Appendix D

Biological Resources Technical Report

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Biological Resources Technical Report

Lithium Valley Specific Plan

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AFY	acre-feet per year
BLM	U.S. Bureau of Land Management
BRTR	Biological Resources Technical Report
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
County	County of Imperial
CWA	Clean Water Act
ESA	Endangered Species Act
HCP	Habitat Conservation Plan
IID	Imperial Irrigation District
MBTA	Migratory Bird Treaty Act
MM	Mitigation Measure
NCCP	Natural Community Conservation Plan
Project	Lithium Valley Specific Plan
RWQCB	Regional Water Quality Control Board
Specific Plan	Lithium Valley Specific Plan
SSC	California Species of Special Concern
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

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1 Introduction

1.1 Purpose of Report

The purpose of this Biological Resources Technical Report (BRTR) is to describe the existing conditions of the biological resources; evaluate the biological significance of these resources and potential impacts to them; and recommend measures to avoid, minimize, or mitigate potential impacts where feasible to less-than-significant levels in the Project Area of the Lithium Valley Specific Plan (Specific Plan or Project). This BRTR is intended to support development of the Specific Plan Environmental Impact Report.

1.2 Project Location and Description

The Project Area spans approximately 51,620 acres from the Imperial Wildlife Area Wister Unit northwest of Niland, California, in the north to Calipatria, California, in the south. On the southwest, the Project Area is bounded by the New River and includes the shoreline and open water portions of the Salton Sea from Vail Seven Drain north past the mouth of the Alamo River to Beach Road (Figure 1, Planning Area). The Project Area is in a portion of the following U.S. Geological Survey 7.5-minute quadrangles: Iris Wash, Niland, Obsidian Butte, Westmorland West, Westmorland East, and Wister.

The County of Imperial (County) is developing the Specific Plan to support existing and expansion of renewable energy (i.e., geothermal and solar) development, lithium extraction, and associated infrastructure and industrial uses. Federal and state renewable energy and greenhouse gas reduction goals are driving the need to find additional utility-scale renewable energy sources and the raw materials for battery-powered vehicles, and this area of Imperial County is poised to provide these resources if sufficient facilities and infrastructure are developed. The Specific Plan and associated environmental document are being developed to frame and guide this development.

1.3 Regulatory Context

1.3.1 Federal

Endangered Species Act

The federal Endangered Species Act (federal ESA) protects federally listed threatened and endangered species and their habitats from unlawful take, and ensures that federal actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Under the federal ESA, "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. U.S. Fish and Wildlife Service (USFWS) regulations, as codified in the Code of Federal Regulations (CFR), define harm to mean "an act which actually kills or injures wildlife" (50 CFR 17.3).

Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." CWA Section 402 prohibits the discharge of pollutants to waters of the United States from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination

System Permit. CWA Section 402 requires such a permit for the discharge of stormwater from construction sites that disturb 1 acre or more, and from industrial facilities, among others. The applicable Regional Water Quality Control Board (RWQCB) administers these permits with oversight provided by the State Water Resources Control Board and the Environmental Protection Agency. CWA Section 404 prohibits the discharge of dredge and fill material into waters of the United States, including wetlands, without a permit from the U.S. Army Corps of Engineers (USACE). Activities regulated under this program include fill for development, water resource projects (e.g., dams and levees), infrastructure development (e.g., highways and airports), and conversion of wetlands to uplands for farming and forestry. CWA Section 401 requires that an applicant for a federal license or permit that discharges into navigable waters provide the federal agency with a water quality certification declaring that the discharge will comply with the water quality standard requirements of the CWA. USACE is prohibited from issuing a CWA permit until the applicant receives a CWA Section 401 water quality certification or waiver from the applicable RWCQB.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act protects bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) by prohibiting the taking, possession, and commerce of such birds, and establishes civil penalties for violation of this Act. "Take" is defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." "Disturb" is defined as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior" (72 Federal Register [FR] 31132; 50 CFR 22.3). All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by USFWS under this Act.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the kill or transport of native migratory birds, or any part, nest, or egg of any such bird, unless allowed by another regulation adopted in accordance with the MBTA. The prohibition applies to birds included in the respective international conventions between the United States and Great Britain, the United States and Mexico, the United Stages and Japan, and the United States and Russia. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA. As authorized by the MBTA, USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13, General Permit Procedures, and 50 CFR Part 21, Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in California Fish and Game Code (CFGC) Sections 3800, 3513, and 3503.5.

1.3.2 State

California Endangered Species Act

Provisions of the California ESA protect state-listed threatened and endangered species and species that are candidates for state listing. The California Department of Fish and Wildlife (CDFW) regulates activities that may result in "take" of individuals ("take" means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under the

California ESA. CFGC Sections 2080 through 2085 address the taking of state threatened, endangered, and candidate species and the conditions that must be met for CDFW to authorize take. Issuance of a take permit require an applicant to "fully mitigate" lost species (i.e. at least a 1:1 ratio), with adequate funding, and prohibitions on "jeopardiz[ing] the continued existence of the species." (F&G Code, § 2081(b)(2); 14 Cal. Code Regs. §§ 783.2(a)(8), 783.4(a)(2).)

In addition to state-listed species, CDFW has also produced a list of Species of Special Concern to serve as a "watch list." Species on this list are of limited distribution, or the extent of their habitats has been reduced substantially such that threats to their populations may be imminent. Species of Special Concern may receive special attention during environmental review, but they do not have statutory protection.

