p>CR-B: In the unlikely event that human remains are encountered during ground-disturbing activities, all ground-disturbing activities in the vicinity of the find shall be stopped and the County Coroner, IID, and the BLM shall be notified. All parties involved shall ensure that any such remains are treated in a respectful manner and that all applicable state and Federal laws are followed. If human remains of Native American origin, associated grave goods, or objects of cultural patrimony are discovered on Federal property, the provisions of the Native American Graves Protection and Repatriation Act shall be followed. If human remains are found on private property, all work shall cease and the county coroner shall be contacted per the California Public Resources Code 5097.98 (b) and (e). Should the remains be identified as Native American, the Native American Heritage Commission shall be contacted within 48 hours to provide a Most Likely Descendent (MLD) to determine reburial practices for the remains.</p>	During Construction	IID and BLM	<input type="checkbox"/>
34	Paleontological Resources	<p>A qualified paleontologist shall conduct a paleontological survey of the project area prior to commencement of ground disturbing activities. The procedures for survey, monitoring, investigating, and taking further action, if required, shall follow the five steps below in accordance with the BLM's "Guidelines for Assessment and Mitigation of Potential Impacts to Paleontological Resources."</p>	Prior to and During Construction	IID and BLM	<input type="checkbox"/>