

5.3 Biological Resources

This section addresses the potential impacts to biological resources (vegetation, wildlife, and jurisdictional waters) of the Amended SSU6 Project. It discusses the applicable LORS, characterizes the existing biological resources, and presents impacts and mitigation measures for identified significant adverse impacts. The discussion presented is based in part on previous biological resources investigations for the original SSU6 project; the previous investigation has been updated and supplemented by additional literature research and field survey work conducted in 2008. Additional detail on the biological studies that were performed for the Amended Project, including personnel qualifications of key staff, are provided in the Biological Technical Report, provided as Appendix F of the Amendment Petition.

The transmission lines that will interconnect the Project with the regional electrical grid have already been licensed by the CEC and the Amended Project proposes no transmission line changes. Thus, the transmission lines are not addressed in this Amended Project biological resources evaluation.

5.3.1 Summary of Differences between Amended Project and Original SSU6

The construction of production pipeline OB-3 and the associated widening of McKendry Road planned for the original project would have directly impacted habitat for the Yuma clapper rail, a bird species listed federally as endangered and by California as threatened. The impacted habitat would have included 0.18 acre of Federal jurisdictional wetlands and 0.3 acre of State jurisdictional wetlands. Additionally, another production well pad was proposed to be located close to the Sonny Bono Salton Sea National Wildlife Refuge (Wildlife Refuge). These impacts will no longer occur with the Amended Project because all production wells and associated pipelines have been relocated to the plant site and McKendry Road will not be modified.

Noise and vibration from construction of the original SSU6 project potentially would have significantly impacted the Yuma clapper rail during the breeding season (February to August). Potential Yuma clapper rail habitat exists in the freshwater wetland area located to the northwest of the plant site. The noise and vibration produced from the construction of the Amended Project will be reduced from the originally proposed SSU6 project because of the relocation of production well facilities to within the plant site and because, with the Amended Project, pile driving activities will occur further from the northwestern plant site boundary than was the case with the original. This will reduce potential indirect noise and vibration impacts to the Yuma clapper rail. However, noise from construction activities in the northwest corner of the plant site and from pile driving could cause noise levels to exceed the U.S. Fish and Wildlife Service (USFWS) threshold of significance of 60dBA Leq during the breeding season. Impacts would be mitigated to less-than-significant levels by a combination of temporary noise barriers; and/or temporary use of smaller, less noise-producing equipment, and/or curtailment of operations for a short time before and after sunrise and sunset (the peak times for Yuma clapper rail breeding activity).

Fall 2008 biological surveys of the plant site, injection well pads, pipeline routes, and the borrow site indicated no potential habitat within the Amended Project footprint for State or federally listed species, including the Yuma clapper rail and the California brown pelican. As discussed above, potential Yuma

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clapper rail habitat is located to the northwest of the plant site, within the California Energy Commission's (CEC's) recommended survey buffer zone around the Project footprint. In addition, as was the case for the original SSU6 project, Phase I and Phase II protocol burrowing owl (BUOW) surveys observed both occupied and unoccupied burrows within the survey area, but not within the Project footprint itself. Phase III (nesting) BUOW surveys are planned for spring 2009. Amended Project BUOW impacts are expected to be no greater than the original SSU6 project.

In summary, the Amended Project would result in reduced biological and wetlands impacts compared to the original SSU6 project. The Amended Project will not have the direct impact on 0.18 acre of Federal wetlands and 0.3 acre of State wetlands near the plant site that the original project would have had (although the Project still will result in impacts to 0.08 acres of non-wetlands ephemeral washes along the "L" transmission line that are considered Federal jurisdictional waters by the U.S. Army Corps of Engineers). The Applicant will implement the agreed upon wetlands mitigation for the original project (creating new wetland acreage to compensate for existing wetland acreage affected), even though the wetland impacts no longer will occur.

No previously unaffected biological resources will be impacted from new or relocated Project components. Potential indirect impacts to the Yuma clapper rail are reduced. Impacts to BUOW likely will be very similar to those of the original SSU6 plant site and injection well pads and associated pipelines. Burrowing owl impacts would continue to be mitigated as in the original SSU6 project, but the mitigation would be adjusted as needed to reflect the results of the updated surveys with respect to the number of burrowing owls potentially affected by the Amended Project.

5.3.2 LORS Compliance

The Amended Project will comply with the following LORS during Project construction and operation. Applicable LORS are summarized in Table 5.3-1 and briefly discussed below.

Table 5.3-1 LORS Applicable to Biological Resources

LORS	Applicability	Where Discussed in AP
Federal:		
Clean Water Act of 1977. Title 33, United State Code (USC), sections 1251-1376, 404, and Code of Federal Regulations (CFR), part 30, section 330.5(a)(26)	Federal law prohibits discharge of dredged or fill material into the waters of the U.S without a permit from the USACE under Section 404.	Sections 5.3.4 and 5.3.5
Endangered Species Act (ESA) of 1973. Title 16, USC, section 1531, and Title 50, CFR, part 17.1	Designates and provides for protection of federally threatened and endangered plant and animal species and their critical habitat.	Sections 5.3.4 and 5.3.5
Migratory Bird Treaty Act, Title 16, USC, sections 703 through 712.	Prohibits take of migratory birds, including nests with viable eggs.	Sections 5.3.4 and 5.3.5
Management and General Public Used of the National Wildlife Refuge System, Executive Order 12996.	Provides guiding principles for public access and involvement, habitat preservation, and local partnerships on the National Wildlife Refuge System.	Sections 5.3.4 and 5.3.5

Table 5.3-1 LORS Applicable to Biological Resources

LORS	Applicability	Where Discussed in AP
National Wildlife Refuge System Improvement Act of 1997	Unifies the mission for the National Wildlife Refuge System, determines compatible uses of the refuges, and outlines requirements for preparing conservation plans.	Sections 5.3.4 and 5.3.5
Salton Sea Reclamation Act of 1998, Public Law 105-372	Directs the Department of Interior to complete studies relative to the continuing use of the Salton Sea as a reservoir for irrigation drainage, salinity stability, elevation stability, maintenance of wildlife resource health, and recreational uses.	Sections 5.3.4 and 5.3.5
Lea Act, 16 USC 695-695c; 62 Stat. 238	Authorizes the Department of Interior to acquire, manage, and develop waterfowl and other wildlife management areas in California.	Sections 5.3.4 and 5.3.5
State:		
California Endangered Species Act of 1984, Fish and Game Code sections 2050 through 2098	Protects California's rare, threatened, and endangered plant and animal species.	Sections 5.3.4 and 5.3.5
California Code of Regulations (CCR), Title 14, Division 1, Subdivision 3, Chapter 3, Sections 670.2 and 670.5	Lists California's plants and animal species that are designated as rare, threatened, or endangered.	Sections 5.3.4 and 5.3.5
California Public Resource Code (PRC), Division 15, Chapter 6, Sections 25527	Prohibits the CEC from placing facilities within ecological preserves, wildlife refuges, estuaries, and unique or irreplaceable habitat.	Sections 5.3.4 and 5.3.5
California Department of Fish and Game Code sections 3511, 4700, 5050, and 5515	Prohibits the taking of animals classified as fully protected in California.	Sections 5.3.4 and 5.3.5
Fish and Game Code sections 3503	Protects California's birds by making it unlawful to take or possess any migratory non-game bird.	Sections 5.3.4 and 5.3.5
Fish and Game Code sections 1930	Designates certain areas as refuges, natural sloughs, riparian areas, and vernal pools as significant wildlife habitat.	Sections 5.3.4 and 5.3.5
Fish and Game Code sections 2700	Provides funding to the Wildlife Conservation Board and CDFG for acquisitions, enhancement, restoration, and protection of areas that are most in need of conservation.	Sections 5.3.4 and 5.3.5
Fish and Game Code sections 1580	Establishes ecological reserves that shall be preserved in a natural condition for the general public to observe native flora and fauna.	Sections 5.3.4 and 5.3.5

Table 5.3-1 LORS Applicable to Biological Resources

LORS	Applicability	Where Discussed in AP
Clean Water Act of 1977, Section 401 (State implementation)	Requires certification by Regional Water Quality Control Boards (RWQCBs) that a proposed activity will not violate State and Federal water quality standards.	Sections 5.3.4 and 5.3.5
Local:		
Imperial County General Plan, Conservation and Open Space Element	Promotes protection, maintenance, and use of the County's natural resources with particular emphasis on scarce resources.	Sections 5.3.4 and 5.3.5
Imperial County General Plan, Noise Element	Establishes land use policies that protect the environment from excessive noise. Notes that many riparian bird species are sensitive to excessive noise, and are considered noise-sensitive receptors.	Sections 5.3.4 and 5.3.5

5.3.2.1 Federal LORS**Clean Water Act of 1977**

Title 33, USC, Sections 1251 through 1376, and CFR, Part 30, Section 330.5(a)(26) prohibit the discharge of dredged or fill material into the waters of the United States without a permit. The administering agency is the U.S. Army Corps of Engineers (USACE). Although the Amended Project no longer affects wetlands near the plant site, there are ephemeral drainages on land managed by the Bureau of Land Management (BLM) along the transmission line route. Because the USACE considers these drainages to be Federal jurisdictional waters, the Applicant will obtain a 404 permit from the USACE for potential impacts to these drainages.

Endangered Species Act (ESA) of 1973

Title 16, USC, Sections 1531 et seq., and Title 50, CFR, Parts 17.1 et seq., designate and provide for the protection of threatened and endangered plant and animal species, and their critical habitat. The administering agency is the U.S. Fish and Wildlife Service (USFWS). The USFWS has indicated that the Biological Opinion for the original SSU6 project will still apply to the Amended Project. Because of the presence of ephemeral drainages on BLM land along the transmission line route, the USACE is expected to request consultation with the USFWS pursuant to Section 7 of the ESA.

Migratory Bird Treaty Act

Title 16, USC, Sections 703 through 712, prohibit the taking of migratory birds, including nests with viable eggs. The administering agency is the USFWS.

Executive Order 12996, Management and General Public Use of the National Wildlife Refuge System

Executive Order 12996 of March 25, 1996 states the mission of the National Wildlife Refuge System is to preserve a national network of lands and waters for the conservation and management of fish, wildlife, and plant resources of the United States for the benefit of present and future generations. The Order set forth guiding principles for public access and involvement, habitat preservation, and local partnerships.

National Wildlife Refuge System Improvement Act of 1997

The Act amends the National Wildlife Refuge System Administration Act of 1966 to include a unifying mission for the Refuge System, a new process for determining compatible uses of refuges, and a requirement for preparing comprehensive conservation plans. The legislation requires that a comprehensive conservation plan (also known as comprehensive management plan) be in place for each national wildlife refuge within 15 years after passage of this bill. The plans must be revised at least every 15 years. Guidelines for producing a comprehensive conservation plan were published in the Federal Register on May 25, 2000 (65 Fed. Reg. 33,891). The Salton Sea does not have a comprehensive conservation plan completed at the time of this AP.

Salton Sea Reclamation Act of 1998

The Salton Sea Reclamation Act of 1998 (Public Law 105-372; Sonny Bono Salton Sea Reclamation Act) directs the Secretary of the Interior to "complete all studies of various options that permit the continual use of the Salton Sea as a reservoir for irrigation drainage and:

- Reduce and stabilize the overall salinity of the Salton Sea;
- Stabilize the surface elevation of the Salton Sea;
- Reclaim, in the long term, healthy fish and wildlife resources and their habitats; and
- Enhance the potential for recreational uses and economic developments of the Salton Sea.

Lea Act

The Lea Act was enacted to help farmers who experience problems with crop damage from ducks and geese. The Act, enacted on May 18, 1948 (16 USC 695- 695c; 62 Stat. 238), authorizes the Secretary of the Interior to acquire and develop waterfowl and other wildlife management areas in California, provided the State acquires equivalent acreage. Lands acquired under the Act as management areas are not subject to the prohibition against taking birds, nests, or eggs, and hunting may be regulated in a cooperative manner necessary to carry out the provisions of the Act and subject to the provisions of the Migratory Bird Treaty Act. The Refuge currently rents land from Imperial Irrigation District (IID) in partial fulfillment of this Act.

5.3.2.2 State LORS

With exception of the Clean Water Act (CWA) Section 401 certification (which will be required from the Colorado River Basin RWQCB in order for the USACE to issue the 404 permit), the administering agency for the State LORS is the CDFG; the CEC obviously also is involved in the case of the Amended Project.

California Endangered Species Act (CESA) of 1984

CDFG Code Sections 2050 through 2098 protect California's rare, threatened, and endangered species. The Applicant will coordinate with CDFG to ensure conformance with CESA, and the CEC is expected to incorporate CDFG's requirements and concerns into the CEC Conditions of Certification (COC) as needed.

California Code of Regulations (CCR)

CCR, Title 14, Division 1, Subdivision 3, Chapter 3, Sections 670.2 and 670.5 list plants and animals of California that are designated as rare, threatened or endangered.

California Public Resources Code (PRC), Division 15, Chapter 6, Section 25527

This PRC section prohibits placing facilities within ecological preserves, wildlife refuges, estuaries, and unique or irreplaceable wildlife habitats of scientific or educational value. The Project is not located in an area protected by this Code.

California Fish and Game Code, Fully Protected Species

Code Sections 3511, 4700, 5050, and 5515 prohibit the taking of animals that are classified as fully protected in California.

California Fish and Game Code, Take, Possess, or Destroy Nests or Eggs

Code Section 3503 protects California's birds by making it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically protects California's birds of prey and their eggs by making it unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird.

California Fish and Game Code, Migratory Birds – Take or Possession

Code Section 3513 protects California's migratory birds by making it unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act or any part of such migratory non-game bird.

California Fish and Game Code, Significant Natural Areas

Fish and Game Code Section 1930 et seq. designates certain areas such as refuges, natural sloughs, riparian areas, and vernal pools as significant wildlife habitat.

California Fish and Game Code, Wildlife and Natural Areas

Code Section 2700 et seq. provides funding to the Wildlife Conservation Board and CDFG for acquisition, enhancement, restoration, and protection of areas that are most in need of proper conservation. In the southern Salton Sea area, CDFG operates the Imperial Wildlife Area, consisting of three units: Wister, Hazard, and Finney-Ramer.

California Fish and Game Code, Ecological Reserves

Code Section 1580 et seq. establishes ecological reserves that shall be preserved in a natural condition for the general public to observe native flora and fauna. It is unlawful to take a bird, mammal, or plant from an ecological reserve. San Felipe Creek Ecological Reserve, one such reserve, is located near the intersection of State Highways 86 and 78, about 10 miles west of the proposed Project.

California Fish and Game Code, Native Plant Protection Act of 1977

Code Section 1900 et seq. designates State rare, threatened, and endangered plants.

Streambed Alteration Agreement (SAA)

Code Section 1603 et seq. regulates activities that may divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake designated by the CDFG in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit. With the new configuration of the Amended Project, the Applicant will not need an SAA for impacts to wetlands along McKendry Road, as these will no longer occur. An SAA may be required for impacts to ephemeral drainages along the transmission line route. Under new procedures, SAA requirements, if applicable, would be incorporated in the CEC licensing process, rather than through a separate agreement with CDFG. The CEC would incorporate CDFG requirements in its Conditions of Certification.

Regional Water Quality Control Board CWA Section 401 Certification

Under Federal law, every applicant for a Federal permit or license for an activity that may result in a discharge into a water body must request State certification that the proposed activity will not violate State and Federal water quality standards. The Amended Project will need a CWA Section 401 Water Quality Certification from the Colorado River Basin RWQCB as part of the 404 permitting process for the ephemeral drainages along the transmission line route. The RWQCB must rely on the CEC for CEQA compliance prior to issuing the section 401 certification.

5.3.2.3 Local LORS**Imperial County General Plan: Conservation and Open Space Element**

The purpose of the Conservation and Open Space Element is to promote the protection, maintenance, and use of the County's natural resources with particular emphasis on scarce resources, and to prevent wasteful exploitation, destruction, and neglect of the State's natural resources. The Conservation and Open Space Element contains specific Biological Resource objectives including:

- Objective 2.1: Conserve wetlands, fresh water marshes, and riparian vegetation;
- Objective 2.2: Protect significant fish, wildlife, plants species, and their habitats;
- Objective 2.3: Protect unique, rare, and endangered plants and animals and their habitat;
- Objective 2.4: Use the environmental impact report process to identify, conserve and enhance unique vegetation and wildlife resources;

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- Objective 2.6: Attempt to identify, reduce and eliminate all forms of pollution, which adversely impact vegetation and wildlife; and
- Objective 2.8: Adopt noise standards, which protect sensitive noise receptors from adverse impacts.

The primary mechanism to implement the Goals and Objectives of the Conservation and Open Space Element is to incorporate environmental concerns into land use planning. Thus, this Element also incorporates the above policies and then identifies the programs the County intends to undertake to promote them. Under the heading of Biological Resource Conservation, the County defines several relevant land planning policies.

Policy 1

Provide a framework for the preservation and enhancement of natural and created open space, which provides wildlife habitat values. Protect riparian habitat and other types of wetlands from loss or modification by dedicating open space easements with adequate buffer zones, and by other means to avoid impacts from adjacent land uses. Road crossings or other disturbances of riparian habitat should be minimized and allowed only when alternatives have been considered and determined infeasible.

Policy 2

Landscaping should be required in all developments to prevent erosion on graded sites and, if the area is contiguous with undisturbed wildlife habitat, the plan should include revegetation with native plant species.

Imperial County General Plan: Noise Element

The County General Plan Noise Element is described in Section 5.8, Noise. The Noise Element identifies that many riparian bird species are sensitive to excessive noise, and as such, they are considered a sensitive receptor.

5.3.2.4 Involved Agencies

Table 5.3-2 identifies agencies involved in Project biological resources-related resources permitting issues.