California Fully Protected Species

The CFGC contains lists of vertebrate species designated as "fully protected" (CFGC Section 3511 [birds], Section 4700 [mammals], Section 5050 [reptiles and amphibians], and Section 5515 [fish]). Fully protected species may not be taken or possessed, unless addressed as covered species in a Natural Community Conservation Plan or otherwise authorized in the CFGC. In July 2023, Senate Bill 147 was signed into law, amending the statutes associated with fully protected species. That bill established a permitting process by which certain types of infrastructure projects, including maintenance, repair, or improvement of water agency infrastructure; transportation projects; and wind and solar projects and appurtenant infrastructure improvement projects, can take Fully Protect species with issuance of a permit from CDFW. At this time, take can be permitted only through 2033 and must meet the standards of CFGC Section 2081.15.

California Fish and Game Code Section 1600 et. seq (as amended)

CFGC Section 1600 et seq. requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the applicant is the Lake or Streambed Alteration Agreement. Often, projects that require a CDFW Lake or Streambed Alteration Agreement also require a permit from USACE under CWA Section 404. In these instances, the conditions of the Section 404 permit and the Lake or Streambed Alteration Agreement may overlap.

California Fish and Game Code Sections 3503, 3503.5, and 3513

Under CFGC Sections 3503, 3503.5, and 3513, activities that would result in the taking, possessing, or destroying of any birds-of-prey; taking or possessing of any migratory nongame bird as designated by the MBTA; the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA; or the taking of any nongame bird pursuant to CFGC Section 3800 are prohibited.

California Fish and Game Code Sections 1900–1913 (Native Plant Protection Act)

California's Native Plant Protection Act prohibits the taking, possessing, or sale within the state of any plant listed by CDFW as rare, threatened, or endangered. This allows CDFW to salvage listed plant species that would otherwise be destroyed.

California Desert Native Plants Act

The provisions in the California Desert Native Plants Act (California Food and Agriculture Code, Division 23 Section 80001 et seq) protect specific California desert native plants (i.e., species in the families Agavaceae, Cacti, and Fouquieriaceae; species in the genera *Prosopis* and *Parkinsonia* [*Cercidium*]; and the species *Senegalia greggii*, *Atriplex hymenelytra*, *Dalea spinosa*, and *Olneya tesota*) from unlawful harvest on private and public lands in the California desert, including Imperial County. The California Desert Native Plants Act prohibits the harvest, transport, sale, or possession of specific native desert plants unless a person has a valid permit or wood receipt, and the required tags and seals.

Porter–Cologne Water Quality Control Act

Under the Porter–Cologne Water Quality Control Act, all projects proposing to discharge waste that could affect waters of the state must file a waste discharge report with the appropriate RWQCB.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires a public agency that proposes to carry out, approve, or fund a project to analyze the project's impacts on the environment, and, if significant environmental effects are identified, to adopt feasible mitigation measures or project alternatives that would avoid or substantially lessen the project's significant impacts. If a project's environmental impacts cannot be feasibly avoided or mitigated to a less-than-significant level, then CEQA prohibits the agency from approving, carrying out, or funding the project unless the agency determines, in a statement of overriding considerations, that the project's specific economic, legal, social, technological, or other benefits outweigh its significant environmental consequences.

A significant impact related to biological resources would occur if the proposed project would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

1.3.3 Local

Imperial County General Plan

The Conservation and Open Space Element of the Imperial County General Plan (County of Imperial 2016) provides detailed plans and measures for the preservation and management of biological resources. The purpose of this element is to recognize that natural resources must be maintained for their ecological value for the direct benefit to the public and to protect open space for the preservation of natural resources, the managed production of resources, outdoor recreation, and for public health and safety. In addition, the purpose of this 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 planning goals and objectives related to biological resources are described below.

Goal 1**:** Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions and educating the public on their value.

Objective 1.1: Encourage uses and activities that are compatible with the fragile desert environment and foster conservation.

Objective 1.2: Coordinate the acquisition, designation, and management of important natural and cultural resource areas in Imperial County with other governmental agencies as appropriate.

Objective 1.3: Develop standards to protect significant natural and cultural resource areas for the purpose of enhancing both the planning and decision-making process.

Objective 1.4: Ensure the conservation and management of the County's natural and cultural resources.

Objective 1.5: Provide opportunities for enjoyment of a quality natural experience to present and future generations.

Objective 1.6: Promote the conservation of ecological sites and preservation of cultural resource sites through scientific investigation and public education.

Goal 2**:** The County will integrate programmatic strategies for the conservation of critical habitats to manage their integrity, function, productivity, and long-term viability.

Objective 2.1**:** Designate critical habitats for Federally and State-listed species.

Objective 2.2: Develop management programs, including preservation of habitat for flat-tailed horned lizard, desert pupfish, and burrowing owl.

Objective 2.3: Support investigation of long-term climate change effects on biological resources.

Objective 2.4: Use the CEQA and NEPA [National Environmental Policy Act] process to identify, conserve and restore sensitive vegetation and wildlife resources.

Objective 2.5: Give conservation of sensitive species and habitat a high priority in County park acquisition and development programs.

Objective 2.6: Attempt to identify, reduce, and eliminate all forms of pollution; including air, noise, soil, and water.

Goal 9: The County shall work towards comprehensive restoration of the Salton Sea in order to provide recreation, healthy habitat for wildlife, and economic revitalization in the region.