Table 5.3-2 Agencies and Agency Contacts

Agency/Contact	Phone/E-mail	Permit/Issue
Carol Roberts USFWS, Carlsbad Office 6010 Hidden Valley Road, Suite 101 Carlsbad, CA 92012	(760) 431-9440 carol_a_roberts@fws.gov	Consultation under Section 7 of the Federal ESA
Robert R. Smith USACE, Los Angeles District, Regulatory Division, South Coast Branch San Diego Section 6010 Hidden Valley Road, Suite 105 Carlsbad, CA 92012	(213) 452-3840 robert.r.smith@uasce.army.mil	Consultation for Section 7 of the ESA and Nationwide Permit No. 12 Under Section 404 of the CWA

Table 5.3-2 Agencies and Agency Contacts

Agency/Contact	Phone/E-mail	Permit/Issue
David Mayer CDFG South Coast Region 4949 Viewridge Ave San Diego, CA 92123	(858) 467-4234 dmayer@dfg.ca.gov	Consultation under the CESA

5.3.2.5 Required Permits and Permit Schedule

As shown in Table 5.3-3, the transmission lines (not addressed in this Amendment Petition because the Amended Project proposes no changes to them), will require permits that are specific to biological resources issues (ephemeral drainages).

Table 5.3-3 Required Permits

Permit	Agency	Schedule
CWA 404 Permit	USACE	Prior to construction
CWA 401 Certification	Colorado River Basin RWQCB	Prior to construction

5.3.3 Affected Environment

5.3.3.1 Regional Environment

The Amended Project site is located at the southern end of the Salton Sea in Imperial County. The Salton Sea covers more than 380 square miles, and thousands of waterfowl and other birds winter along the Sea's shoreline or in its waters. The Salton Sea provides feeding, resting, and nesting habitat for birds and supports a diversity of wildlife species throughout the year.

The once dry desert located east and south of the Salton Sea has become a highly productive agricultural area with an intricate system of dikes, pump stations, drains, and irrigation canals. Much of the agricultural production is alfalfa or winter food crops. Areas to the west and north of the Salton Sea are less developed.

The Chocolate Mountains are over 2,000 feet high on the east and northeast side of the Imperial Valley, and the 4,500-foot high Santa Rosa Mountains are on the west and northwest. Much of the valley is below sea level and, the mountains have isolated the area, creating what is known as the Salton Sink. All rain that falls on the interior slopes of the trough-shaped Sink, or water used as irrigation, is isolated and flows into the lowest point in the trough, the Salton Sea (currently about 227 feet below sea level). In addition, because there is no outlet for the Salton Sea, there is no way to flush salts or chemicals from the Sea. These conditions have created a major salinity problem – the Salton Sea's level of dissolved salts is more than 10 percent higher than the Pacific Ocean.

The southeast edge of the Salton Sink is gently sloping. There is a 40-mile-long dune system on the west side of Sand Hills that was formed by windblown beach sands of ancient Lake Cahuilla. This is one of the largest dune systems in the United States and includes dune crests over 300 feet high. These dunes are a large recreational attraction, but the northern portion has been designated a wilderness area by the BLM

and is off limits to vehicles. The southwest edge of Salton Sink is a gently sloping desert environment with little topographical relief, with the exception of the Superstition Hills and Fish Creek Mountains, which range from 200 to 270 feet above sea level. These flatter areas are crisscrossed with highways, transmission lines, and other linear facilities that connect the United States and Mexico.

The Salton Sea was stocked with several marine fish in the 1950s when the salinity of the Salton Sea was nearly that of the Pacific Ocean. This resulted in the establishment of orange-mouth corvina (*Cynoscion xanthalmus*), sargo (*Anisotremus davidsoni*), and gulf croaker (*Bairdiella icistius*). Other game fish (e.g., striped bass [*Morone saxatilis*] and black crappie [*Pomoxis nigromaculatus*]) were introduced to the canals of the irrigation system in the 1950s to remove weeds in the canals (Imperial County, 1977). Tilapia (*Tilapia* spp.), an introduced species from Africa, are also present in the canals. Continued increases in salinity are threatening the fisheries in the Salton Sea.

The Salton Sea receives the majority of its water inflow from agricultural runoff from the Colorado River. Until recently, Arizona and Nevada did not use their full share of Colorado River Water and California was allowed to use the excess. However, by way of a 2003 Quantification Settlement Agreement (QSA), California is required to reduce its use of Colorado River Water to accommodate increased growth in Arizona and Nevada. As a result of the QSA, the Salton Sea will receive less agricultural runoff from the Colorado River in the coming decades. Absent intervention, as a result of this reduced inflow and other factors, the Salton Sea will begin to dry up. This will in turn impair air quality, increase the salinity of the Sea, and reduce the availability of wildlife habitat.

Legislation implementing the QSA [SB 277 (Ducheny 2003), SB 317 (Kuehl 2003), and SB 654 (Machado 2003), as amended by SB 1214 (Kuehl 2004)] requires California to adopt a restoration plan for the Salton Sea to counteract the effects of the reduced water flows (see Fish and Game Code § 2931-2932). In June 2007, the California Department of Water Resources (CDWR) and the California Department of Fish and Game (CDFG) finalized a Programmatic Environmental Impact Report that outlines several alternatives and proposes an \$8.9 billion restoration plan (the preferred alternative). The preferred alternative was presented to the California legislature in May 2007, but the legislature has not yet decided whether to proceed with or modify the preferred alternative, or to select another alternative. The preferred alternative specifically contemplates the further development of geothermal resources at the southern end of the Salton Sea, where the Amended Project will be located.

On September 27, 2008, Governor Schwarzenegger signed SB 187 into law (see Fish and Game Code § 2932.3), which provides that funds in the Salton Sea Restoration Fund from Proposition 84 (a 2006 ballot measure that provided \$47 million for Salton Sea Restoration activities) shall be spent upon appropriation by the Legislature. Although SB 187 stated that it did not select or reject the preferred alternative, the expenditures it authorizes must be used for a restoration project that is consistent with the preferred alternative and that provides for the maximum feasible attainment of the objectives identified in Fish and Game Code § 2391(c), including restoring aquatic and shoreline habitat, eliminating air quality impacts from the restoration projects, and protecting water quality. SB 187 limits expenditures authorized by the bill to activities within the first five years of implementation, referred to as development Phase I in the preferred alternative.

5.3.3.2 Vegetation Communities/Land Uses

Table 5.3-4 below provides the major vegetation communities and land uses that occur in the vicinity of the Project site. The subsection also briefly describes the major vegetation types and land use cover. A total of four vegetation communities and cover types were mapped within the Project footprint and nine vegetation and land use types were mapped within the one-mile buffer zone (see Figure 5.3-1).

Table 5.3-4 Vegetation Communities within the Project Vicinity

Vegetation Communities and Other Cover Types	Project Footprint¹ (Acres)	Survey Area² (Acres)
Roadway or Agricultural Ditch	17.8	346.3
Developed Areas	28.9	510.7
Agricultural Lands	194.9	3,726.7
Desert Sink Scrub	0.0	82.8
Tamarisk Scrub	1.2	6.1
Freshwater Wetland	0.0	42.6
Open Water (Salton Sea)	0.0	799.8
Salt Pan	0.0	92.1
Barren Land	0.0	39.9
Total	242.8	5,647.1
¹ Project footprint acreages include the Amended Project plant site, well pads, 110-foot-wide pipeline ROWs, and borrow site. ² Survey area includes Project footprint; a one-mile buffer area around plant site, well pads, and borrow site; and a 1,000-foot buffer area around pipeline ROWs.		

Roadway or Agricultural Ditch

There are several unpaved and paved north-south and east-west oriented roads in the Project vicinity. Several agricultural ditches adjacent to these roads contain irrigation water from the agricultural fields. Generally these ditches are less than 20 feet in width and have steep banks. Some support sparse vegetation consisting of cattails (*Typha* sp.), giant reed (*Arundo donax*) and salt cedar (*Tamarisk* sp.). Periodic maintenance of the drainage channels and removal of vegetation precludes the habitat from supporting special status species. The agricultural ditch adjacent to Severe Road, west of the plant site and between McKendry and Grubel Roads supports dense stands of giant reed and salt cedar, which are invasive species. The ditch at the western end of Grubel Road is heavily vegetated with salt cedar.

A total of 17.8 acres of roadway/agricultural ditch were mapped within the Amended Project footprint and 346.3 acres were mapped within the one-mile survey area.

Developed Areas

These areas generally consist of energy production facilities and associated infrastructure. The areas lack natural vegetation cover. A total of 28.9 acres of developed land were mapped within the one-mile survey area and 510.y acres were mapped within the one-mile buffer zone.

Agricultural Lands

Agricultural lands form the major land use type in the Project vicinity. The dominant vegetation type in these fields is alfalfa and most of the agricultural plots in the Project vicinity are active. These lands also provide foraging habitat for overwintering migratory birds and waterfowl. A total of 194.9 acres of agricultural areas were mapped within the Amended Project footprint and 3,726.2 acres were mapped within the one-mile buffer zone.

Desert Sink Scrub

This habitat is restricted to the Obsidian Butte and consists of low, grayish microphyllpous (small leaved) shrubs, widely scattered and predominantly consisting of the salt-tolerant iodine bush (*allenrolfea occidentalis*). Vegetation cover is low, with much bare ground between widely spaced shrubs. The soils in this area are fine-textured, poorly drained with high alkalinity and/or salinity. There was no desert sink scrub mapped with the Amended Project footprint and 82.8 acres were mapped within the one-mile survey area.

Tamarisk (Saltcedar) Scrub

This habitat type refers to small monocultural stands of saltcedar (*Tamarisk* sp.) not associated with other habitat types in the project vicinity. The presence of this habitat is usually an indication that tamarisk has supplanted native vegetation following major disturbance. Tamarisk is a non-native, invasive Eurasian or African species usually found in saline soils. Tamarisk is a strong phreatophyte and a prolific seeder, attributes which predispose the species to be aggressive competitors in disturbed riparian corridors. A total of 1.2 acres of tamarisk scrub areas were mapped within the Amended Project footprint and 6.1 acres were mapped within the one-mile survey area.

Freshwater Wetland

This habitat occurs at the juncture of Severe Road and McKendry Road, adjacent to the northwest corner of the plant site. This area is bordered by Obsidian Butte to the west, the Salton Sea to the north, a portion of the Wildlife Refuge to the east, and the plant site and adjacent salt flat to the south. The marsh is fed by a drainage ditch outside the Project site along the west side of Severe Road, with flow ultimately emptying into the Salton Sea via an outlet to the north via under drain systems below the field. The wetland is lined by a thick stand of salt cedar on the outer margin and an inner margin consisting of dense stands of cattails. A few stands of giant reed also occur in the southeastern portion. The interior of the wetland consists of open water. There are also several wetland areas within the Wildlife Refuge, to the north of the plant site, including a wetland area created by the Wildlife Refuge adjacent to the south of Sinclair Road between Severe and Boyle roads. Freshwater wetland areas in the Project area potentially could provide foraging and nesting habitat for the Yuma clapper rail.

There was no freshwater wetland mapped with the Amended Project footprint. Approximately 42.6 acres were mapped within the one-mile survey area.

Open Water

Open water habitat in the project vicinity is associated with the Salton Sea. There was no open water mapped within the Amended Project footprint and 799.8 acres were mapped within the one-mile buffer.

Salt Pan

This habitat occurs west of Severe Road, north of Grubel Road and south of the Obsidian Butte. In addition, a small salt pan also occurs in the Refuge, approximately 0.75 miles north of the plant site. This habitat consists of a flat expanse of unvegetated land where previously standing water has evaporated, leaving behind deposits of salts and other minerals. There was no salt pan mapped within the Amended Project footprint and 92.1 acres were mapped within the one-mile buffer zone around the Project site.

Barren Land

Barren land supports little or no vegetation. The central and southern portions of the Obsidian Butte are barren land. There was no barren land mapped within the Project footprint and 39.9 acres were mapped within the one-mile buffer.

5.3.3.3 Project Site and Vicinity

The Amended Project plant site is located on a 160-acre parcel along the northern portion of the block bounded by McKendry Road to the north (where the main entrance will be placed), Severe Road to the west, Peterson Road to the south, and Boyle Road to the east. Current land uses around the plant site include agriculture, geothermal production, and wildlife habitat conservation associated with the Refuge. The Project's injection well pads and pipeline routes occur on and are surrounded by agricultural lands, roadways and ditches, and developed industrial area. Most of the agricultural areas on and adjacent to the Amended Project are currently active with alfalfa fields, or have been recently used for alfalfa production.

As discussed in the Project Description, the project site will be surrounded by a perimeter fence. Similarly, the injection well pad sites will also be fenced. The injection pipelines between the main plant site and injection well pads will not be fenced and will be constructed so as to be elevated somewhat from ground level.

5.3.3.4 Special-Status Species

Review of special-status plant and animal species that are known or considered likely to occur within one mile of the Project area or along the Project's linear facilities. A list of special status species that have been known to occur in the Project vicinity is presented in Table 5.3-5. CNDDDB-listed species are shown on Figures 5.3-1 and 5.3-2. Surveys conducted for the original project as well as recent surveys conducted in support of the Amended Project disclosed only a few species for which mitigation measures are warranted. The results of the most recent surveys performed in support of the Amended Project, potential impacts, and proposed mitigation measures are presented in sections 5.3.3.6, 5.3.4, and 5.3.6, respectively.

Peirson's Milk-vetch (*Astragalus magdaleneae* var. *peirsonii*). Peirson's milk-vetch is a federally listed threatened and state listed endangered plant species. Peirson's milk-vetch is found on the slopes and hollows of mobile sand dunes, usually in the lee of the prevailing winds. There was only one reported observation of this species in the Project vicinity and that occurred in the 1980s approximately four miles from the Amended Project site. The 2003 Final Staff Assessment (FSA) for the original SSU6 project found that suitable habitat is lacking in the immediate area of the Project and thus no further analysis is warranted.

Desert Pupfish (*Cyprinodon macularius*). The desert pupfish was listed as a California endangered species in 1980. In 1986, the USFWS listed this species as endangered and designated critical habitat. The listing was based on habitat alteration, the introduction of exotic species and contaminants, and other habitat impacts. The desert pupfish was once endemic to the Colorado River and many springs throughout the Salton Sink region. However, the species is presently found only in the Salton Sea and some of its tributaries. As noted in the original SSU6 AFC process, researchers have been surveying for this species intensively since 1980 and have found desert pupfish using several irrigation laterals, agricultural drains, and shoreline pools. However, surveys in the 1990s did not consistently detect desert pupfish in the Salton Sea area. As the Amended Project has pulled back from the Salton Sea and will no longer impact wetlands areas around the Salton Sea, there is no potential for the Project to impact desert pupfish, and no further discussion is provided.

California Brown Pelican (*Pelecanus occidentalis californicus*). The California brown pelican is listed as endangered by both the Federal and State governments and is a regular visitor to the Salton Sea. The migrants typically begin to arrive in June and depart by late fall, with populations peaking from July to September. Most do not nest in the area, as reported in the original SSU6 AFC, although a few pairs formed in 1996 through 1999, and nests were temporarily established on Obsidian Butte, Mullet Island, and at the mouth of the Alamo River (CEC, 2003b). As noted in the Final Commission Decision, a California brown pelican loafing area is located along the islands south and west of Obsidian Butte (CEC, 2003a). California brown pelicans were consistently seen in spring 2003 along the Salton Sea shoreline at the corner of Lack and Lindsey Roads (USFWS, 2003a). These 2003 sightings were outside of the survey area for the Amended Project but in proximity to the L-Line transmission interconnection.

American White Pelicans (*Pelecanus erythrorhynchos*). The American white pelican, a California Species of Special Concern, use the area as a migratory stop over in spring and fall, and some individuals may spend the winter. Both pelican species use the open water portion of the sea for resting and feeding. Tens of thousands of pelicans use Mullet Island (about four miles north of Obsidian Butte).

Since 1996, there have been several outbreaks of avian botulism at the Salton Sea. The most affected birds in these outbreaks were American white pelicans and California brown pelicans. Mortality from these outbreaks is high. For example more than 8,000 American white pelicans and over 1,000 California brown pelicans were killed in a 1996 outbreak (CEC, 2003b). Also, California brown pelicans have been attracted to aquaculture farms in the Salton Sea area, and rapid flights from these ponds have resulted in deaths due to collisions with electrical distribution lines (CEC, 2003a).

Yuma Clapper Rail (*Rallus longirostris yumanensis*). The Yuma clapper rail is listed by the Federal government as endangered and as threatened by the State of California. The species is a year-round resident of the Project area and is known to breed in marshes on the lower Alamo and New Rivers. These birds are secretive and prefer extensive and undisturbed marshes for foraging and nesting. However, they are adaptable to a variety of ephemeral and disturbed wetland conditions (Garrett and Dunn 1989). Their

preferred habitat is mature cattail-bulrush stands with shallow water, but they will forage in adjacent agricultural areas.

Yuma clapper rails use calls to find mates and defend territories in the dense marsh habitat. Rails call primarily near dawn and dusk, or during morning and evening twilight. Most of the rails in the area are found on Refuge lands, which are managed to promote dense cattails. A number of areas of the Refuge have been identified as habitat, and researchers have suggested that exploring new areas in the Imperial Valley might find additional occupied habitat (Burditt, 2002).

Only a very small percentage of the local area around the Amended Project site is suitable nesting habitat because of the dominance of agriculture and also because of the active removal of cattails from irrigation canals to improve water supplies. The Applicant conducted surveys for Yuma clapper rail in 2001 and 2002 for the original SSU6 project and noted several individuals in areas adjacent to the originally proposed locations for production pipeline OB-3 and production well pad OB-1 (CEOE, 2002a, Figure 5-1). However, production facilities have been relocated to within the plant site for the Amended Project, thereby avoiding direct impacts to Yuma clapper rail.

Riparian Birds. Both the New River and Alamo River, to the southwest and east of the Project site respectively, have areas of mature riparian habitat, mostly dominated by tamarisk (*Tamarix* spp.). The least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*), both federally and State-listed as endangered are dependent on mature riparian vegetation near open water. Although tamarisk is generally low-quality nesting habitat for these species, the species will nest in dense tamarisk near open water (USFWS, 1995). Neither species has been observed in the Project area. Yellow-breasted chats (*Icteria virens*), a California Species of Special Concern, occasionally can be found in the Salton Sea area, but normally there are fewer than five individuals in any given season (CEC, 2003b).

California Black Rail (*Lateralus jamaicensis coturniculus*). The California black rail is a State-listed threatened species that has scattered occurrences in the Salton Sink. Black rails require dense vegetation cover, but the vegetation types utilized by the species at the Salton Sea have not been described. General surveys in 2002 did not detect black rail within the Project area, and 2008 surveys by the Applicant's consultants also did not detect the species. The Refuge lists the black rail as having occasional occurrence in the area, normally less than five individuals per season.

Mountain Plover (*Charadrius montanus*). Mountain plover is a California Species of Special Concern. The species has been proposed in the past for listing as a federal threatened species, but in 2003 the USFWS withdrew the proposed listing, because new information indicated that threats to the species were not as significant as earlier believed. The Imperial Valley has been considered to provide wintering habitats for about one-half of the global population (Wunder and Knopf, 2002). This species forages in agricultural fields that have been recently cleared or burned, a condition that is highly variable across the Imperial Valley throughout the year. The mountain plover is not typically observed within the Project area. However, 139 mountain plovers were observed in a freshly burned field near Walker Road and Hoskins Road, about six miles south of the Project plant site during 2002 surveys for the original SSU6 project (CEOE, 2002a).

Western Burrowing Owl (*Athene cunicularia hypugaea*). Western burrowing owls (BUOW) are a California Species of Special Concern and are abundant in southeastern California. They inhabit open areas such as grasslands, pastures, coastal dunes, desert scrub, and the edges of agricultural fields. BUOW use rodent burrows or construct burrows in semi-compacted soil in the slopes of drainage canals next to agricultural

fields. Surveys conducted for the original SSU6 project found BUOW near the plant site and well pads, but not on the sites themselves. Protocol Phase I and Phase II BUOW surveys conducted in late 2008 also observed BUOW and occupied burrows near the plant site and injection well pads and pipelines, but not within the Project footprint itself (see Sections 5.3.3.4 and 5.3.3.5 below).

Loggerhead Shrike (*Lanius ludovicianus*). Loggerhead shrike, a California Species of Special Concern, is an uncommon resident of the area. This species prefers very open and semi-open habitats where suitable hunting perches are available. The species was not seen during avian surveys conducted for the originally proposed SSU6 project. The 2003 FSA concluded that as the species is not expected to occur in the Project area, no further analysis is warranted.

Black Skimmer (*Rynchops niger*). Black skimmers are a California Species of Special Concern which are fairly common summer residents of the Salton Sea (CDFG, 2005). They were first reported to nest at the Salton Sea in 1972 (McCaskie et al., 1974) and have been known to nest at Rock Hill and Mullett Island, near the mouth of the Alamo River (CEC, 2003b). Black skimmers were not observed in the surveys conducted for the original project or the Amended Project, and there are no anticipated Amended Project impacts to this species.

Le Conte's Thrasher (*Toxostoma lecontei*). Le Conte's thrashers are typically found in sparsely vegetated desert flats, dunes, alluvial fans, or other areas where saltbush (*Atriplex* sp.) or cholla cactus (*Opuntia* sp.) are present. Le Conte's thrasher is not present in the irrigated portions of the Imperial Valley and the Colorado River, although it breeds in drier habitats outside of these areas (Garrett and Dunn, 1981). This species was not detected during avian surveys and there are no records of this species since 1952. According to the 2003 FSA, suitable habitat is lacking in the immediate area of the Project, and thus no further analysis is warranted.

Gull-billed Tern (*Gelochelidon nilotica*). The gull-billed tern, a California Species of Special Concern, breeds sporadically in the Salton Sea. The main nesting location is near Rock Hill in a wetland area managed by the Refuge; the species also nests on Mullett Island. In the mid-1990s terns nested on the shoreline of Obsidian Butte (CEOE, 2002a; 2002e), and in the spring of 2003, gull-billed terns established a nesting colony on offshore islands adjacent to Obsidian Butte (USFWS, 2003a). The 2003 FSA did not express any concerns with impacts to terns from the original project. As the Amended Project has moved Project elements further away from Obsidian Butte and the Salton Sea, impacts to gull-billed terns are expected to be less than significant.

Birds of Prey. Birds of prey as a group are considered sensitive because of loss of foraging areas, their vulnerability to human disturbance at their nest site, low population densities, and their position at the top of the food chain. Several species have been observed flying over and foraging within the Project area. These include northern harrier (*Circus cyaneus*, California Species of Special Concern), ferruginous hawk (*Buteo regalis*), prairie falcon (*Falco mexicanus*), and red-tailed hawk (*Buteo jamaicensis*). American kestrels (*Falco sparverius*) are abundant in the Project area, and were observed foraging in the agricultural fields during the 2002 biological surveys. Tall structures suitable for perching and nesting are not plentiful in the study area and those that are present are used extensively by raptors. Raptors have been observed using existing power poles and transmission towers for these purposes, as well as the scattered clumps of trees in the area.

Flat-tailed Horned Lizard (*Phrynosoma mcallii*). This species has been proposed in the past for listing under the Federal ESA, but the USFWS withdrew its proposal for listing in 2006. This species is a California Species of Special Concern. It is an uncommon resident of fine, windblown (aeolian) sands of the low Colorado Desert in southern California and northeastern Baja California (Stebbins, 1985). Surveys of the Project areas in 2002 and 2008 did not identify any appropriate habitat for the flat-tailed horned lizard so there are no anticipated Amended Project impacts to this species.

Bats. Several bat species are attracted to the agricultural lands in the Project area, where they forage for fruit and insects. A number of these species are California Species of Special Concern, including the California leaf-nosed (*Macrotus californicus*), Townsend's big-eared (*Plecotus townsendii*), and California mastiff (*Eumops perotis californicus*) bats.

Former California Species of Special Concern. Several bird species discussed in the AFC for the original SSU6 project have since been removed from the CDFG's list of Species of Special Concern (CDFG, 2008b; L. Comrack, personal communication). These include the double-crested cormorant (*Phalacrocorax auritus*), white-face ibis (*Plagadis chichi*), Cooper's hawk (*Accipiter cooperi*), sharp-shinned hawk (*Accipiter striatus*), prairie falcon (*Falco mexicanus*), ferruginous hawk (*Buteo regalis*), merlin (*Falco columbarius*), osprey (*Pandion haliaetus*), long-billed curlew (*Numenius americanus*), California gull (*Larus californicus*), laughing gull (*Larus atricilla*), Caspian tern (*Sterna caspia*), and elegant tern (*Sterna elegans*). As was the case for the original project, the Amended Project is not anticipated to have significant impacts on these bird species. Due to the lack of continued special regulatory status for these species, no further analysis is warranted.

Table 5.3-5 Special Status Species Known to Occur in the Project Vicinity

Plants	
<i>Astragalus magdalenae</i> var. <i>peirsonii</i> (Peirson's milk-vetch)	FT, CE, CNPS List 1B
Wildlife	
Birds	
<i>Pelecanus occidentalis californicus</i> (California brown pelican)	FE, CE, CFP
<i>Pelicanus erythrorhynchos</i> (American white pelican)	CSC
<i>Ixobrychus exilis</i> (least bittern)	CSC
<i>Circus cyaneus</i> (Northern harrier)	CSC
<i>Rallus longirostris yumanensis</i> (Yuma clapper rail)	FE, CT, CFP
<i>Laterallus jamaicensis coturniculus</i> (California black rail)	CT, CFP
<i>Charadrius montanus</i> (mountain plover)	CSC
<i>Chlidonias niger</i> (black tern)	CSC
<i>Rynchops niger</i> (black skimmer)	CSC
<i>Athene cunicularia hypugaea</i> (western burrowing owl)	CSC
<i>Empidonax traillii extimus</i> (southwestern willow flycatcher)	FE,

Table 5.3-5 Special Status Species Known to Occur in the Project Vicinity

<i>Vireo bellii pusillus</i> (least Bell's vireo)	FE, CE
<i>Lanius ludovicianus</i> (loggerhead shrike)	CSC
<i>Dendroica petechia</i> (yellow warbler)	CSC
<i>Icteria virens</i> (yellow-breasted chat)	CSC
<i>Toxostoma lecontei</i> (Le Conte's thrasher)	CSC
<i>Gelochelidon nilotica</i> (gull-billed tern)	CSC
Fish	
<i>Cyprinodon macularius</i> (Desert pupfish)	FE, CE
<i>Phrynosoma mcallii</i> (Flat-tailed horned lizard)	CSC
Mammals	
<i>Eumops perotis californicus</i> (California mastiff bat)	CSC
<i>Macrotus californicus</i> (California leaf-nosed bat)	CSC
<i>Plecotus townsendii</i> (Townsend's big-eared bat)	CSC
Status Legend: FE: Federally Endangered FT: Federally Threatened CE: California Endangered CT: California Threatened CFP: California Fully-protected Species FE: Federally Endangered FPT: Federal Proposed Threatened CSC: California Species of Special Concern CNPS List 1B: Rare or endangered in California and elsewhere.	

5.3.3.5 Biological Survey Methods

Biological Surveys Conducted for Original SSU6 Project

Biological surveys for the original SSU6 project were conducted in 2001 and 2002. They are documented extensively in the original SSU6 AFC and summarized briefly below. The study area for the previous surveys included each of the original project elements plus the areas within one mile of the plant site and within 1,000 feet of the linear facilities. Literature sources, databases, and field surveys were used.

Wildlife survey methods included early morning bird surveys, systematic, pedestrian and driving surveys of linear facility routes, and fish sampling. Focused surveys were conducted for BUOW, Yuma clapper rail, and desert pupfish. The California Natural Diversity Database (CNDDDB) was reviewed to support the surveys.

An avian flyover analysis was conducted to establish the numbers and types of waterfowl and shorebirds potentially affected by new facilities and transmission lines in the project area. Project biologists also collected data from several biological surveys of the Obsidian Butte study area from 1999 to 2002 and conducted shoreline and transmission-line flyover surveys, as well as avian abundance surveys. Following the flyover survey, the biologists assessed the abundance of waterfowl and shorebirds and any sensitive species within the project footprint and a 1,000-foot buffer zone, recorded habitat-type and agricultural or

other human activities and noted the presence or absence of water in foraging areas. Focused surveys for sensitive plant species were conducted in 2001 and April 2002. All representative habitats within the study area were visited, and observed plants were documented. The CNDDDB and California Native Plant Society (CNPS) database were reviewed to support the surveys.

Biological Surveys Conducted for the Amended Project

Project biologists conducted wildlife and botanical field surveys of the Amended Project area in September through December of 2008. Biological surveys conducted for the Amended Project covered the plant site and areas in which changes have been proposed compared to the original SSU6 project (e.g., different offsite injection well pads and pipelines). As required under CEC guidelines, surveys also covered a one-mile buffer zone around the plant site, borrow site, and well pads, including a 1,000-foot buffer zone around pipeline ROWs.

For BUOW, a general habitat assessment (Phase I) survey was conducted in September 2008 for areas within one mile of the plant site, borrow site, and well pads and within 1,000 feet of pipeline ROWs. In accordance with the 1993 BUOW Survey Protocol established by the California Burrowing Owl Consortium, a protocol-level burrow survey (Phase II) was conducted within a 500-foot buffer around the plant site, well pads, pipelines, and borrow site. The Phase II BUOW survey was conducted in November and December 2008. Areas were scoped, walked, and viewed from vehicles to determine the location of BUOW, potential burrowing opportunities, and BUOW sign (e.g., white-wash, pellets, feathers, bones), which were then mapped using GPS units.

The wildlife and botanical surveys in the injection well pad areas consisted of a pedestrian survey, while the pipeline routes and buffer areas surveys consisted of windshield surveys conducted by driving slowly (15 to 25 miles per hour) along dirt and paved roads throughout the entire injection well/pipeline areas and in surrounding areas. At several points during the surveys, biologists focused their attention on areas with a higher potential for supporting special status animal and plant species where very small patches of native plants were found. None of these areas can be considered native habitat, as the patches of native plants were usually just a few feet in diameter and were always mixed with nonnative weed species associated with agricultural fields.

The surveys were planned to achieve three primary objectives: 1) characterize and identify all vegetation communities occurring within the study area and the potential for these communities to support special status species; 2) perform vegetation community mapping for the new injection well sites; and 3) map and record sensitive species incidentally observed during the survey.

Surveys were conducted in accordance with the sensitive species survey guidelines provided by the CDFG and USFWS, and CEC siting regulations. Database information for the known sensitive species occurrences in the region includes the CNDDDB, and the CDFG RareFind occurrences database and Inventory of Rare and Endangered Plants.

5.3.3.6 Survey Results

Biological Surveys Conducted for the Original SSU6 Project

The observed vegetation in the original SSU6 surveys consisted primarily of a mixture of native and nonnative herbaceous species commonly found in disturbed areas. There were no sensitive plant species observed on or near the Project site. The ongoing cultivation of the agricultural fields throughout the area and the use of access roads essentially precludes habitat that can support sensitive plant species.

Three special-status wildlife species were detected during biological surveys for the original SSU6 project: 1) BUOW, 2) Yuma clapper rail, and 3) California brown pelican. BUOW were detected in the vicinity of the plant site along McKendry Road and along Grubel Road, south of the plant site. BUOW also were observed in the vicinity of the originally proposed locations for production well pads OB2, OB4, and OB5; production pipeline OB3; and injection well pads OBI1, OBI2, and OBI3 and their associated pipelines. (As discussed in Section 5.3.4 below, these facilities have been relocated for the Amended Project, reducing potential impacts to BUOW).

Yuma clapper rail and/or clapper rail habitat were observed in the vicinity of the originally proposed locations for production well pads OB1 and OB2 and production pipelines OB1 and OB3. (These production facilities have been relocated for the Amended Project, thus avoiding direct impacts to Yuma clapper rail habitat.) California brown pelicans were observed during flyover surveys on several occasions in the Project vicinity.

Biological Surveys Conducted for the Amended Project

Wildlife and botanical surveys conducted in 2008 found no habitat within the Amended Project footprint for listed wildlife and plant species. With the exception of the BUOW and the Yuma clapper rail, no suitable habitat for special-status species was found within the Amended Project survey area.

During the 2008 Phase I and Phase II BUOW surveys of the Amended Project site, one potential BUOW burrow was found within 500 feet of the plant site boundary (see Figures 5.3-1 and 5.3-2). In addition, one burrow was found with recent sign near injection well pad OB-1 and one BUOW was found within 500 feet of injection pipeline OB-1. The BUOW surveys conducted for the borrow site indicated that there are no BUOW occurrences within 500 feet of the borrow site. No BUOW or burrows were observed within the Amended Project footprint. The total size of the BUOW populations on the Amended Project site will be determined during focused breeding season (Phase III) surveys to be conducted in the spring of 2009.

No Yuma clapper rails were observed during the 2008 surveys. However, a freshwater wetland area with suitable Yuma clapper rail habitat was observed adjacent to the northwest corner of the plant site.

5.3.3.7 Sensitive Habitats

The Refuge and CDFG manage wetlands throughout the southern Salton Sea area. There are three major wetland complexes in the project area: Wister Unit, Alamo River delta, and Unit 1 of the Refuge. The Wister Unit of the Imperial Wildlife Area includes the largest complexes of managed wetlands in the Salton Sink region. The Alamo River delta and Refuge Unit 1 also contain wetlands. The largest riparian area in the southern Salton Sea area is at the mouth of Thiery Creek (near Bombay Beach), over 15 miles north of the site. The riparian area resulted primarily from long-term seepage from the Coachella Canal. The New

River and Alamo River also have patches of riparian habitat along their banks and at their mouths. The open water and shoreline of the Salton Sea attracts waterfowl and other birds, which spend the winter at the Refuge. The numerous canals and drains in the area provide strips of open water that are used by wildlife. During the 1950s herbivorous game fish were introduced to the canals to control weeds. The game fish provided an abundant food source for migrating birds.

Several islands in the Salton Sea contain rookeries (high density bird nesting areas). The southern edge of the Sea has 15 identified rookeries and there also is one on the Alamo River (Redlands Institute, 2002). As farming in the Salton Sea area increased in the 1940s, migrating waterfowl became increasingly dependent on the crops for food. Flooded croplands can also attract waterfowl. The Refuge manages lands throughout the area as cropland for use by wildlife.

As mentioned earlier, the water level of the Salton Sea receding and salinity has been increasing. Increases in salinity threaten the quality of the habitat, particularly if such increases continue in the future. .

5.3.3.8 Refuges, Wilderness Areas and Parks

The Wildlife Refuge actively manages agricultural lands, wetlands, and upland habitat to supply foraging and nesting opportunities to the many birds that migrate to the Salton Sea. However, most of the land surface in the Project area is regularly disturbed by farming activities. Little or no cover or suitable nesting habitat occurs more than one foot above the surface on agricultural fields. However, the fields provide foraging habitat for species that prey on small mammals and insects.

The Wildlife Refuge was established in 1930 and it leases and owns lands along the Salton Sea's southeast shoreline. The primary purpose of the Wildlife Refuge is to protect habitat for migrating birds and for endangered species. It also is important for resting, feeding, and nesting for shorebirds. As mentioned earlier, the quality of the habitat is threatened by the increases in salinity of the Salton Sea.

The Salton Sea State Park, which later became the Salton Sea State Recreation Area, was dedicated in 1955. The Salton Sea State Recreation Area is located approximately 14 miles northwest of the Project plant site along the Salton Sea's eastern edge.

The CDFG manages the Imperial Wildlife Area between Brawley and North Shore, near Highway 111. The Wildlife Area is divided into the Wister, Hazard, and Finney-Ramer units. The CDFG also manages the San Felipe Creek Ecological Reserve near the intersection of State Highways 86 and 78. Portions of San Felipe Creek are a BLM Area of Critical Environmental Concern. There are a variety of parks and wilderness areas in the region. These include Joshua Tree National Park, Santa Rosa Mountains Wilderness, North Algodones Wilderness Area (part of Imperial Sand Dunes Recreation Area), Mt. San Jacinto State Park, Cuyamaca Rancho State Park, and Anza Borrego Desert State Park. The USFWS also manages three other national wildlife refuges in the region, none in the Project vicinity. These are: the Coachella Valley National Wildlife Refuge near Palm Springs, and the Cibola and Imperial National Wildlife Refuges along the Colorado River.