Objective 9.1: Develop programs in association with County, State, and Federal agencies and the Salton Sea Joint Powers Authority (JPA) to restore the Salton Sea.

Objective 9.2: Encourage renewable energy developments that include Salton Sea restoration components.

Objective 9.3: Coordinate with US Fish and Wildlife Service, California Department of Fish and Wildlife, and the Salton Sea JPA in developing programs to protect and restore migratory bird habitat, desert pup fish, and other sensitive or endangered species associated with the Salton Sea.

Objective 9.4: Develop educational programs to promote a greater understanding of the value and importance of the Salton Sea habitat management areas among County residents.

2 Methods

2.1 Literature and Data Review

The biological resources of the Salton Sea and Imperial Valley region have been studied extensively, resulting in a wealth of existing public documentation and data available for use in preparing this BRTR. As such, the existing conditions described in this BRTR were developed primarily from existing sources and verified through desktop analysis and field reconnaissance. A review of existing documents, literature, and regional data was conducted for this BRTR, including peer-reviewed scientific papers; resource agency documents and data; national, state, regional, and local geographic information system (GIS) datasets; and other relevant information and data on physical conditions, vegetation communities, aquatic resources, botanical resources, wildlife resources, and landscape-scale processes. Specific sources used are cited throughout this BRTR, with references provided in Chapter 8, References.

Vegetation Communities, Land Covers, and Aquatic Resources

Based on a review of available existing data sources for mapping vegetation communities, other land cover types, and potentially jurisdictional aquatic resources, there was no single data source that provided detailed, comprehensive coverage of the Project Area. Therefore, mapping of these resources was developed from the assembly of the best available existing data from multiple sources, including the USFWS National Wetlands Inventory dataset (USFWS 2022a) for the wetland and riparian areas, the California Department of Water Resources Statewide Crop mapping dataset (DWR 2018) for agricultural lands, the Imperial Irrigation District (IID) canals and drains dataset (IID 2014), and existing site-specific environmental documents. These existing data sources were supplemented by using aerial imagery from Bing, Google Earth, the 2020 U.S. Department of Agriculture National Agriculture Imagery Program (NAIP), and field reconnaissance (see Section 2.2, Field Reconnaissance) to make land cover refinements for Salton Sea open water and Salton Sea shoreline and playa areas (to account for land cover changes due to the receding sea level) and to map areas of desert scrub, barren/rock outcrop, and developed/disturbed. Additionally, 4-centimeter pixel resolution aerial imagery collected in 2024 using a ground-piloted aerial vehicle (i.e., drone) within approximately 11,000 acres of the Project Area was used to verify the mapping of vegetation communities, land covers, and aquatic resources. Site-specific field mapping of vegetation communities at the alliance/association levels using the California Natural Community List (CDFW 2022a) and descriptions from the Manual of California Vegetation Online (CNPS 2021) per the Survey of California Vegetation Classification and Mapping Standards (CDFW 2020a) and jurisdictional delineations of aquatic resources per regulatory agency guidelines were not conducted due to the size of the Project Area (51,622 acres), lack of access, the 30-year horizon for the Specific Plan, and the dynamic nature of biological resources over these timeframes and geographic area.

Plant and Wildlife Species

The descriptions of plants and wildlife within the Project Area were developed based on existing literature and data review and limited field reconnaissance. Special-status plant and wildlife species with the potential to occur in the Project Area were identified based on evaluation of USFWS's Federally Listed Species Occurrences GIS dataset (USFWS 2022b), CDFW's California Natural Diversity Database (CDFW 2022b) occurrence records within the Project Area and 5-mile buffer of the Project Area, and special-status species evaluated in the Salton Sea Management

Program Phase 1: 10-Year Plan Environmental Assessment (USACE and CNRA 2022) and Salton Sea Species Conservation Habitat Project Draft Environmental Impact Statement/Environmental Impact Report (DWR and CDFW 2011). Protocol or focused surveys for plant and wildlife species were not conducted for the Project.

Landscape Habitat Linkages and Wildlife Movement

Landscape habitat linkages through and surrounding the Project Area were identified through a review of the California Essential Habitat Connectivity Project (Spencer et al. 2010) and California Desert Connectivity Project (Penrod et al. 2012) mapping. Additionally, information and data about species and habitat uses in the Project Area were used to describe wildlife movement, including Important Bird Areas (Cooper 2004a) and the Pacific Flyway for avian movement. Wildlife movement studies were not conducted for the Project.

2.2 Field Reconnaissance

Field reconnaissance was conducted primarily to verify information gathered from existing sources and to identify any major changes to on-the-ground conditions relative to the existing information and data. Field reconnaissance was conducted by Dudek biologists Mike Howard and Callie Amoaku in November 2022 by driving public roadways throughout the Project Area. Observations were recorded using an aerial-based Project map displayed through the ESRI Collector Application on a hand-held mobile device. Representative photos were taken of habitat types, key features, and conditions of the Project Area. Field reconnaissance throughout the Project Area and the 2024 drone aerial imagery collected over approximately 11,000 acres of the Project Area were used together with existing data sources (see Section 2.1, Literature and Data Review) for the mapping of vegetation communities, land covers, and aquatic resources.

2.3 Study Limitations

The approach used in this BRTR provides a robust description and evaluation of the biological resources existing conditions and potential impacts of the Project in the Project Area suitable for supporting development of the Specific Plan and the associated Programmatic Environmental Impact Report. Due to the size of the Project Area, property access limitations, 30-year horizon for the Specific Plan, and the dynamic nature of biological resources over these timeframes and geographic area, comprehensive site-specific mapping and focused surveys were not conducted throughout the Project Area. Additional surveys may be necessary to support future project-level approvals or agency permits.

3 Project Setting

3.1 Ecoregions and Watersheds

The U.S. Department of Agriculture has identified ecoregions throughout the United States, and the ecoregion system includes four hierarchical levels: domains, divisions, provinces, and sections/subsections. The broader domain and division ecoregion levels are defined by climate, precipitation, and temperature, and the finer-grained divisions and sections/subsections are differentiated based on vegetation and terrain (USDA 2022a). The Project Area occurs in the Dry domain, Tropical/Subtropical Desert division, American Semi-Desert and Desert province, and Colorado Desert section. Ecoregion subsections in the Project Area include the Imperial Valley, Coachella Valley, and East Mesa–Sand Hills.

The Project Area occurs within the Salton Sea subbasin (Hydrologic Unit Code [HUC] 8) and includes a portion of the Salton Sea itself and the lower portions of four watersheds (HUC 10): Alamo River, Imperial Valley–Frontal Salton Sea, New River, and Superstition Hills–Frontal Salton Sea (USGS 2022).

3.2 Climate

The Imperial Valley has an arid, low-latitude desert (hot) climate characterized by extremely hot and dry summers and moderately cold winters (CDFG 2003; PEC 2006). The average annual high temperature is 88°F and the average annual low temperature is 57°F, which are much higher than other regions of California (PEC 2006; U.S. Climate Data 2022). The average annual precipitation is approximately 2.9 inches, with most rainfall occurring December through February (U.S. Climate Data 2022).

3.3 Geomorphology and Topography

Geomorphology refers to the landforms and relief patterns of the Earth's surface. The Project Area occurs within the basin of the Salton Sea (i.e., the Salton Trough) in the Imperial Valley, which is the dominant geomorphological feature. The Alamo River channel runs roughly through the center of the Project Area from the south to the northwest, draining in the Salton Sea (IID 2002). Obsidian Buttes, Rock Hill, and Red Hill are volcanic domes/deposits that provide topographic relief along the shoreline of the Salton Sea. The very northeast corner of the Project Area extends just out of the valley floor into the alluvial fans at the base of the Chocolate Mountains.

Nearly the entire Project Area is below sea level, and the topography is flat but sloping generally from east to west toward the Salton Sea. Elevations range from approximately -240 feet mean sea level at the edge of the Salton Sea to 60 feet above mean sea level (USGS 2023).

3.4 Hydrology

The primary surface water features in the Project Area are the Salton Sea, the Alamo River, the IID distribution system of canals, and the IID drainage system. The IID distribution system delivers water from the Colorado River to the agricultural fields of the Imperial Valley, and drainage water flows to the Salton Sea via the Alamo River or flows through agricultural drains to the playa surrounding the Sea (IID 2002). The majority of inflows to the Salton

Sea are agricultural return flows, but groundwater, direct precipitation, and surface runoff also provide water to the Salton Sea. As a result of surface application of irrigation water and the low permeability of soils throughout the IID water service area, a perched water table exists throughout portions of the Imperial Valley (CH2MHill 2002). Groundwater originating as precipitation in the mountains on the east and west side of the Salton Sea also enters the Salton Sea (LLNL 2008). See Section 4.1 for the vegetation communities and land cover types associated with the surface water features in the Project Area, including the Salton Sea shoreline and shallow water areas, wetland communities, riparian communities, and canals and drains.

3.5 Soils

Soil types mapped within the Project Area include the following soil surface textures and types (USDA 2022b):

- Clay loam, 513 acres (Glenbar Clay Loam)
- Gravelly sand, 1,825 acres (Niland Gravelly Sand and Niland-Imperial Complex)
- Loam, 779 acres (Glenbar Complex, Indio Loam, Indio-Vint Complex, and Meloland and Holtville Loams)
- Silty clay, 22,387 acres (Holtville Silty Clay and Imperial Silty Clay)
- Silty clay loam, 11,387 acres (Imperial-Glenbar Silty Clay Loams)
- Very fine sandy loam, 1,199 acres (Meloland Very Fine Sandy Loam and Vint and Indio Very Fine Sandy Loams)
- Undesignated/unmapped areas, 13,529 acres (Badlands; Fluvaquents Saline; Torriorthents-Rock Outcrop Complex; Water; and unmapped areas, including those within the Salton Sea)

3.6 Land Ownership and Use

The majority of the agricultural lands and the other undeveloped areas of the Project Area are private lands. Public lands include IID lands, state lands (CDFW Imperial Wildlife Area, Wister Unit), USFWS lands (Salton Sea Sonny Bono Wildlife Refuge), and U.S. Bureau of Land Management (BLM) lands. The majority of the private lands are in agricultural uses, but also include renewable energy, industrial, commercial, residential, and transportation uses. The public lands are generally open space, including the Salton Sea itself and associated lands (County of Imperial 2015a).

3.7 Regional Resource Planning Context

IID Water Conservation and Transfer Project Draft Habitat Conservation Plan and Natural Community Conservation Plan

The IID services Imperial Valley with water and energy to support agricultural, commercial, industrial, and residential activities throughout Imperial County. As part of the IID Water Conservation and Transfer Project, a Draft Habitat Conservation Plan (HCP) and Draft Natural Community Conservation Plan (NCCP) were prepared in 2001. The Draft HCP/NCCP outlines the shared objectives and policy mechanisms between IID and the Wildlife Agencies to support the protection and conservation of the state's wildlife resources while supporting economic development, population growth, and land use change. Although the Environmental Impact Report/Environmental Impact Statement was completed in January 2002 (IID and Reclamation 2002), development of the Draft HCP/NCCP is still in process and has not been approved (IID 2024).