5.3.4 Environmental Impacts

This section discusses impacts on biological resources that are expected to result from the project. Site selection and routing of project components have been specifically designed to avoid or substantially

5.3 Biological Resources

minimize adverse impacts. Potential impacts are described for construction and operation phases of the Project and by Project component. Significance criteria are defined in the general context of the California Environmental Quality Act of 1970. Potentially significant impacts to biological resources include, but are not limited to:

- Substantial adverse effects to wildlife species that are federally or State-listed or proposed to be listed; a substantial impact to wildlife species of special concern to CDFG, candidates for State listing, or animals fully protected in California;
- Substantial adverse effects to plant species considered by the CNPS to be rare, threatened, or endangered in California or with strict habitat requirements and narrow distributions
- Substantial adverse effects to a sensitive natural community (i.e., community that is especially diverse; regionally uncommon; or of special concern to local, State, and Federal agencies);
- Substantial adverse effects to habitats that serve as breeding, foraging, nesting, or migrating grounds and are limited in availability or that serve as core habitats for regional plant and wildlife populations; and
- Substantial adverse effect to important riparian habitats or wetlands or any other “waters of the U.S.” or State jurisdictional waters.

Direct impacts occur when biological resources are altered or destroyed during the course, or as a result, of project implementation. Examples of such impacts include removing vegetation, filling wetland habitats, or severing or physically restricting the width of wildlife corridors. Other direct impacts may include loss of foraging or nesting habitat and loss of individual species as a result of habitat clearing. Indirect impacts may include elevated levels of noise or lighting, change in surface water hydrology within a floodplain and increased erosion or sedimentation. These types of indirect impacts can affect vegetation communities or their potential use by sensitive species. Permanent impacts may result in irreversible damage to biological resources. Temporary impacts are interim changes in the local environment that would not extend beyond Project-associated construction, including temporary disturbance to areas adjacent to native habitats that are then revegetated once construction is complete. .

5.3.4.1 Construction

Construction activities have the potential to result in temporary indirect impacts in a variety of ways. In general, Project construction activities would result in temporary reduction of wildlife use on adjacent lands as a result of human presence, construction dust, lighting, and noise. Wildlife use would be expected to return to pre-construction rates following the completion of construction activities.

Vegetation Communities

Project construction activities would not result in significant direct impacts to sensitive vegetation communities because no such communities occur within the Project site or along pipeline ROWs. Development of the Amended Project, including the injection well pads and pipelines, will result in the long-term loss of approximately 213.4 acres of land, of which 181.1 acres are agricultural lands, 14.1 acres are developed lands, 17.8 acres are roadways or agricultural ditches, and 1.2 acre is tamarisk scrub. The loss is not considered significant by itself or cumulatively with other projects because agricultural land, developed land, and roadways/agricultural ditches are not considered regionally important as habitat for wildlife.

Plant Species

Construction of the Project would not result in significant direct impacts to special-status plant species because special status plants are not known to occur within the Project area.

Wildlife Species

Construction activities have the potential to result in temporary indirect impacts in a variety of ways. In general, Amended Project construction activities would result in temporary reduction of wildlife use on adjacent lands as a result of human presence, construction dust, lighting, and noise. Wildlife use would be expected to return to pre-construction rates following the completion of construction activities.

Equipment used during construction of the facilities will result in air emissions of particulate matter (PM10 and PM2.5), nitrogen oxides (NOX), carbon monoxide (CO), and sulfur dioxide (SO2). These pollutants have the potential to affect biological resources. Detailed information on construction emissions is included in Section 5.2, Air Quality. Impacts from construction emissions were shown in Section 5.2, Air Quality, to be below applicable ambient air quality health and secondary standards and likewise are below significance criteria established for impacts to plants and wildlife.

Development of the site is expected to represent a minimal loss of raptor foraging habitat, and should not be limiting to raptor species in the area. As stated in the 2003 Staff Assessment for the original SSU6 project, construction at the plant site will not result in significant direct or indirect impacts to wildlife movement corridors because of the already highly fragmented habitat. The limited fencing around the injection well pads and the lack of a fence (physical barriers) between the plant site and the well pads are not expected to limit or impede foraging activity or general movements of wildlife species.

Project construction would generate average noise levels of approximately 85 dBA Leq at 50 feet from the construction activity; noise levels would attenuate to 60 dBA Leq at a distance of approximately 530 feet from the source (see Section 5.8 Noise). The USFWS considers 60 dBA Leq to be the threshold of significance for federally listed breeding birds. Construction activities in the power blocks of the three 53 (net) MW units would occur at locations considerably greater than 530 feet from the boundary of the 160-acre site, and the noise generated from these locations would attenuate to below 60 dBA within the site boundary. However, Amended Project construction in the northwest corner of the plant site and pile driving for foundations of some Project equipment in the center of the site have the potential for indirect impacts to Yuma clapper rail. Potential noise impacts specific to Yuma clapper rail are described further in the following section.

Yuma Clapper Rail

As indicted earlier, the freshwater wetland northwest of the plant site provides a potential nesting and foraging habitat for the Yuma clapper rail. The relocation of production facilities to within the plant site for the Amended Project will avoid direct impacts to this habitat. However, Yuma clapper rail may be impacted indirectly by Project construction noise occurring in the northwest corner of the plant site and by pile driving for the foundations of various Project heavy equipment items in the power block area in the center of the site. However, the Amended Project's larger site (160 acres compared to 80 acres for the original SSU6 project), has allowed the Amended Project power block facilities to be placed further from the northwestern

areas of the plant site and thus further from the clapper rail habitat. Construction noise levels exceeding the USFWS threshold of 60 dBA are expected to extend into the potential clapper rail habitat next to the site

Construction activities in the northwestern area of the plant site will consist of site grading and construction of the flood control berm, storm water detention pond, an aerated brine injection well, and Production Well Pad OB-2 (see Figure 2-6 in Section 2.0, Project Description). The potential impacts from these activities would be temporary and would occur over a relatively small area. All civil site work, including the construction of the storm water detention pond and the berm around the entire perimeter, is expected to be completed in six months, and the detention pond and berm construction in the northwest corner will be a small portion of the total civil effort and duration. The berm will be constructed in the early stages of the Project (see Figure 2-14 in Section 2.0, Project Description). Once constructed, the flood control berm itself would provide some noise shielding for receptors within the immediate areas beyond the berm. This is particularly true for Yuma clapper rail, a bird species that builds its nests close to the ground.

Construction of the onsite well pads will occur over a ten-month period, only a portion of which will involve construction of Production Well Pad OB-2 and the plant injection wells. As noted earlier the USFWS uses 60 dBA Leq as a threshold of impacts for wildlife species. With the exception of pile driving activities, noise levels from plant site construction activities outside the northwestern portion of the site, including construction at the power blocks and production well pads OB-1 and OB-3, are expected to attenuate to less than 60 dBA Leq before reaching the plant site boundary. The Amended Project's potential noise impacts to Yuma clapper rail are expected to be less than those for the originally proposed SSU6 project, due to the relocation of production facilities to the plant site and the relocation of the plant equipment that require pile driving further from Yuma clapper rail habitat.

With implementation of mitigation measures incorporated in the Conditions of Certification (see Section 5.3.6), potential noise impacts to Yuma clapper rail during construction would be reduced. These mitigation measures would create a noise abatement program for the construction of the Amended Project, particularly during construction activities involving heavy equipment in the northwest area of the plant site, which is the area closest to clapper rail habitat. The noise abatement program also will establish a noise monitoring program to ensure that the abatement program is properly implemented.

Consistent with the Conditions of Certification for the original SSU6 project, if construction noise were to exceed 60 dBA Leq hourly at the edge or within occupied Yuma clapper rail habitat during the breeding season (February 15 to August 31), then construction would be curtailed or quieted such that resultant noise levels would be less than 60 dBA. Because the concern would be disturbance to clapper rail mating calls (breeding activity) that occur only near sunrise and sunset, construction work would only be potentially affected for one-half hour before and one hour after sunrise and one hour before and one-half hour after sunset on any given day. Other listed species present in the Project vicinity would not be significantly impacted by construction noise.

There is no known Yuma clapper rail habitat within 1,000 feet of the three injection well pads, and Yuma clapper rails are not expected to be impacted by injection well pad construction noise. The construction of the proposed injection well pads and pipelines will not have any impacts to wetlands or other jurisdictional waters.

During plant commissioning, the plant piping will be cleaned by high-pressure steam (steam blows) during daytime hours over an approximately 72-hour period. Steam blows produce noise levels up to 118 dBA at a

distance of 100 feet. A noise silencer can attenuate the steam blow by approximately 44 dB to about 74 dBA, which would attenuate with distance to the 60 dBA USFWS threshold at approximately 400 feet (within the plant site boundary). Therefore, Project steam blows would have no significant impacts on Yuma clapper rail or other special-status species.

Burrowing Owl

The construction of the power plant is expected to have temporary impacts to one potential BUOW burrow within 500 feet of the plant site boundary (the BUOW survey protocol buffer zone) (see Figures 5.3-1 and 5.3-2). Owls potentially inhabiting this burrow would be impacted by the noise, dust, and other disturbances associated with the construction of the plant site. Indirect disturbance of adjacent owl populations due to construction is not considered permanent, as temporarily displaced owls would be expected to return upon completion of Project construction.

BUOW surveys conducted for the Amended Project indicated the presence of one burrow with recent sign near injection well pad OB-1 and one owl within 500 feet of injection pipeline OB-1. The BUOW surveys conducted for the borrow site indicated that there are no BUOW occurrences within 500 feet of the borrow site. Mitigation measures will be implemented to reduce or eliminate impacts to BUOW, as discussed below in Section 5.3.6.

Mountain Plover

Mountain plovers overwinter in agricultural fields, such as the alfalfa fields found in the Project area. This species prefer to forage in recently burned or heavily grazed agricultural fields and only roost in abandoned or fallowed agricultural fields. Since the parcels encompassing the plant site, the offsite well pads and pipelines, and the borrow area do not fall into any of those categories, the Amended Project will not result in loss of foraging habitat of this species. Project construction may result in some loss of roosting habitat. Because the Project area predominantly consists of agricultural lands including much of the immediate vicinity, there is ample roosting habitat for this species, and impacts to the mountain plover from Project construction would be considered to be less-than-significant.

California Brown Pelican

In the Project area, the California brown pelicans are known to use the islands to the west of Obsidian Butte in the summer (approximately 0.7 miles from the proposed plant site). This nesting site is sufficient distance from the plant site such that the noise levels generated from the construction activities proposed within the northwestern corner of the plant site (e.g., production well OB-2) are not expected to negatively impact any pelicans loafing or nesting in this area. However, construction noise in the northwestern area of the plant site might temporarily displace feeding or loafing pelicans along the Salton Sea shoreline and open water area just northwest of the plant site. Because the Amended Project facilities have been moved further away from the Salton Sea islands used by this species, the impacts of the Amended Project on the California Brown Pelican would be reduced compared to the original SSU6 project.

Jurisdictional Waters

As part of the original SSU6 project, the Applicant submitted an application for a Section 404 permit for potential impacts to wetlands along McKendry Road. These impacts have been eliminated because of the

Amended Project's relocation of all production wells to the plant site. Construction of the other Amended Project facilities (injection well pads and pipelines and borrow site) will have no wetlands impacts. However, there are approximately 0.08 acres of ephemeral drainages on BLM land along the transmission line route that are considered Federal jurisdictional waters. While transmission line impacts are not covered in this Amendment Petition because they have not changed from original SSU6 project, a 404 permit from the USACE will be required for potential impacts to these drainages.

5.3.4.2 Operation

Following initial construction activities, Amended Project operation would also generate varying levels of dust, lighting and noise disturbance adjacent to the plant site and offsite well pads and, on limited occasion, in proximity to injection well pipelines. The level of disturbance from noise, lighting, etc., often associated with maintenance activities, would be both of smaller magnitude and of shorter duration than those associated with construction. A small, less-than-significant increase in the sorts of disturbance would also be anticipated for day-to-day general Project operations at the plant site.

Vegetation Communities

Operation of the Amended Project would not result in significant direct impacts to sensitive vegetation communities because no sensitive vegetation communities occur on the site or within the surrounding survey buffer area. Operation potentially could result in indirect impacts to vegetation communities through unauthorized access by workers. Unauthorized access by workers and their vehicles can trample and destroy vegetation outside of, but immediately adjacent to, the proposed Project area. These impacts will be avoided, however, through implementation of Project mitigation measures (e.g., worker awareness training).

Plant Species

Operation of the Project would not result in significant direct impacts to special-status plant species because special-status plants are not known to occur within the Project area.

Wildlife Species

Direct impacts could result from mortality of wildlife by crushing or vehicle collisions during operation and maintenance activities. Implementation of the impact avoidance, minimization, and mitigation measures will reduce the Project's impacts on listed and special-status wildlife species to a level of insignificance.

For protected wildlife species, indirect impacts are possible due to the noise associated with the operations of the proposed Project. Acoustical calculations were performed to estimate the location of the 60 dBA Leq noise contour from operation of the plant. For plant operation, the 60 dBA Leq contour is located just within the plant site. As the plant facilities are located in the center of the plant site (approximately 750 feet away from clapper rail habitat), operation sound levels of the plant would be less than the 60 dBA Leq threshold in the Yuma clapper rail habitat located to the northwest of the plant site (Figure 5.8-2 in Section 5.8.2, Noise). For the injection wells, the 60 dBA Leq contour is approximately 30 feet from the noise source and will remain within the boundaries of the well pad. Therefore, no significant noise impacts to the Yuma clapper rail or other sensitive bird species would occur as a result of operation of the Amended Project.

Jurisdictional Waters

Operation of the Amended Project plant site and offsite well field would not result in significant direct or indirect impacts to Federal or state Jurisdictional Waters. No jurisdictional waters exist within the footprints of these facilities.

5.3.4.3 Cumulative Impacts

With mitigation, the Amended SSU6 project itself will not have significant adverse effect on biological resources. The cumulative impacts to specific environmental resources resulting from the Project considered together with other projects in the area also would be less than significant. Other projects would be required individually to comply with applicable biological resource-related LORS, undergo a CEQA environmental review process, and implement mitigation for their identified impacts. Regional mitigation issues would be addressed and coordinated on a regional basis by local agencies such as Imperial County, the Salton Sea Authority and IID, as well as other interested stakeholders.

5.3.5 Mitigation Measures

Biological resources mitigation measures are embodied in the CEC's Conditions of Certification (COC) for the original project. These COC have been adopted and modified by the Applicant to make them appropriate for the Amended Project in the following section.

5.3.6 Conditions of Certification

The COCs presented in the Commission Decision for the original SSSU6 project are presented below. Applicant-proposed changes to the COCs to make them applicable to the Amended Project are shown in ~~strike through~~ (deletions) and *italics* (additional or modified language). The modifications indicate in italics where COCs (or parts of COCs) apply to transmission lines, as these portions of the COCs do not apply to this Amendment Petition. BIO-24 has been deleted because the wetlands impacts that led to the requirement for wetlands mitigation will not occur with the Amended Project. However, the Applicant plans to undertake a wetlands creation program on a voluntary basis.

Designated Biologist and Biological Monitor(s) Selection

BIO-1 The project owner shall submit the resume(s), including contact information, of the proposed Designated Biologist and any Biological Monitor(s) to the Compliance Project Manager (CPM) for approval.

Verification: The project owner shall submit the resume and contact information for the Designated Biologist and Biological Monitor(s) to the CPM at least 60 days prior to the start of any site (or related facilities) mobilization. The Designated Biologist must have a thorough understanding of the Conditions of Certification, the federal and state permits, and the monitoring procedures established in the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). Site and related facility activities shall not commence until an approved Designated Biologist is available to be on site and to train all Biological Monitors. Biological Monitor(s) training shall include familiarity with the Conditions of Certification, the federal and state permits, and the monitoring procedures established in the BRMIMP.

The Designated Biologist must meet the following minimum qualifications:

5.3 Biological Resources

1. Bachelor's Degree in biological sciences, zoology, botany, ecology, or a closely related field;
2. Three years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society; and
3. At least one year of field experience with biological resources found in or near the project area.

The Biological Monitor(s) shall have a background in biology and be approved by the CPM.

If a Designated Biologist needs to be replaced, the specified information of the proposed replacement must be submitted to the CPM at least ten working days prior to the termination or release of the preceding Designated Biologist. In an emergency, the project owner shall immediately notify the CPM and submit the qualifications of a short-term replacement. The CPM shall approve the short-term replacement within one business day. The short-term replacement shall have all the duties and rights of a Designated Biologist while a permanent Designated Biologist is proposed to the CPM for consideration.

Designated Biologist and Biological Monitor(s) Duties

BIO-2 The project owner shall ensure that the Designated Biologist and Biological Monitor(s) shall perform the following during any site (or related facilities) mobilization, ground disturbance, grading, construction, operation, and closure activities:

1. Advise the project owner's Construction and Operation Managers on the implementation of the biological resources Conditions of Certification;
2. Be available to supervise or conduct mitigation, monitoring, and other biological resources compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as wetlands and special status species or their habitat;
3. Clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions;
4. Inspect active construction areas where animals may have become trapped prior to construction commencing each day. At the end of the day, inspect for the installation of structures that prevent entrapment or allow escape during periods of construction inactivity. Periodically inspect areas with high vehicle activity (parking lots) for animals in harms way;
5. Notify the project owner and the CPM of any non-compliance with any biological resources Condition of Certification; and
6. Respond directly to inquiries of the CPM regarding biological resource issues.

Verification: The project owner shall ensure that the Designated Biologist and Biological Monitor(s) maintain written records of the tasks described above, and summaries of these records shall be submitted in the Monthly Compliance Reports (MCR).

During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report.

Designated Biologist and Biological Monitor(s) Authority

BIO-3 The project owner's Construction/Operation Manager shall act on the advice of the Designated Biologist or Biological Monitor(s) to ensure conformance with the biological resources Conditions of Certification.

If required by the Designated Biologist or Biological Monitor(s), the project owner's Construction/ Operation Manager shall halt all site mobilization, ground disturbance, grading, construction, and operation activities in areas specified by the Designated Biologist as sensitive or which may affect a sensitive area or species.

The Designated Biologist and Biological Monitor(s) shall:

1. Require a halt to all activities in any area when it is determined that there would be an adverse impact to sensitive species if the activities continued;
2. Inform the project owner and the Construction/Operation Manager when to resume activities; and
3. Notify the CPM if there is a halt of any activities, and advise the CPM of any corrective actions that have been taken, or will be instituted, as a result of the halt.

Verification: The project owner shall ensure that the Designated Biologist notifies the CPM immediately (and no later than the following morning of the incident, or Monday morning in the case of a weekend) of any non-compliance or a halt of any site mobilization, ground disturbance, grading, construction, and operation activities. The project owner shall notify the CPM of the circumstances and actions being taken to resolve the problem.

Whenever corrective action is taken by the project owner, a determination of success or failure will be made by the CPM within five working days after receipt of notice that corrective action is completed, or the project owner will be notified by the CPM that coordination with other agencies will require additional time before a determination can be made.

Worker Environmental Awareness Program

BIO-4 The project owner shall develop and implement a CPM-approved Worker Environmental Awareness Program (WEAP) in which each of its employees, as well as employees of contractors and subcontractors who work on the project site or any related facilities during site mobilization, ground disturbance, grading, construction, operation and closure are informed about sensitive biological resources associated with the project.

The WEAP must:

1. Be developed by or in consultation with the Designated Biologist and consist of an on-site or training center presentation in which supporting written material is made available to all participants;
2. Discuss the locations and types of sensitive biological resources on the project site and adjacent areas. Personnel shall be advised that handling of flat-tailed horned lizards by anyone is prohibited by State law without a permit;

5.3 Biological Resources

3. Present the reasons for protecting these resources;
4. Present the meaning of various temporary and permanent habitat protection measures;
5. Identify whom to contact if there are further comments and questions about the material discussed in the program; and
6. Include a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines.

The specific program can be administered by video by a competent individual(s) acceptable to the Designated Biologist.

Verification: At least 60 days prior to the start of any site (or related facilities) mobilization, the project owner shall provide to the CPM two copies of the WEAP and all supporting written materials prepared or reviewed by the Designated Biologist and a resume of the person(s) administering the program.

The project owner shall provide in the MCR the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date.

The signed training acknowledgement forms from construction shall be kept on file by the project owner for a period of at least six months after the start of commercial operation.

During project operation, signed statements for active project operational personnel shall be kept on file for six months following the termination of an individual's employment.

Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP)

BIO-5 The project owner shall submit two copies of the proposed Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) to the CPM for review and approval, and to California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS) for review and comment, and shall implement the measures identified in the approved BRMIMP.

The final BRMIMP shall identify;

1. All biological resources mitigation, monitoring, and compliance measures proposed and agreed to by the project owner;
2. All biological resources Conditions of Certification identified in the Commission's Final Decision;
3. All biological resource mitigation, monitoring and compliance measures required in federal agency terms and conditions, such as those provided in the USFWS Biological Opinion and Bureau of Land Management (BLM) Right-of-Way permit. (*Note: USFWS Biological Opinion and BLM ROW permit apply to transmission lines; do not apply to Amendment Petition*);
4. All biological resources mitigation, monitoring and compliance measures required in other state agency terms and conditions, such as those provided in the CDFG Incidental Take Permit and Streambed Alteration Agreement (*Note: per new procedures; Incidental Take Permits and Streambed Alteration*

Agreements will be handled as part of the CEC process without a separate permit from CDFG) and Regional Water Quality Control Board permits;

5. All biological resources mitigation, monitoring and compliance measures required in local agency permits, such as site grading and landscaping requirements;
6. All sensitive biological resources to be impacted, avoided, or mitigated by project construction, operation and closure;
7. All required mitigation measures for each sensitive biological resource;
8. Required habitat compensation strategy, including provisions for acquisition, enhancement, and management for any temporary and permanent loss of sensitive biological resources;
9. A detailed description of measures that shall be taken to avoid or mitigate temporary disturbances from construction activities;
10. All locations on a map, at an approved scale, of sensitive biological resource areas subject to disturbance and areas requiring temporary protection and avoidance during construction;
11. Aerial photographs, at an approved scale, of all areas to be disturbed during project construction activities - one set prior to any site or related facilities mobilization disturbance and one set subsequent to completion of project construction. Include planned timing of aerial photography and a description of why times were chosen;
12. Duration for each type of monitoring and a description of monitoring methodologies and frequency;
13. Performance standards to be used to help decide if/when proposed mitigation is or is not successful;
14. All performance standards and remedial measures to be implemented if performance standards are not met;
15. A discussion of biological resources related facility closure measures;
16. A process for proposing plan modifications to the CPM and appropriate agencies for review and approval; and
17. A copy of all biological resources permits obtained.

Verification: The project owner shall provide the specified document at least 60 days prior to start of any site (or related facilities) mobilization. The CPM, in consultation with the CDFG, the USFWS and any other appropriate agencies, will determine the BRMIMP's acceptability within 45 days of receipt. The project owner shall notify the CPM no less than five working days before implementing any modifications to the approved BRMIMP to obtain CPM approval.

Any changes to the approved BRMIMP must also be approved by the CPM in consultation with CDFG, the USFWS and appropriate agencies to ensure no conflicts exist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written report identifying

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which items of the BRMIMP have been completed, a summary of all modifications to mitigation measures made during the project's site mobilization, ground disturbance, grading, and construction phases, and which mitigation and monitoring items are still outstanding.

Closure Plan Measures

BIO-6 Deleted. Refer to General Conditions of Compliance for closure.

Incidental Take Permit

BIO-7 The project owner shall acquire an Incidental Take Permit from the California Department of Fish and Game (CDFG) (per Section 2081(b) of the Fish and Game Code; California Endangered Species Act) if required and incorporate the terms and conditions into the project's BRMIMP.

Verification: At least 30 days prior to the start of any site or related facilities mobilization activities, the project owner shall submit to the CPM a copy of the CDFG Incidental Take Permit (if required). *(Note: Condition applies to transmission lines; does not apply to Amendment Petition also note that per new procedure, CDFG will not issue separate Incidental Take Permits.)*

Streambed Alteration Agreement

BIO-8 The project owner shall acquire a Streambed Alteration Agreement from the CDFG (per Section 1600 of the Fish and Game Code) if required, and incorporate the biological resource related terms and conditions into the project's BRMIMP.

Verification: At least 30 days prior to the start of any site or related facilities mobilization activities, the project owner shall submit to the CPM a copy of the CDFG Streambed Alteration Agreement (if required). *(Note Condition applies to transmission lines; does not apply to Amendment Petition.)*

Regional Water Quality Control Board Certification

BIO-9 The project owner shall acquire the Regional Water Quality Control Board Section 401 state Clean Water Act certification or a waiver if required, and incorporate the biological resource related terms and conditions into the project's BRMIMP.

Verification: At least 30 days prior to the start of any site or related facilities mobilization activities, the project owner shall provide the CPM with a copy of the Regional Water Quality Control Board's certification or waiver. *(Note: Condition applies to transmission lines; does not apply to Amendment Petition.)*

Federal Biological Opinion

BIO-10 The project owner shall provide a copy of the Biological Opinion per Section 7 of the federal Endangered Species Act obtained from the U.S. Fish and Wildlife Service. The terms and conditions contained in the Biological Opinion shall be incorporated into the project's BRMIMP.

Verification: At least 30 days prior to the start of any site or related facilities mobilization activities, the project owner shall submit to the CPM a copy of the U. S. Fish and Wildlife Service's Biological Opinion. *(Note: Condition applies to transmission lines; does not apply to Amendment Petition.)*

U. S. Army Corps of Engineers Section 404 Permit

BIO-11 The project owner shall provide evidence of compliance with the U.S. Army Corps of Engineers Section 404 program of the federal Clean Water Act. The biological resources related terms and conditions contained in the permit shall be incorporated into the project's BRMIMP.

Verification: At least 30 days prior to the start of any site or related facilities mobilization activities, the project owner shall submit to the CPM evidence of compliance with the U.S. Army Corps of Engineers Section 404 program of the federal Clean Water Act. *(Note: Condition applies to transmission lines; does not apply to Amendment Petition.)*

Preventative Design Mitigation Features

BIO-12 The project owner shall modify the project design to incorporate all feasible measures that avoid or minimize impacts to the local biological resources such as the following.

1. Design, install, and maintain transmission line poles, access roads, pulling sites, and storage and parking areas to avoid identified sensitive resources and preferentially use previous pull sites or already disturbed locations. *(Note: Condition applies to transmission lines; does not apply to Amendment Petition.)*
2. Avoid wetland loss to the extent possible when placing facility features.
3. Design, install, and maintain facilities to prevent brine spills from endangering adjacent properties and waterways that contain sensitive habitat.
4. Schedule disposal of brine within brine ponds ~~as expeditiously as possible~~ *on a regular basis.*
5. Design, install, and maintain facility lighting to prevent side casting of light towards wildlife habitat.
6. Insulate production and injection well pipelines and flanges, except during maintenance, NDE testing, and repair activities.
7. Prescribe a road sealant that is non-toxic to wildlife and plants and use only fresh water when adjacent to wetlands, rivers, or drainage canals.
8. Equip steam blow piping with a temporary silencer that quiets the noise of steam blows to no greater than 74 dBA measured at a distance of 100 feet. Orient the silencer to maximize the noise reduction achieved in occupied Yuma clapper rail habitat to the north and northwest of the project site (i.e., Union Pond, McKendry Pond and Obsidian Butte).
9. Shield pile driving equipment to maximize noise reduction in the occupied Yuma clapper rail habitat to the north and northwest of the project site (i.e., Union Pond, McKendry Pond and Obsidian Butte).
10. Design, install, and maintain transmission lines and all electrical components to reduce the likelihood of electrocutions of large birds by following the Avian Power Line Interaction Committee (APLIC)'s Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996. *(Note: Condition applies to transmission lines; does not apply to Amendment Petition.)*

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11. Route the reject reverse osmosis water to the service water pond in lieu of the brine ponds.
12. All mitigation measures and their implementation methods shall be included in the BRMIMP.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP.

Construction Mitigation Management to Avoid Harassment or Harm

BIO-13 The project owner shall manage their construction site, and related facilities, in a manner to avoid or minimizes impacts to the local biological resources.

Typical measures are:

1. Install a temporarily fence and provide wildlife escape ramps for construction areas that contain steep walled holes or trenches if outside of an approved, permanent exclusionary fence. The temporary fence shall be constructed of materials that are approved by USFWS and CDFG. The ramps shall be located at not greater than 1,000-foot intervals and shall be sloped less than 45 degrees. All animals discovered in trenches shall be allowed to escape voluntarily (by escape ramps or temporary structures), without harassment, before construction activities resume, or be removed from the trench or hole by a qualified biologist and allowed to escape unimpeded;
2. Make certain all food-related trash is disposed of in closed containers and removed at least once a week.
3. Prohibit feeding of wildlife by staff or contractors;
4. Prohibit non-security related firearms or weapons from being brought to the site;
5. Prohibit pets from being brought to the site;
6. Minimize use of rodenticides and herbicides in the project area;
7. Advise all employees, contractors, and visitors of the need to adhere to speed limits and to avoid any animals, including burrowing owls, which may be encountered on or crossing the roads to and from the project site. The maximum speed on unpaved roads or on paved roads within 300 feet of occupied sensitive species habitat (such as on McKendry Road west of Boyle road and Lack Road between Kuns and Lindsey Roads) shall be restricted to 15 miles per hour or lower during construction.
8. Inspect all construction pipes, culverts, or similar structures with a diameter of four inches or greater for sensitive species (such as burrowing owls) prior to movement of pipe or pipe burial. Cap all pipes with a diameter of four inches or greater if they are to be left in trenches overnight or in storage areas outside of the construction laydown area.
- ~~9. For the section of pipeline between production well OB3 and the power plant site, empty the concrete-lined pipe at the power plant site. For all remaining sections, empty concrete lined pipe into designed evaporation and percolation ponds;~~

10. Report all inadvertent deaths of sensitive species to the appropriate project representative. Injured animals shall be reported to USFWS and CDFG and the project owner shall follow instructions that are provided by USFWS and CDFG. All incidences of wildlife injury or mortality resulting from project-related vehicle traffic on roads used to access the project shall be reported in the MCR.
11. Implement standard mitigation measures for the flat-tailed horned lizard detailed in the Flat-tailed Horned Lizard Rangewide Management Strategy-Appendix 3 for work in flat-tailed horned lizard habitat. *(Note: Condition applies to transmission lines; does not apply to Amendment Petition.)*
12. Confine construction activities to the plant, well pad, or pipeline side of any existing or constructed barriers (such as roads or levees), *where feasible*, to reduce the potential disruption associated with human presence within occupied sensitive species habitat.
13. Transmission line construction within 1 mile of Lack and Lindsey Roads shall not be conducted at night or when wind speeds exceed 15 miles per hour. *(Note: Condition applies to transmission lines; does not apply to Amendment Petition.)*

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP.

Pre-Construction Monitoring to Avoid Harassment or Harm

BIO-14 The project owner shall provide a baseline survey proposal in the BRMIMP. The CPM, in consultation with the CDFG, Refuge, the USFWS and any other appropriate agencies, will determine the acceptability of the baseline survey protocol(s), the survey area(s) and the Designated Biologist's prescription(s) for potential impacts.

Prior to mobilization, the project owner shall conduct baseline surveys for special status species *with the potential to occur in the Project area* at a level that establishes the occurrence and abundance of species. In addition, mapping of suitable habitat types will be completed for any special status species that potentially occur, but are not present at the time of the baseline survey. Mapping of suitable habitat types will also be completed for any species that can not be surveyed for because of protocol restrictions. The baseline surveys shall cover appropriate habitats within one-mile of the plant site and within 1,000 feet of all linear facilities, unless other areas are deemed more appropriate. Protocol level surveys for Yuma clapper rails shall be conducted by qualified individuals at Union Pond, McKendry Pond, and the adjacent parts of the Vail 5 drain prior to the start of any construction within 0.5 mile of these sites.

The Designated Biologist shall make recommendations to the project owner to avoid or minimize impacts to the special status species based on completed baseline surveys and any protocol level surveys.

Verification: The baseline survey proposal shall include a list of target species and the survey techniques to be used. The list of target species must, at a minimum, include California brown pelicans, mountain plover, burrowing owl, Yuma clapper rail, California black rail and flat-tailed horned lizard *(Note: Flat-tailed horned lizard survey applies to transmission lines; does not apply to Amendment Petition)*. In addition, a proposal for mapping suitable habitats shall, at a minimum, include Yuma clapper rail and mountain plover habitat. The baseline survey proposal shall establish indices (e.g., propensity for flight) for comparison with other monitoring efforts. The baseline survey proposal shall include the survey locations and their distance from the site or linear facilities. The baseline survey proposal shall identify actions that can be taken to

avoid or minimize impacts to the special status species (such as restricting construction to certain months or marking sensitive areas).

The project owner shall provide copies of agency-approved survey protocols in the BRMIMP. At a minimum, the project owner shall include a copy of the agency-approved survey protocol for California black rail and Yuma clapper rail in the event that the baseline surveys show these species are mating or nesting within 1,000 feet of the proposed project. The BRMIMP shall identify at least two southern California or western Arizona biologists that hold a USFWS permit for surveying these species and include their contact information.

Results of the baseline surveys must be submitted to the CPM, USFWS, CDFG and Refuge no later than thirty (30) days prior to the start of mobilization. The protocol survey results shall be submitted to the CPM, USFWS, CDFG and Refuge no more than ten (10) days after completion and at least twenty (20) days prior to mobilization.

Construction Monitoring to Avoid Harassment or Harm

BIO-15 The project owner shall perform monitoring throughout construction to ensure construction-related impacts remain at or below levels of significance set forth in the BRMIMP. The monitoring results shall be compared to the pre-construction baseline surveys' indices and to other local population values.

The project owner shall provide a monitoring proposal and indices for comparison to pre-construction baseline survey work within the BRMIMP. Monitoring must include any sensitive species located during the pre-construction baseline survey and any areas identified as suitable habitat. Protocol level surveys shall be completed for appropriate habitats within 1,000 feet of the plant site and within 1,000 feet of all linear facilities or within specified areas in the Salton Sea Basin during each year that construction is occurring and for the year following construction. The CPM, in consultation with the CDFG, Refuge, the USFWS and any other appropriate agencies, will determine the acceptability of the monitoring protocol(s) and survey area(s).

Verification: The project owner shall provide the results of the construction monitoring in the MCR or annual compliance reports, as appropriate. Protocol survey results shall be compiled into a separate report and submitted within four (4) weeks of completion. The construction monitoring results shall be compared by the designated biologist in the MCR to preconstruction indices established in the BRMIMP (e.g., increased number of flights) and to other local population values collected by the project owner or other entities.

Noise and Vibration Management to Avoid Harassment or Harm

BIO-16 The project owner shall prepare a detailed Noise and Vibration Assessment and Abatement Plan based on the final design of the facility to determine the most practicable measures to reduce/mitigate construction noise and vibration impacts. At a minimum, the Noise and Vibration Assessment and Abatement Plan shall address measures to:

1. Reduce site grading and clearing, pile-driving and steam-blow noise levels using measures that have the maximum sound attenuation effect practicable (e.g., beyond 78 dBA Leq5) at the occupied habitat areas during the Yuma clapper rail mating and nesting season (February 15 to August 31);

2. Ensure overall noise levels at the power plant site during the mating season of Yuma clapper rails (February 15 to August 31), will not exceed the threshold of 60 dBA Leq hourly at occupied habitat areas for one-half hour before and one hour after sunrise and one hour before and one-half hour after sunset; and
3. Ensure site grading and clearing and pile-driving vibrations levels are equal or less than 72 VdB at the northern and western boundaries of the power plant site during the Yuma clapper rail nesting season (June 1 to August 31). The project owner will conduct noise monitoring at the edge of project boundaries facing occupied listed species breeding habitat to verify compliance with any applicable noise restrictions. Other noise and vibration avoidance measures can be considered for approval by the CPM in consultation with involved agencies and may include measures such as sound wall installation and the use of smaller construction equipment in the northwest corner of the Project. Use of this type of equipment will keep the noise levels under 60 dBA.