Lower Colorado River Multi-Species Conservation Program Habitat Conservation Plan

The Lower Colorado River Multi-Species Conservation Program HCP is a multi-agency HCP approved in 2004 that addresses multiple species associated with the Lower Colorado River basin of Nevada, Arizona, and California covering activities associated with water diversions, water flows, hydropower, and conservation. The Lower Colorado River Multi-Species Conservation Program HCP area does not overlap the Project Area; however, IID is a permittee under the HCP (LCR MSCP 2004).

Desert Renewable Energy Conservation Plan

The Desert Renewable Energy Conservation Plan is a planning document developed by the California Energy Commission and BLM to advance federal and state natural energy and resource conservation goals and facilitate the timely and streamlined permitting of renewable energy projects in the Mojave and Colorado/Sonoran Desert regions of Southern California, including Imperial County. The Desert Renewable Energy Conservation Plan was initially envisioned as an effort that would fulfill federal ESA permitting requirements on private lands as a General Conservation Plan, federal ESA permitting requirements on BLM lands, and California ESA permitting requirements as an NCCP; however, the General Conservation Plan and NCCP components were not completed or approved. In 2016, the BLM Desert Renewable Energy Conservation Plan Land Use Plan Amendment was adopted addressing only BLM lands within the California Desert Conservation Area, including BLM lands in Imperial County (BLM 2016).

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4 Results

4.1 Vegetation Communities and Other Land Cover Types

The Project Area is characterized by a highly modified landscape influenced by human activities and disturbance. The Salton Sea, surrounding agricultural uses and associated irrigation system, and the other extensive land uses, including geothermal facilities, solar fields, and roads and urban areas, have transformed vegetation communities and land covers in a majority of the Project Area. For the purpose of this description of existing conditions, vegetation communities and land cover types are described using broad, general categories suited best for planning purposes. The vegetation community and land cover mapping and type descriptions are based primarily on the best available existing sources and field reconnaissance (see Chapter 2, Methods). Field-based mapping of vegetation types pursuant to project-level standards was not conducted or considered necessary to support this planning effort, particularly given the nature of the Project Area. Figure 2, Vegetation Communities and Other Land Cover, provides mapping of the vegetation communities and land cover types in the Project Area, and Table 1 provides an acreage summary of the general vegetation communities and land cover types in the Project Area.

Table 1. Vegetation Communities and Other Land Cover Types in the Project Area

Vegetation Communities and Land Cover Types	Project Area Acreage
Vegetation Community	
Salton Sea	
Open Water	6,480
Shoreline and Playa	4,920
Wetland Communities	
Freshwater Emergent Wetland	4,639
Freshwater Forested/Shrub Wetland	436
Freshwater Pond	3,010
Open Water/Lake	26
Riparian Communities	478
Desert Scrub Communities	1,295
Vegetation Community Subtotal	*21,284*
Other Land Covers	
Agriculture	21,868
Barren/Rock Outcrop	60
Developed and Disturbed	8,409
Other Land Cover Type Subtotal	*30,337*
Project Area Total	**51,621**

Sources: USFWS 2022a; DWR 2018; IID 2014; Chambers Group 2023. Additional sources include 2024 Project-specific drone aerial imagery and refinements using aerial imagery from Bing, Google Earth, and the U.S. Department of Agriculture National Agriculture Imagery Program (NAIP) from 2020.
Notes: Imperial Irrigation District canals/drains are linear features that occur within developed and disturbed areas, agriculture, and along riparian areas.
Totals may not sum due to rounding.

Salton Sea Open Water, Shoreline, and Playa

The Project Area includes open water of a portion of the Salton Sea and shallow shoreline areas and exposed playa that extend around the perimeter of the Salton Sea. This area contains unvegetated mud flats, playa, and shoreline, as well as vegetated shoreline areas dominated by tamarisk (*Tamarix ramosissima*), iodine bush (*Allenrolfea occidentalis*), and/or salt grass (*Distichilis spicata*) (DWR and CDFG 2007). South of the Alamo River and around the Rock Hill outcrop, dust suppression activities (i.e., surface roughening by grading of linear ditches) have been implemented in the open playa, and these areas could be characterized as disturbed.

Wetland Communities

Areas of managed and unmanaged vegetation, including diked wetlands, are located above and along the shoreline of the Salton Sea in the Project Area where water associated with irrigation runoff and other sources provide adequate soil moisture. Tamarisk and iodine bush are the most common species in these wetlands, along with cattail (*Typha latifolia*), bulrush (*Schoenoplectus americanus*), and other wetland plant species (DWR and CDFG 2007). USFWS National Wetlands Inventory data classifies the wetlands in the Project Area as freshwater emergent wetlands, freshwater forested/shrub wetlands, freshwater ponds, and lakes (USFWS 2022a). Wetland communities may be subject to the jurisdiction of state and/or federal regulatory agencies (see Section 1.3, Regulatory Context). In the Project Area, managed and unmanaged wetlands occur both north and south of the Alamo River around the CDFW Imperial Wildlife Area Wister Unit and the Sonny Bono Salton Sea National Wildlife Refuge.