Verification: The project owner shall submit two copies of the Noise and Vibration Assessment and Abatement Plan to the CPM for review and approval and one copy to the CDFG, Refuge, and USFWS for review and comment 60 days prior to start of any site (or related facilities) mobilization. The Noise and Vibration Assessment and Abatement Plan shall identify all noise and vibration sources by construction phase, the location of all biologically related sensitive receptors, and the noise and vibration levels expected after the implementation of mitigation. The CPM, in consultation with the CDFG, Refuge, USFWS and any other appropriate agencies, will determine the Noise and Vibration Assessment and Abatement Plan's acceptability within 45 days of receipt.

The project owner shall, at a minimum, appoint a person(s) to collect weekly noise measurements at *locations to be determined in consultation with the CPM* ~~original Noise Measurement Locations ML2, ML3 and ML4~~ for a 1-hour period.

The results shall be utilized as follows:

- If noise measurement is outside of Yuma clapper rail mating and nesting season (September 1 to February 14) and exceeds 60 dBA Leq at the edge or within occupied habitat, it shall be highlighted in the data table for the MCR and the reasons for the noise level (if known) described.
- If a noise measurement is within Yuma clapper rail mating and nesting season (February 15 to August 31) and exceeds 60 dBA Leq hourly at the edge or within occupied habitat, then pieces of construction equipment shall be stopped, moved, or quieted such that resultant noise levels are less than 60 dBA. Construction work need only be stopped or quieted for one-half hour before and 1 hour after sunrise and 1 hour before and one-half hour after sunset. If 24-hour construction is required, every person on the agency call list shall be notified as to the expected noise level, the equipment in use, and the remedial actions that are recommended (if any). The remedial action(s) should be implemented after approval by agency staff and may include the use of noise walls around the potential clapper rail habitat.

The noise measurements and any remedial actions taken shall be described in the MCR.

Overhead Transmission Line Monitoring to Avoid Harassment or Harm

BIO-17 The project owner shall install an agency-approved marker on the grounding wire of the proposed transmission lines. These markers shall be placed and maintained on the highest-bird-use portions of the proposed transmission lines (initially Mileposts M10 to L13). Monitoring of the entire 31 miles of proposed transmission line, and sections of unmarked but comparable transmission line in the study area, shall be implemented for the first two years of operation, and may continue for up to ten years (to determine effectiveness of remedies) if impacts are found to be excessive by a working group of interested agency personnel. Remedial actions to address collision deaths shall be included in a Bird Collision Deterrent Proposal and Monitoring Plan. The project owner must implement the CPM-approved remedial actions where ever high bird use and evidence of bird collisions are found during post-construction monitoring, and measure the effectiveness of the remedial measure for reducing impacts for at least one year following their implementation.

Verification: The project owner shall submit two copies of a Bird Collision Deterrent Proposal and Monitoring Plan (BCDM Plan) to the CPM for review and approval and one copy to the CDFG, Refuge, and USFWS for review and comment 60 days prior to start of transmission line mobilization. The BCDM Plan shall identify all Species of Concern, the threshold used for determining impacts, the proposed type and spacing of markers, the post-construction monitoring plan, and remedial actions. The first monitoring report shall be due to the CPM, Refuge, CDFG and USFWS three months after completion of the transmission line construction, and the second monitoring report shall be due to the same parties at six months. A two-year summary report which summarizes all actions taken, compiles all the monitoring data, and includes an evaluation of effectiveness of the markers is due two years after the completion of the transmission line construction. A working group of interested agency personnel shall meet after submittal of the second monitoring report to determine if remedial actions need to be implemented and the timeline for their completion. The project owner must implement the CPM-approved remedial actions following the timelines set by the working group of interested agencies. The BCDM shall include remedial actions such as marking of unmarked transmission line segments that show high bird use and collisions during the post construction monitoring, decreasing the spacing of markers on marked lines, and alternative transmission line routes. Maintenance and replacement of markers for the life of the transmission line will be required for all areas determined in the two-year summary report to have high bird use and evidence of bird collisions. The CPM, in consultation with the CDFG, the Refuge, the USFWS and any other appropriate agencies, will determine the BCDM Plan's acceptability within 30 days of receipt.

(Note: Condition applies to transmission lines; does not apply to Amendment Petition.)

Re-vegetation for Construction Impacts

BIO-18 The project owner shall contour all temporary disturbance areas and allow them to re-vegetate with pre-disturbance species. Invasive exotic species (as defined by the U.S. Department of Agriculture) shall be precluded from establishing themselves in the temporary disturbance areas through implementation of a three-year post-construction weed removal program. Every three years for a period of nine years following construction, the project owner shall evaluate the need for control of exotic species in areas disturbed by construction of the power plant and its associated facilities.

Verification: The project owner shall provide a brief report of temporary disturbance conditions at the end of the project construction in the BRMIMP Closure Report. Annual reporting of weed abatement shall be

provided to the CPM in the annual reporting for nine years post-construction, or until such time as the CPM determines it is no longer needed.

Survey and Provide Habitat Compensation for Burrowing Owls

BIO-19 The project owner shall survey for burrowing owl activities on the 160-acre parcel and along the transmission lines (*Note: transmission lines not covered in Amendment petition*) prior to site mobilization to assess owl presence. The project owner shall evaluate the potential impact to each burrowing owl occurrence using impact criteria reviewed by the CDFG and USFWS and approved by the CPM. The impact criteria will be based on type of activity, length of activity, distance maintained from the burrowing owl(s), and time of year. For impact determinations which require monitoring of burrowing owls, a credentialed biologist approved by the CPM must do the monitoring.

The project owner shall protect ~~at least 6.5 acres of suitable land~~ *in an amount that will ensure the successful relocation of* for each impacted pair of owls or impacted unpaired resident bird (as determined by the CPM-approved impact criteria). For each occupied burrowing owl burrow that must be destroyed, existing unsuitable burrows on the protected lands shall be enhanced (e.g., cleared of debris or enlarged) or new burrows installed at a ratio of ~~2:1~~ *that will ensure the successful relocation of impacted BUOW*. ~~If habitat is made unsuitable (e.g., the evicted owls leave the area), 6.5 acres of habitat per pair would be provided. For example, if pre-construction surveys find 17 occupied owl burrows within the project's footprint, and monitoring determined 17 burrowing owl pairs left the area, the project owner must create 34 new or improve 34 existing burrows and provide 110.5 acres of protected land.~~ The actual requirement will be determined after the CPM reviews the burrowing owl pre-construction surveys and monitoring. Avoidance is preferred over mitigation of impacts.

Verification: At least 60 days prior to site mobilization, the project owner shall provide to the CPM for review and approval, and to the USFWS and CDFG for review and comment, the impact criteria that will be used to evaluate construction, maintenance, and operational impacts to burrowing owls. The project owner must submit to the CPM for approval the resume of any biologist (s) that will perform the burrowing owl monitoring at least one week prior to their assignment to start monitoring. If burrowing owl monitoring is needed, then a summary report completed by the Designated Biologist and all original data sheets shall be included in the MCR. At least 15 days prior to site mobilization, the project owner shall provide the CPM, USFWS, Refuge, and CDFG with the burrowing owl survey results. Burrowing owl surveys are valid only for 30 days.

Based on the number of burrowing owls identified as potentially impacted, the project owner shall identify the amount of land it intends to protect 15 days prior to construction. The project owner shall fund the acquisition and long-term management of the compensation lands in a form acceptable to the CEC and CDFG (e.g., provide a letter of credit or establish an escrow account) 15 days prior to construction. The project owner shall propose land for purchase or protection with a description of habitat types and propose a management and monitoring plan 90 days prior to commercial operation. The land protection proposal and management fund(s) shall be approved by the CPM and reviewed by CDFG.

The project owner shall rectify any under-funded amounts in the acquisition and long-term management account(s) at least 60 days prior to commercial operation. At least 30 days prior the start of commercial operation, the project owner shall submit to the CPM two copies of the relevant legal paperwork that protects lands in perpetuity (e.g., a conservation easement as filed with the Imperial County Recorder), a

5.3 Biological Resources

final land management and monitoring plan, and documents which discuss the types of habitat protected on the parcel. If a private mitigation bank is used, the project owner shall provide a letter to the CPM from the approved land management organization stating the amount of funds received, the amount of acres purchased and their location, and the amount of funds dedicated to long term monitoring or management at least 60 days prior to commercial operation. If fund remain after performance of all habitat compensation obligations, the monies in the letter of credit or escrow account will be returned to the project owner with written approval of the CPM.

All mitigation measures and their implementation methods shall be included in the BRMIMP.

Emergency Management to Avoid Harassment or Harm

BIO-20 The project owner shall prepare and submit an agency notification list for emergency events which involve the rupture or spill of brine fluids at the facility. The project owner shall obtain and then follow the recommendations resulting from the agency notification for avoiding harassment or harm to biological resources.

Verification: The project owner shall provide the agency notification list to the CPM for approval at least 60 days prior to start of commercial operation. The agency notification list shall be incorporated into the BRMIMP. The project owner shall report in the annual compliance report any agency notifications and whether the agency recommendations were followed.

County Permit for Wellheads, Pads and Brine Pipelines

BIO-21 The project owner shall submit a copy of the Imperial County permit for the wellheads, pads and brine pipelines. The biological resource related terms and conditions contained in the permit shall be incorporated in the project's BRMIMP.

Verification: At least 30 days prior to the start of any site or related facilities mobilization activities, the project owner shall submit to the CPM a copy of the Imperial County permit and any related documents which discuss biological resources.

Compensation for Impacts to Flat-tailed Horned Lizard Habitat

BIO-22 The project owner shall provide funding to the Bureau of Land Management (BLM) for impacts to flat-tailed horned lizard as prescribed by the *Flat-tailed Horned Lizard Rangeland Management Strategy - Appendix 4 Compensation Formula*. (Note: Condition applies to transmission lines; does not apply to Amendment Petition.)

Landscaping Plan

BIO-23 The project owner shall develop and submit a Landscaping Plan for the project.

Verification: At least 90 days prior to the installing the landscaping, the project owner shall submit a copy of the landscape plan to the CPM for review and approval and to the CDFG, Refuge, and USFWS for review and comment. The landscaping plan shall clearly identify all plant species (and their variety) to be installed and the anticipated irrigation schedule. Preference shall be given to native plants.

Conservation Easement for Wetland

BIO-24 ~~The project owner shall submit copies of the fee title and/or conservation easement relating to the restoration and creation of wetland habitat prior to the start of the first Yuma clapper rail breeding season that follows the initiation of fill operations along McKendry Road. The project owner shall provide an endowment to fund management of the land to achieve the targeted functions and values described in the U.S. Army Corps of Engineers permit.~~

Verification: ~~Within 30 days before the start of commercial operation, the project owner shall submit to the CPM two copies of the conservation easement, as recorded with the Imperial County Recorder and any related documents that discuss the types of habitat restored or created on the parcel.~~

Provide Habitat Compensation for Permanent Disturbance to Burrowing Owl Habitat

BIO-25 Foraging habitat which is permanently destroyed shall be replaced at 0.5:1 ~~(mitigation:impacts)~~ a ratio suitable for the protection of burrowing owls and managed for the protection of burrowing owls. Based on these ratios, the project owner must protect and manage ~~42.65 acres~~ of land for burrowing owls (40 acres for the power plant site and 2.65 acres for the transmission line pads). *(Note: transmission lines are not included in the Amendment Petition.)* The mitigation amount can be reduced if mitigation land for the same burrowing owls is also being provided under Condition of Certification BIO-19. *(Note: Final burrowing owl mitigation needs can only be determined following Phase III (nesting) surveys in spring 2009 and subsequent discussions with the resources agencies and CEC.)*

Verification: At least 15 days prior to site mobilization, the project owner shall provide the CPM, USFWS, Refuge, and CDFG with the burrowing owl survey results. If burrowing owls are present where a permanent facility will be placed or within 300 feet of a permanent facility, the project owner shall identify the amount of land they intend to protect 15 days prior to construction. The project owner shall fund the acquisition and long-term management of the compensation lands in a form acceptable to the CEC and CDFG (e.g., provide a letter of credit or establish an escrow account) 15 days prior to construction. The land protection proposal and management fund(s) shall be approved by the CPM and reviewed by CDFG. The project owner shall propose land for purchase or protection with a description of habitat types and propose a management and monitoring plan at least 90 days prior to commercial operation.

The project owner shall rectify any underfunded amounts in the acquisition and long-term management account(s) at least 60 days prior to commercial operation. At least 30 days prior to commercial operation, the project owner shall submit to the CPM two copies of the relevant legal paperwork that protects lands in perpetuity (e.g., a conservation easement as filed with the Imperial County Recorder), a final management and monitoring plan, and documents and documents which discuss the types of habitat protected on the parcel.

If a private mitigation bank is used, the project owner shall provide a letter to the CPM from the approved land management organization stating the amount of funds received, the amount of acres purchased and their location, and the amount of funds dedicated to long term monitoring or management at least 60 days prior to commercial operation. If funds remain after performance of all habitat compensation obligations, the monies in the letter of credit or escrow account will be returned to the project owner with written approval of the CPM.

All mitigation measures and their implementation methods shall be included in the BRMIMP.

Operational Management to Avoid Harassment or Harm

BIO-26 The operation of the power plant ~~and transmission lines~~ (*Transmission lines not included in Amendment Petition*) shall be conducted to avoid harassment and harm to sensitive biological resources. At a minimum, maintenance and operations personnel shall follow the following guidance:

1. Regular transmission line maintenance within 1 mile of the intersection of Lack and Lindsey Roads shall not be conducted at night or when wind speeds exceed 15 miles per hour; (*Note: Does not apply to Amendment Petition*)
2. The project owner shall develop a reporting procedure for observations by land owners along the transmission lines of bird strikes or the presence of carcasses that may have resulted from transmission line strikes. (*Note: Does not apply to Amendment Petition.*)
3. The project owner and Imperial Irrigation District's maintenance personnel shall observe the areas under power transmission lines during the course of their duties to informally monitor for birds that have struck the transmission lines. (*Note: Does not apply to Amendment Petition.*)
4. Advise all employees, contractors, and visitors of the need to adhere to speed limits. The maximum speed on unpaved roads or on paved roads within 300 feet of occupied sensitive species habitat (such as on McKendry Road west of Boyle road and Lack Road between Kuns and Lindsey Roads) shall be restricted 15 miles per hour or lower during operations.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP. The project owner shall report in the annual compliance report any agency notifications and whether the agency recommendations were followed, and shall include a copy of any reports sent to the U.S. Fish and Wildlife Service in compliance with the Federal Biological Opinion.

5.3.7 References

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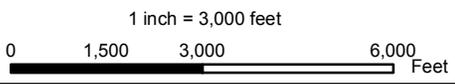
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Legend	
Sensitive Species	Other
Surveys for Amended Project	Habitats and Land Uses
<ul style="list-style-type: none"> Burrowing Owl(s) with Burrows Potential Burrowing Owl Burrows 	<ul style="list-style-type: none"> California brown pelican (CEC, 2003a) Yuma clapper rail (2001-2002; Not in CNDDDB)
CNDDB	
<ul style="list-style-type: none"> California gull Caspian tern Yuma clapper rail black skimmer desert pupfish gull-billed tern 	<ul style="list-style-type: none"> Desert Sink Scrub Open Water (Salton Sea) Salt Pan Barren Land Roadway or Agricultural Ditch Developed Areas
	<ul style="list-style-type: none"> Plant Site Proposed Well Pad Proposed Pipeline Borrow Site 1 mile radius of Project
	Noise Contour (60 dBA)
	<ul style="list-style-type: none"> Operational Noise Contour Construction Noise Contour



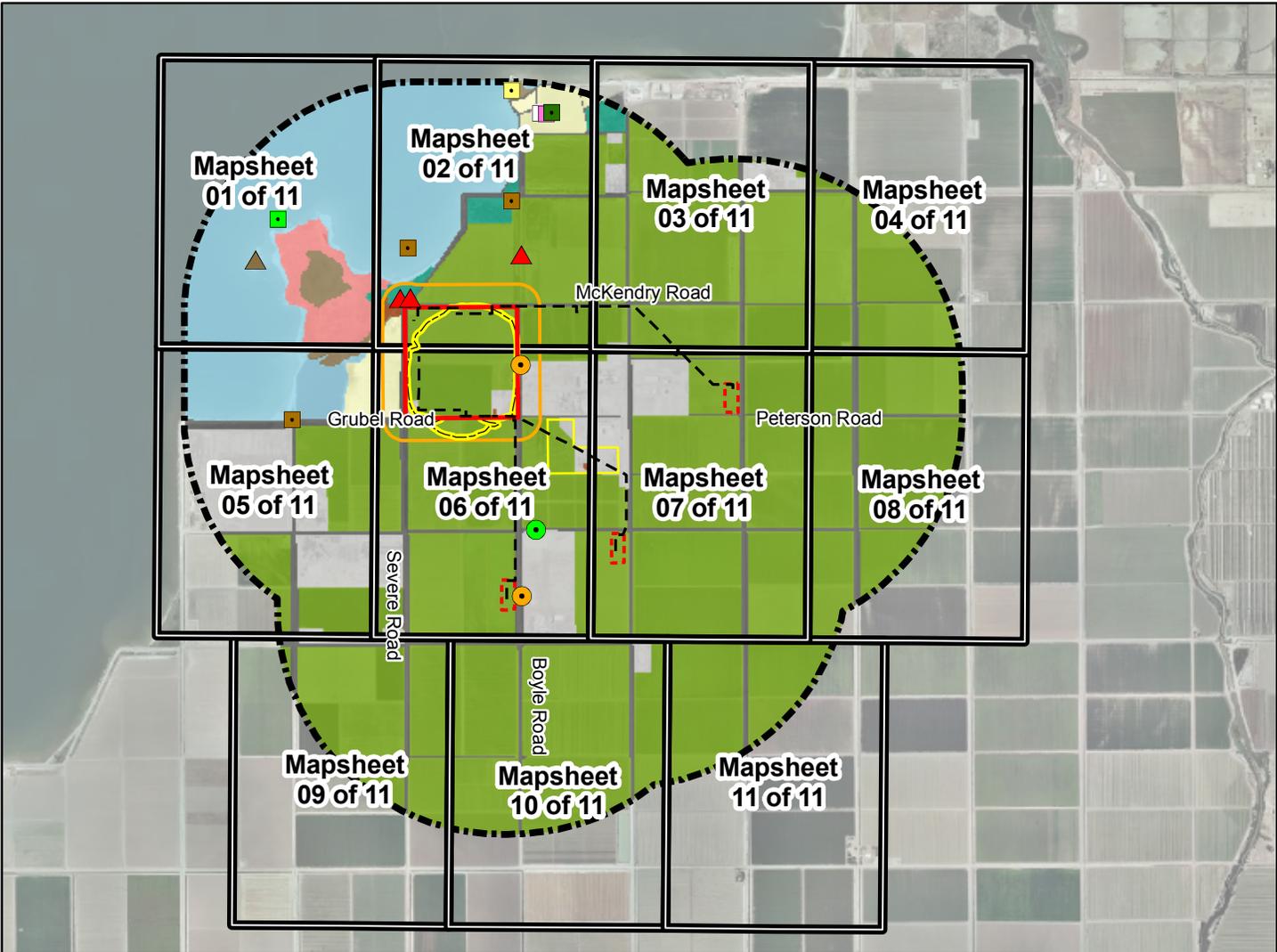
Amended SSU6 Project
Figure 5.3-1
Overview Map for Project
Site and Buffer Zone