Riparian Communities

Riparian vegetation in the Project Area is primarily associated with the Alamo River, New River, and immediate tributaries and drains. These communities occur along the banks of these features and are primarily dominated by non-native species such as tamarisk, athel tree (*Tamarix aphylla*), and quail bush (*Atriplex lentiformis*), but also supports narrowleaf willow (*Salix exigua*), salt grass, and arrowweed (*Pluchea sericea*) (Dudek 2010). In the remnant patches of desert scrub communities (see below) that occur in the higher-elevation areas in the northeastern portion of the Project Area, desert riparian communities occur along ephemeral washes, which are characterized by scattered desert ironwood (*Olneya tesota*), mesquite (*Prosopis* spp.), and palo verde (*Parkinsonia* spp.). USFWS National Wetlands Inventory data classifies the riparian areas in the Project Area as riverine (USFWS 2022a). Riparian communities may be subject to the jurisdiction of state and/or federal regulatory agencies (see Section 1.3).

Desert Scrub Communities

The Project Area supports isolated parcels and patches of remnant desert scrub vegetation not previously converted by land use changes, primarily located in the northeastern corner of the Project Area and around the rock outcrops associated with Obsidian Buttes and Red Hill. Desert scrub communities include widely scattered creosote bush (*Larrea tridentada*), saltbush species (e.g., *Atriplex canescens*), white bur-sage (*Ambrosia dumosa*), brittlebush (*Encelia farinosa*), and boxthorn (*Lycium andersonii*), among other species (USACE and CNRA 2022).

Agricultural Lands

Most of the Project Area is characterized by agricultural lands, including row crops, fallowed fields, dairy feedlots, and other agricultural uses.

Barren/Rock Outcrop

Barren areas largely devoid of vegetation and characterized by rock outcrops occur in three locations in the Project Area: Obsidian Buttes, Rock Hill, and Red Hill. As noted in Section 3.3, Geomorphology and Topography, these features are volcanic domes/deposits that occur along or near the edge of the Salton Sea.

Developed and Disturbed Areas

Developed and disturbed areas, including geothermal energy facilities, solar energy facilities, roads, road shoulders, irrigation facilities, and other developed and disturbed areas, exist throughout the Project Area. These areas are devoid of vegetation or support largely non-native or ornamental plantings. A system of irrigation canals and drains occurs generally along roadway shoulders throughout the Project Area. Canals are largely devoid of vegetation. Drains can be unvegetated or support sparse to thick vegetation cover with species such as tamarisk and arrowweed.

Sensitive Natural Communities

CDFW has identified sensitive natural communities throughout the state (CDFW 2022c) that are identified at the vegetation alliance level according to the classification system of the California Natural Community List (CDFW 2022a) and descriptions from the Manual of C alifornia Vegetation Online (CNPS 2021). As noted in Section 4.1, Vegetation Communities and Other Land Cover Types, the vegetation communities in the Project Area are described at a planning level suitable for the purpose of this Project. The California Sensitive Natural Communities List (CDFW 2022c) was reviewed to identify the potential for sensitive natural communities to occur in the Project Area.

Desert riparian vegetation was observed along the ephemeral washes within the desert scrub vegetation in the northeastern portion of the Project Area. These desert riparian washes support palo verde and desert ironwood, which would likely be mapped at the project level as palo verde–ironwood woodland (*Parkinsonia florida – Olneya tesota* alliance), which is a CDFW sensitive natural community.

Areas of exposed playa, drier/saltier basins, berms, and other areas within the Project Areas support areas dominated by iodine bush and/or saltgrass. Although these areas are generally highly modified, this vegetation would likely be mapped at the project level as iodine bush scrub (*Allenrolfea occidentalis* alliance) or saltgrass flat (*Distichlis spicata* alliance), which are CDFW sensitive natural communities.

Areas along IID drains and edges of riparian areas, wetlands, and drainages support arrowweed. Although these areas are generally highly modified, this vegetation would likely be mapped at the project level as arrow weed thickets (*Pluchea sericea* alliance), which is a CDFW sensitive natural community.

Unmanaged and managed wetlands in the Project Area support areas dominated by cattail and bulrush. Bulrush-dominated wetlands would likely be mapped at the project level as common threesquare marsh (*Schoenoplectus americanus* alliance), which is a CDFW sensitive natural community.

Although not specifically observed or mapped in the Project Area, remnant patches of mesquite thickets (*Prosopis glandulosa – Prosopis velutina – Prosopis pubescens* alliance) have the potential to occur in the Project Area, which is a CDFW sensitive natural community.

4.2 Plant Diversity

Section 4.1, Vegetation Communities and Other Land Cover Types, describes common plant species found in the various vegetation and land cover types in the Project Area. As noted, the Project Area is highly modified by human activities and disturbance, including a substantial portion of the acreage in agricultural uses or developed or disturbed through energy development, irrigation facilities, roadways, and other development, which reduces the overall native plant diversity in these areas. Riparian, wetland, and remnant desert scrub vegetation communities in the Project Area support some diversity of native plant species, but these areas have also been influenced by surrounding disturbance effects, such as non-native invasive species, water quality, and fragmentation. Section 4.4.1 describes special-status plant species that occur or potentially occur in the Project Area.