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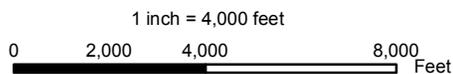
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Legend

Sensitive Species		Other		Plant Site	
Surveys for Amended Project		▲ California brown pelican (CEC, 2003a)	▲ Yuma clapper rail (2001-2002; Not in CNDDB)	▭ Plant Site	▭ Proposed Well Pad
● Burrowing Owl(s) with Burrows	● Potential Burrowing Owl Burrows	Habitats and Land Uses		--- Proposed Pipeline	▭ Borrow Site
CNDDB		■ Tamarisk Scrub	■ Agricultural Land	▭ 1 mile radius of Project	▭ Map Series Sheet Extent
■ California gull	■ Caspian tern	■ Freshwater Wetland	■ Desert Sink Scrub	Noise Contour (60 dBA)	
■ Yuma clapper rail	■ black skimmer	■ Open Water (Salton Sea)	■ Salt Pan	--- Operational Noise Contour	--- Construction Noise Contour
■ desert pupfish	■ gull-billed tern	■ Barren Land	■ Roadway or Agricultural Ditch		
		■ Developed Areas			



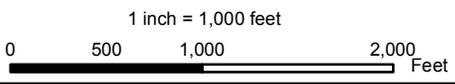
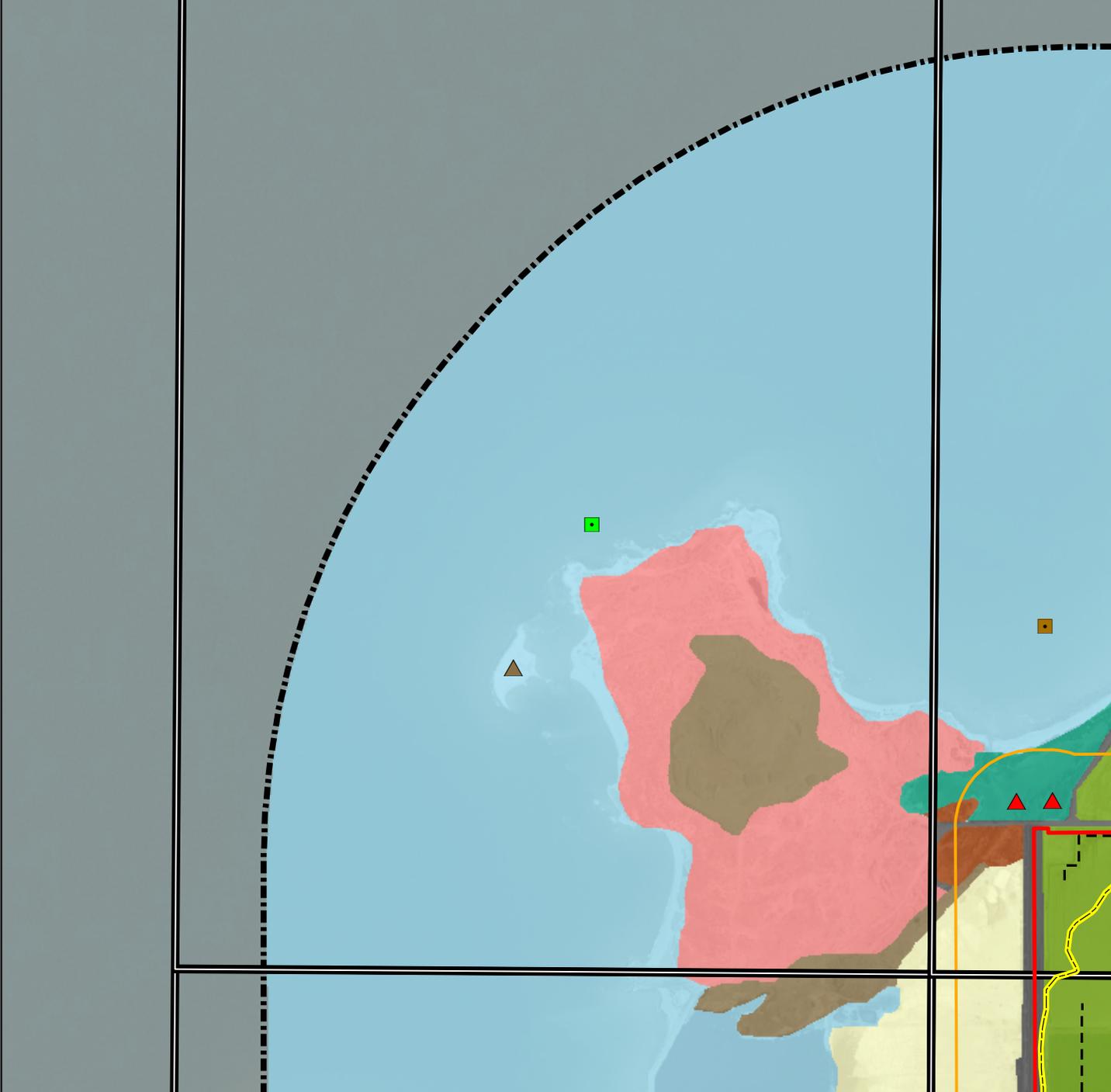
Amended SSU6 Project
Figure 5.3-2
Map Series Sheet Locator



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Sensitive Species Surveys for Amended Project Burrowing Owl(s) with Burrows Potential Burrowing Owl Burrows	CNDDDB California gull Caspian tern Yuma clapper rail black skimmer	desert pupfish gull-billed tern Other California brown pelican (CEC, 2003a) Yuma clapper rail (2001-2002; Not in CNDDDB) Tamarisk Scrub	Agricultural Land Freshwater Wetland Desert Sink Scrub Open Water (Salton Sea) Salt Pan Barren Land Roadway or Agricultural Ditch Developed Areas	Plant Site Proposed Well Pad Proposed Pipeline Borrow Site 1 mile radius of Project Map Series Sheet Extent	Noise Contour (60 dBA) Operational Noise Contour Construction Noise Contour
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Amended SSU6 Project
 Figure 5.3-2
 Habitat Map Series for
 Project Site and Buffer Zone

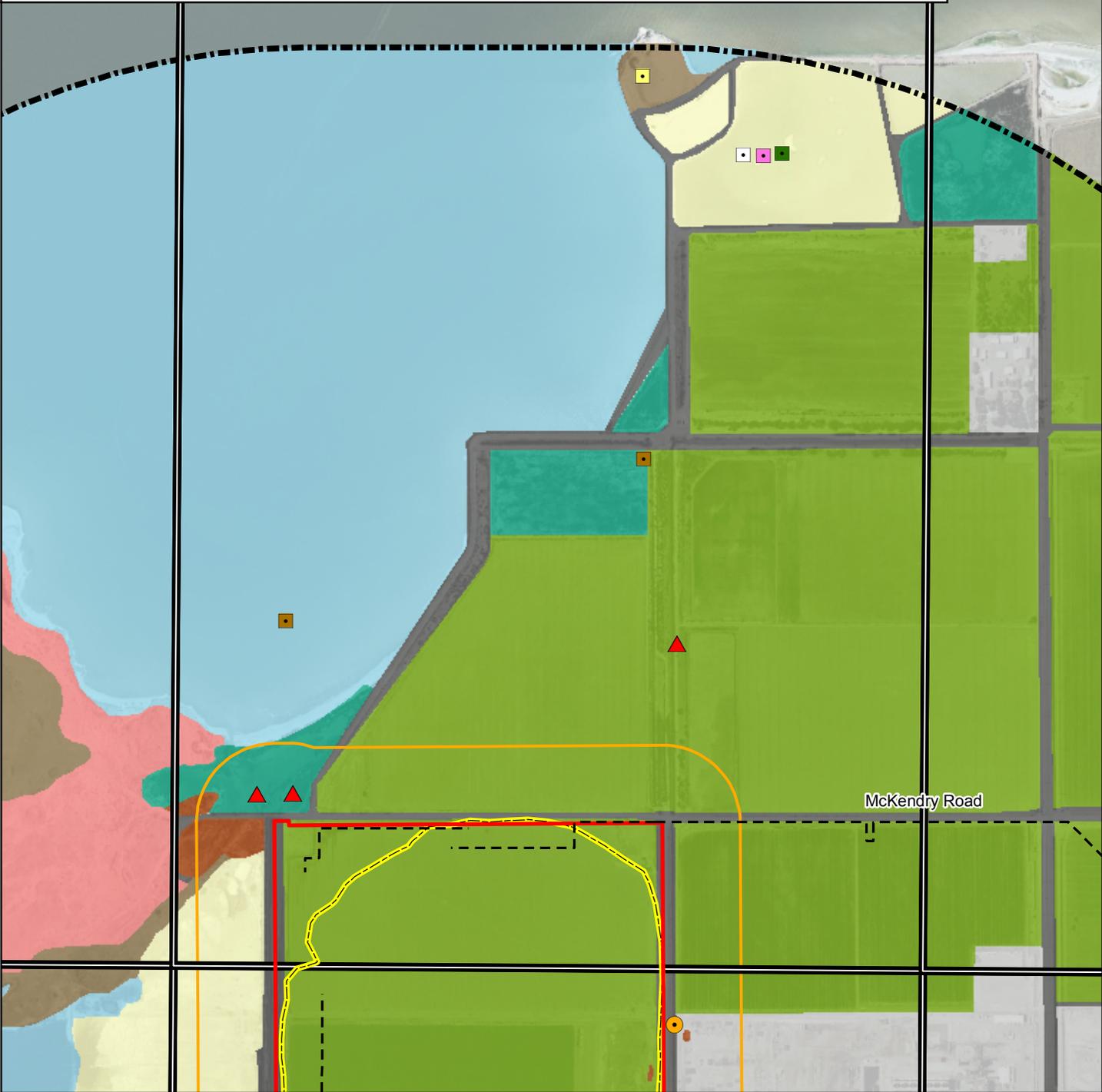
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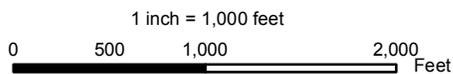
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 Date: February 2009

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McKendry Road



Amended SSU6 Project
Figure 5.3-2
Habitat Map Series for
Project Site and Buffer Zone

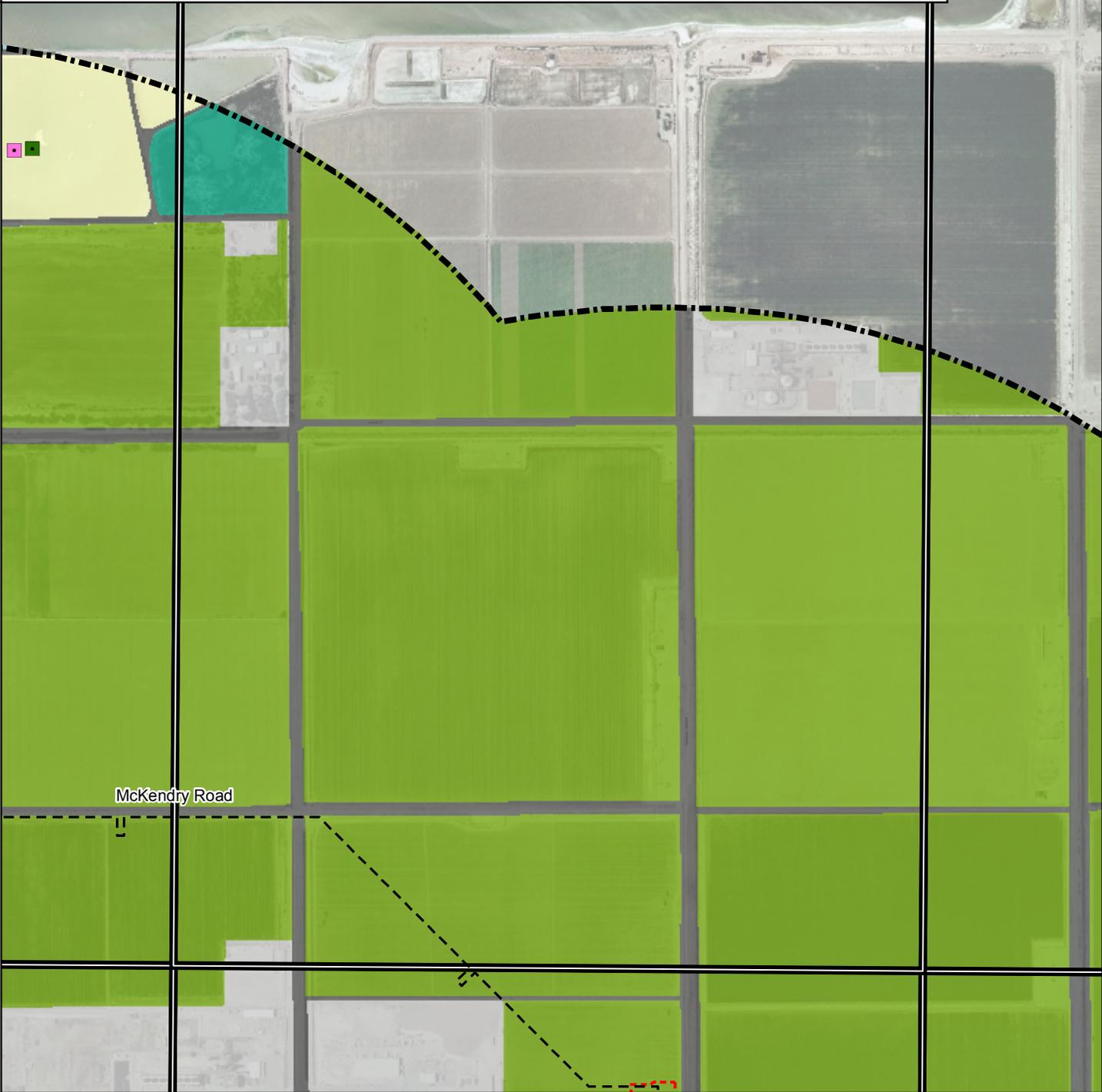
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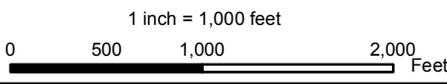
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McKendry Road



Amended SSU6 Project
Figure 5.3-2
Habitat Map Series for
Project Site and Buffer Zone

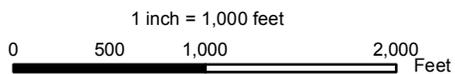
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Amended SSU6 Project
 Figure 5.3-2
 Habitat Map Series for
 Project Site and Buffer Zone

Mapsheet 04 of 11

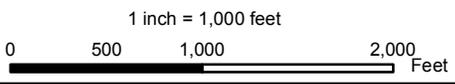
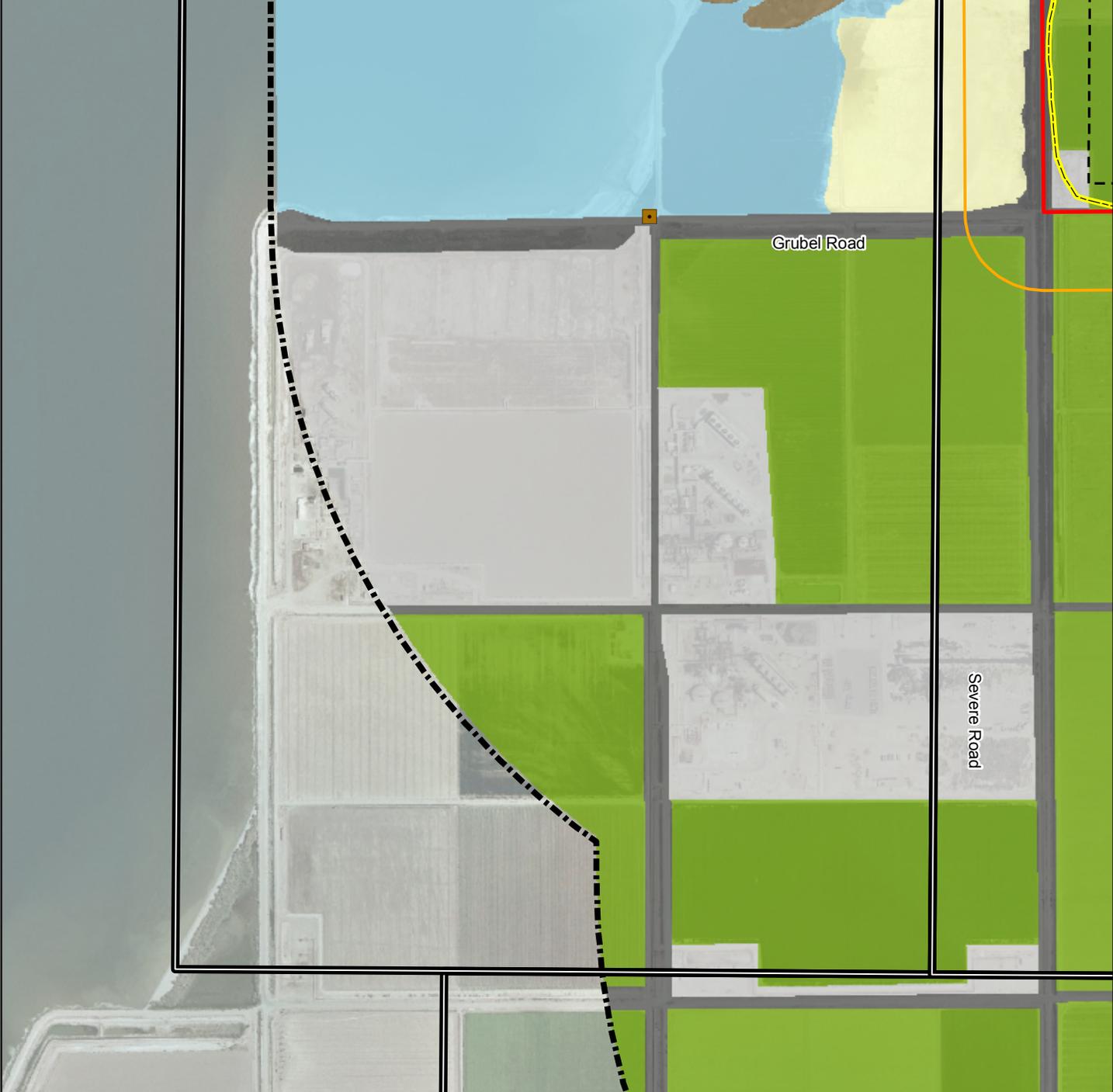