4.3 Wildlife Diversity

The Project Area supports habitat for a variety of wildlife species. The Salton Sea and associated shoreline and wetland habitats support a diverse assemblage of bird species, as well as aquatic invertebrates and fish. The surrounding agricultural fields, riparian habitat along the Alamo River, and the remaining desert scrub habitats in the Project Area also support wildlife. The following provides a summary of wildlife aquatic species, birds species, and other terrestrial species. Section 4.4.2 describes special-status wildlife species that occur or potentially occur in the Project Area.

Aquatic Species

The shoreline and shallow and open water areas of the Salton Sea, as well as the river mouth and delta of the Alamo River, the Alamo River and agricultural drains, and other wetland areas, provide habitat for aquatic invertebrates and fish. Aquatic invertebrates associated with these habitats include species of worms, crustaceans, snails, mollusks, and insects (Kuperman et al. 2000; Miles et al. 2009).

In previous decades, the Salton Sea was a productive fishery; however, the richness of fish species has declined dramatically in the open water and other associated aquatic habitats as a result of the sea's hypersaline conditions (CDFG 1961, 2007; Hurlbert et al. 2007). The most abundant fish species in the Salton Sea is a California Mozambique hybrid tilapia, which is thought to be a hybrid between the Mozambique tilapia (*Oreochromis mossambicus*) and Wami River tilapia (*O. urolepis hornorum*) (Costa-Pierce 2001; Hurlbert et al. 2007). Although now largely or completely absent from the open water areas of the Salton Sea, bairdiella (*Bairdiella icistia*), sargo (*Anisotremus davidsoni*), and orangemouth corvina (*Cynoscion xanthulus*) may occur in the river mouth and delta, or near shore areas with lower salinity levels (Hurlbert et al. 2007). Sailfin molly (*Poecilia latipinna*), shortfin molly (*Poecilia Mexicana*), and mosquitofish (*Gambusia affinis*) are known from the Alamo River and agricultural drains (CDFG 1991). Desert pupfish (*Cyprinodon macularius*), which is discussed further in Section 4.4.2, also occurs along the shoreline of the Salton Sea and in the lower portions of the agricultural drains (USFWS 2021a).

Bird Species

The Salton Sea and its shorelines, and the wetlands, riparian areas, and agricultural fields of the Imperial Valley support substantial populations of wintering, migratory, and breeding waterbirds, wading birds, shorebirds, and songbirds. The Salton Sea and the Imperial Valley are identified as Audubon Important Bird Areas (Cooper 2004a, 2004b) and are known as critical North American stopover locations along the Pacific Flyway (Shuford et al. 2000). More than 400 species of resident and migratory birds, including special-status bird species, have been recorded in the region, with the number of wintering and migratory birds in the hundreds of thousands (DWR and CDFW 2011; USACE and CNRA 2022).

Numerous shorebird, wading bird, and waterfowl species occur in and around the Salton Sea, including numerous species of gulls and terns; numerous species of herons, egrets, and night-herons; American white pelican (*Pelecanus erythrorhynchos*); California brown pelican (*Pelecanus occidentalis*); willet (*Tringa semipalmata*); grebes (*Aechmophorus* and *Podiceps* spp.); plovers (*Charadrius* spp.); geese (*Anser* spp.); black-necked stilt (*Himantopus mexicanus*); ruddy duck (*Oxyura jamaicensis*); American coot (*Fulica americana*); northern shoveler (*Spatula clypeata*); northern pintail (*Anas acuta*); double-crested cormorants (*Phalacrocorax auritus*); and white-faced ibis (*Pledgadis chihi*) (DWR and CDFG 2007; Shuford et al. 2000; USACE and CNRA 2022). Black-necked stilts, whimbrels (*Numenius phaeopus*), small sandpipers (*Calidris* spp.), dowitchers (*Limnodramus* spp.), willets, and long-billed curlews (*Numenius americanus*) are abundant. The area is a major wintering ground for more than 100,000 waterfowl (DWR and CDFG 2007). In a survey of the Imperial Valley agricultural fields over 14 days in 2006 and 2007, more the 24,000 bird individuals of 32 different species were recorded in the Project Area, including 8,503 white-faced ibis, 3,408 cattle egrets (*Bubulcus ibis*), 1,000 western sandpipers (*Calidris mauri*), 938 long-billed curlews, 725 snow geese (*Anser caerulescens*), 570 mountain plovers (*Charadrius montanus*), and 384 black-necked stilts (CDFW 2020b). The Salton Sea/Imperial Valley has been identified as a region of global, national, and statewide importance for migrant and resident bird species (Cooper 2004b).

Common bird species in and around the riparian habitat of the Project Area include common yellowthroat (*Geothlypis trichas*), song sparrow (*Melospiza melodia*), Abert's towhee (*Melozone aberti*), verdin (*Auriparus flaviceps*), house finch (*Carpodacus mexicanus*), black phoebe (*Sayornis nigricans*), red-winged blackbird (*Agelaius phoeniceus*), and marsh wren (*Cistothorus palustris*). Northern harrier (*Circus hudsonius*), red-tailed hawk (*Buteo jamaicensis*), and turkey vulture (*Cathartes aura*) are commonly seen throughout the Project Area over the marshes, agricultural fields, and desert scrub habitats (Dudek 2010). Numerous special-status bird species are known from the Project Area (see Section 4.4.2).