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Sensitive Species Surveys for Amended Project Burrowing Owl(s) with Burrows Potential Burrowing Owl Burrows	CNDDB California gull Caspian tern Yuma clapper rail black skimmer	desert pupfish gull-billed tern Other California brown pelican (CEC, 2003a) Yuma clapper rail (2001-2002; Not in CNDDB) Habitats and Land Uses Tamarisk Scrub	Agricultural Land Freshwater Wetland Desert Sink Scrub Open Water (Salton Sea) Salt Pan Barren Land Roadway or Agricultural Ditch Developed Areas	Plant Site Proposed Well Pad Proposed Pipeline Borrow Site 1 mile radius of Project Map Series Sheet Extent	Noise Contour (60 dBA) Operational Noise Contour Construction Noise Contour
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Amended SSU6 Project
 Figure 5.3-2
 Habitat Map Series for
 Project Site and Buffer Zone

Mapsheet 05 of 11

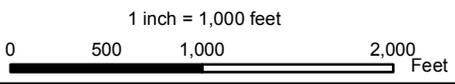
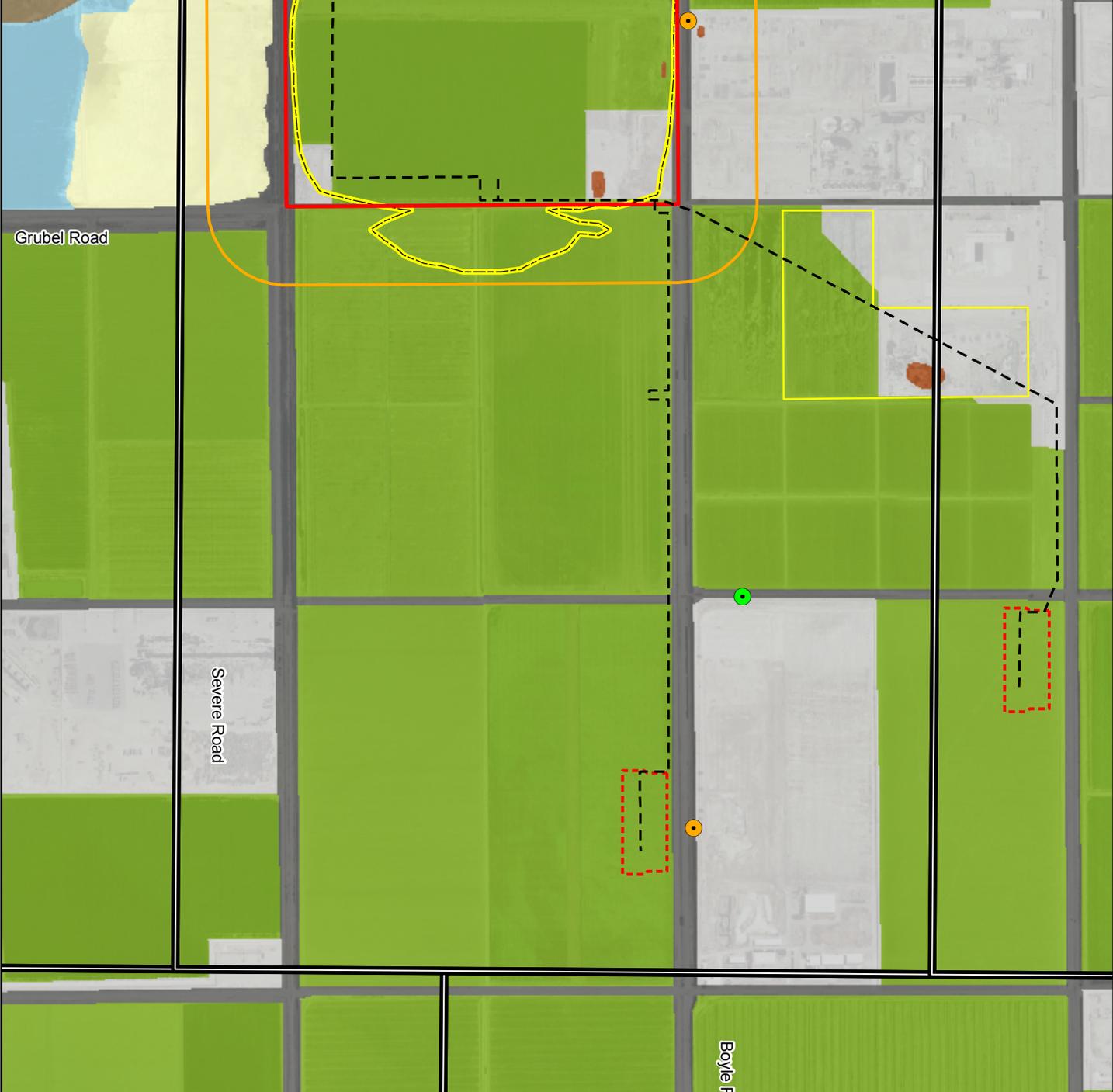


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Sensitive Species Surveys for Amended Project Burrowing Owl(s) with Burrows Potential Burrowing Owl Burrows	CNDDDB California gull Caspian tern Yuma clapper rail black skimmer	desert pupfish gull-billed tern Other California brown pelican (CEC, 2003a) Yuma clapper rail (2001-2002; Not in CNDDDB) Tamarisk Scrub	Agricultural Land Freshwater Wetland Desert Sink Scrub Open Water (Salton Sea) Salt Pan Barren Land Roadway or Agricultural Ditch Developed Areas	Plant Site Proposed Well Pad Proposed Pipeline Borrow Site 1 mile radius of Project Map Series Sheet Extent	Noise Contour (60 dBA) Operational Noise Contour Construction Noise Contour
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Amended SSU6 Project
Figure 5.3-2
Habitat Map Series for
Project Site and Buffer Zone

Mapsheets 06 of 11

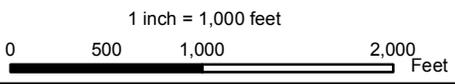
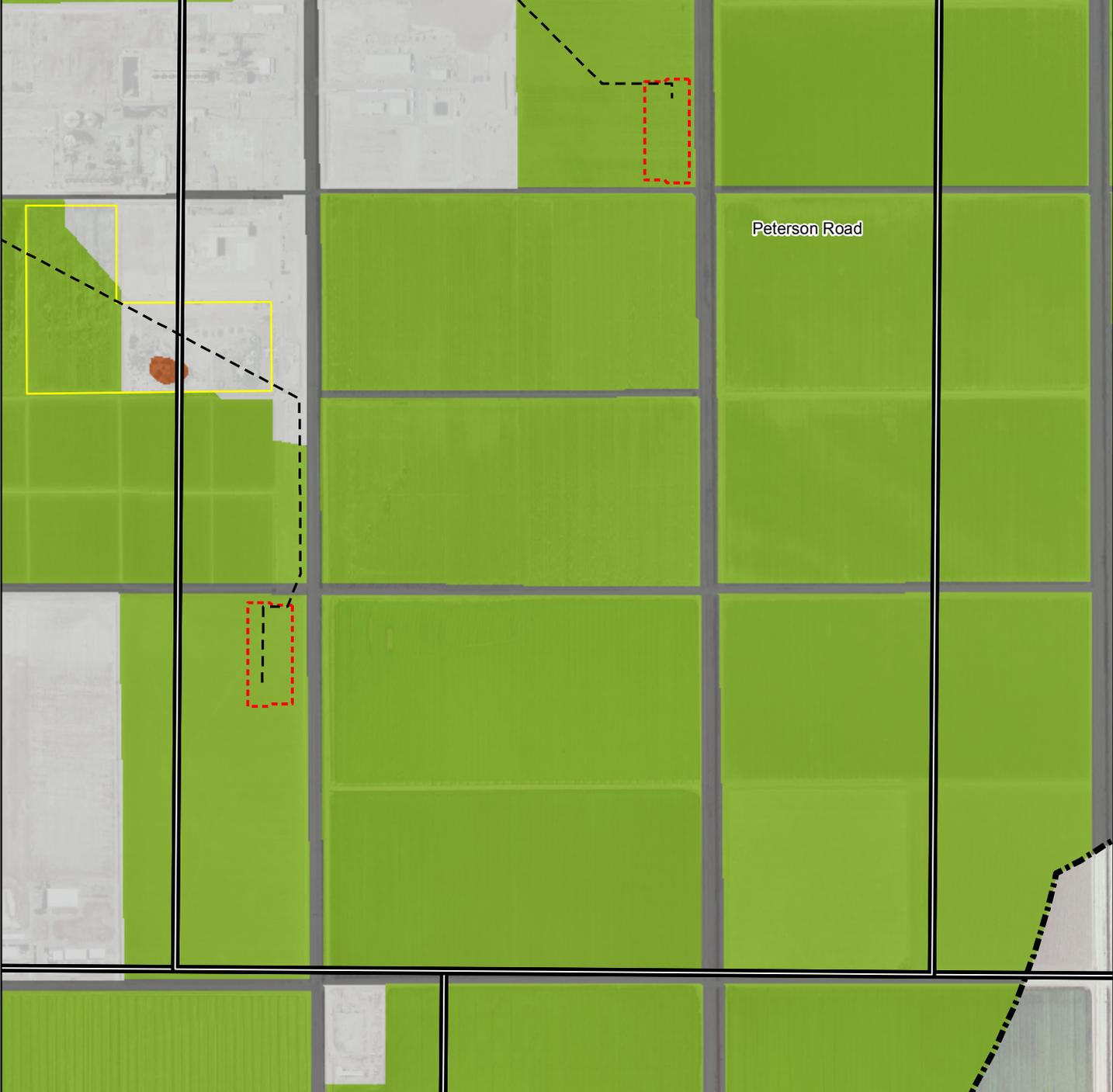


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Sensitive Species Surveys for Amended Project Burrowing Owl(s) with Burrows Potential Burrowing Owl Burrows	CNDDB California gull Caspian tern Yuma clapper rail black skimmer	desert pupfish gull-billed tern Other California brown pelican (CEC, 2003a) Yuma clapper rail (2001-2002; Not in CNDDB) Habitats and Land Uses Tamarisk Scrub	Agricultural Land Freshwater Wetland Desert Sink Scrub Open Water (Salton Sea) Salt Pan Barren Land Roadway or Agricultural Ditch Developed Areas	Plant Site Proposed Well Pad Proposed Pipeline Borrow Site 1 mile radius of Project Map Series Sheet Extent	Noise Contour (60 dBA) Operational Noise Contour Construction Noise Contour
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Amended SSU6 Project
 Figure 5.3-2
 Habitat Map Series for
 Project Site and Buffer Zone

Mapsheet 07 of 11

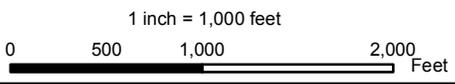
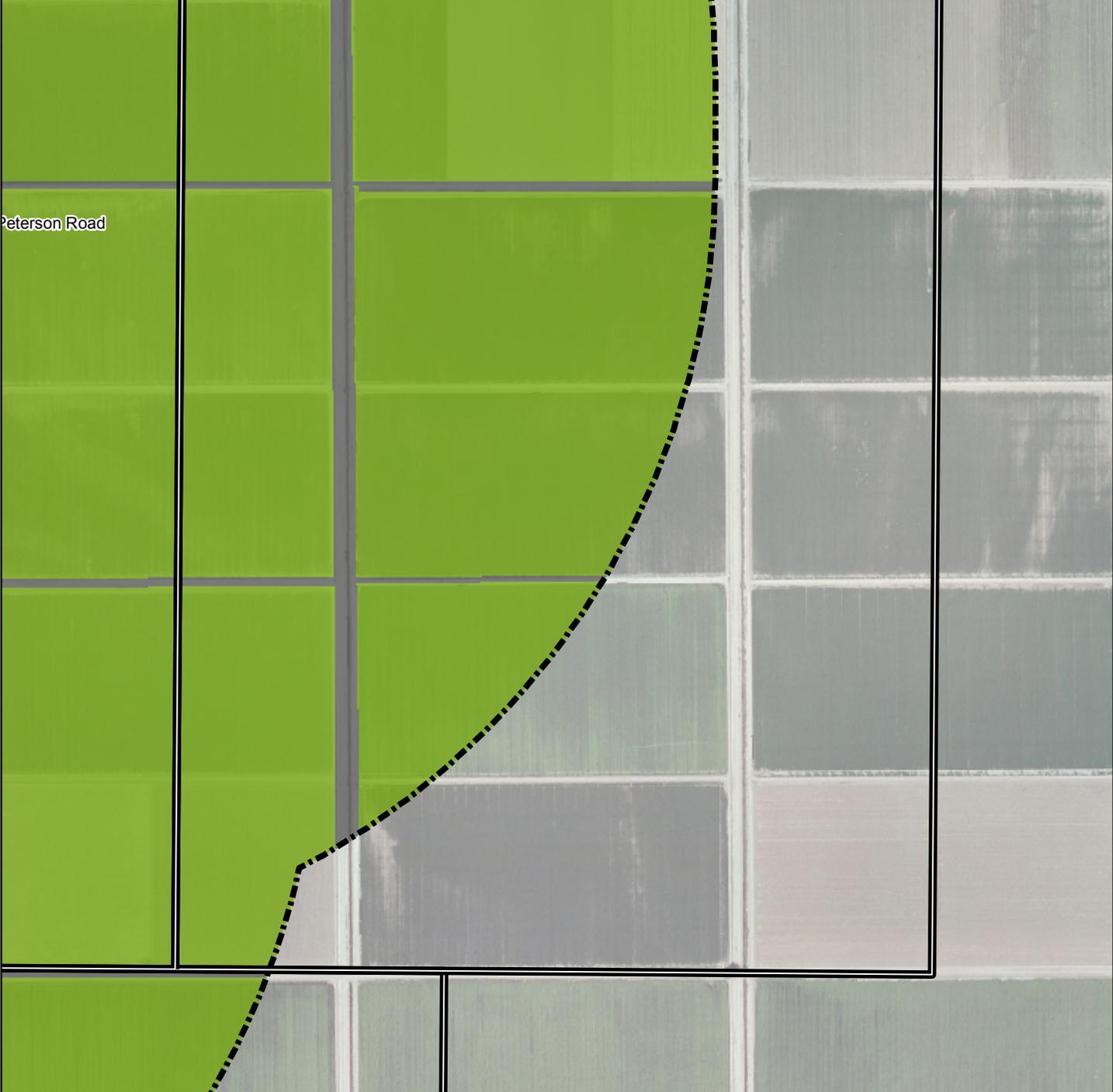


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 Date: February 2009

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Amended SSU6 Project
 Figure 5.3-2
 Habitat Map Series for
 Project Site and Buffer Zone

Mapsheets 08 of 11

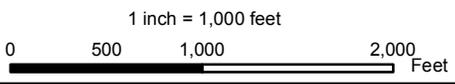


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Amended SSU6 Project
 Figure 5.3-2
 Habitat Map Series for
 Project Site and Buffer Zone

Mapsheet 09 of 11

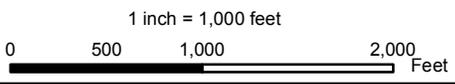


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Amended SSU6 Project
 Figure 5.3-2
 Habitat Map Series for
 Project Site and Buffer Zone

Mapsheet 10 of 11

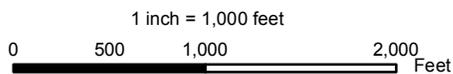


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Sensitive Species Surveys for Amended Project Burrowing Owl(s) with Burrows Potential Burrowing Owl Burrows	CNDDB California gull Caspian tern Yuma clapper rail black skimmer	desert pupfish gull-billed tern Other California brown pelican (CEC, 2003a) Yuma clapper rail (2001-2002; Not in CNDDB) Tamarisk Scrub	Agricultural Land Freshwater Wetland Desert Sink Scrub Open Water (Salton Sea) Salt Pan Barren Land Roadway or Agricultural Ditch Developed Areas	Plant Site Proposed Well Pad Proposed Pipeline Borrow Site 1 mile radius of Project Map Series Sheet Extent	Noise Contour (60 dBA) Operational Noise Contour Construction Noise Contour
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Amended SSU6 Project
 Figure 5.3-2
 Habitat Map Series for
 Project Site and Buffer Zone

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