Other Terrestrial Species

Other terrestrial species include common reptile and mammal species that use the upland habitats in the Project Area. Common reptile species in the region include desert spiny lizard (*Sceloporus magister*), gopher snake (*Pituophis catenifer*), side-blotched lizard (*Uta stansburiana*), and western diamond-backed rattlesnake (*Crotalus atrox*). Common mammal species in the region include coyote (*Canis latrans*), desert cottontail (*Sylvilagus audobonii*), raccoon (*Procyon lotor*), round-tailed ground squirrel (*Spermophilus tereticaudus*), striped skunk (*Mephitis mephitis*), Virginia opossum (*Didelphis virginiana*), and western pocket gopher (*Thomomys bottae*) (USACE and CNRA 2022). See Section 4.4.2 for a discussion of special-status terrestrial species.

4.4 Special-Status Species

Special-status plant species in this BRTR include those recognized as endangered, threatened, or candidates/proposed for listing under the federal ESA or California ESA, and plant species with a California Rare Plant Rank of 1 or 2. Special-status wildlife species in this BRTR include those recognized as endangered, threatened, or candidates/proposed for listing under the federal ESA or California ESA, California Fully Protected species, and California Species of Special Concern (SSC). In addition, bald eagle and golden eagle receive special protections under the Bald and Golden Eagle Protection Act. All migratory bird species are protected under the Migratory Bird Treaty Act but are not considered special status in this BRTR.

4.4.1 Special-Status Plant Species

A total of 16 special-status plant species were evaluated for potential to occur in the Project Area based on species with California Natural Diversity Database occurrence records within the Project Area and 5-mile buffer, and species evaluated under the Salton Sea Management Program (USACE and CNRA 2022) and Salton Sea Species Conservation Habitat Project (DWR and CDFW 2011). Additionally, the USFWS Information for Planning and Consultation (IPaC) database was queried for potential plant species in the Project Area (Appendix A). The special-status plant species potential to occur evaluation is provided as Appendix B, Special-Status Plant Species Potential to Occur in the Project Area. Figure 3, Special-Status Plant and Wildlife Occurrences, shows the species occurrence records within the Project Area and within 5 miles of the Project Area.

One special-status plant species, Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*; California Rare Plant Rank 2B.2) was determined to have a high potential to occur in the northeastern portion of the Project Area and low potential to occur elsewhere in the Project Area. The remaining 15 special-status plant species evaluated for potential to occur were determined to have a low potential to occur or are not expected to occur in the Project Area.

No USFWS-designated critical habitat for federally listed plant species occurs within the Project Area or 5-mile buffer. Designated critical habitat for Peirson's milk-vetch (*Astragalus magdalenae* var. *peirsonii*) occurs approximately 11 miles east of the Project Area in the Algodones Dunes.

4.4.2 Special-Status Wildlife Species

A total of 46 special-status wildlife species were evaluated for potential to occur in the Project Area based on species with USFWS and California Natural Diversity Database occurrence records within the Project Area and 5-mile buffer, and species evaluated under the Salton Sea Management Program (USACE and CNRA 2022) and Salton Sea Species Conservation Habitat Project (DWR and CDFW 2011). Additionally, the USFWS Information for Planning and Consultation (IPaC) database was queried for potential wildlife species in the Project Area (Appendix A). Special-status wildlife species potential to occur evaluation is provided as Appendix C, Special-Status Wildlife Species Potential to Occur in the Project Area. Figure 3 shows the species occurrence records within the Project Area and within 5 miles of the Project Area.

A total of 13 special-status wildlife species occur or have a high potential to occur in the Project Area:

- Burrowing owl (*Athene cunicularia*), California candidate
- Redhead (*Aythya americana*), SSC
- Mountain plover (*Charadrius montanus*), SSC
- Western snowy plover, interior population (*Charadrius nivosus nivosus*), SSC
- Gull-billed tern (*Gelochelidon nilotica*), SSC
- Least bittern (*Ixobrychus exilis*), SSC
- Loggerhead shrike (*Lanius ludovicianus*), SSC
- California black rail (*Laterallus jamaicensis coturniculus*), fully protected, SSC
- Large-billed savannah sparrow (*Passerculus sandwichensis rostratus*), SSC
- American white pelican (*Pelecanus erythrorhynchos*), SSC
- Yuma Ridgway's rail (*Rallus obsoletus yumanensis*), federally endangered, California threatened, fully protected

- Black skimmer (*Rynchops niger*), SSC
- Desert pupfish (*Cyprinodon macularius*), federally endangered, California endangered

A total of 23 special-status wildlife species have a moderate potential to occur in the Project Area:

- Couch's spadefoot (*Scaphiopus couchii*), SSC
- Mojave desert tortoise (*Gopherus agassizii*), federally threatened, California endangered
- Flat-tailed horned lizard (*Phrynosoma mcallii*), SSC
- Lesser sandhill crane (*Antigone canadensis canadensis*), SSC
- Greater sandhill crane (*Antigone canadensis tabida*), California threatened, fully protected
- Fulvous whistling-duck (*Dendrocygna bicolor*), SSC
- White-tailed kite (*Elanus leucurus*), fully protected
- Southwestern willow flycatcher (*Empidonax traillii extimus*), federally endangered, California endangered
- Bald eagle (*Haliaeetus leucocephalus*), state endangered, fully protected
- Yellow-breasted chat (*Icteria virens*), SSC
- Gila woodpecker (*Melanerpes uropygialis*), California endangered
- Wood stork (*Mycteria americana*), SSC
- California brown pelican (*Pelecanus occidentalis californicus*), fully protected
- Yellow warbler (*Setophaga petechia*), SSC
- Crissal thrasher (*Toxostoma crissale*), SSC
- LeConte's thrasher (*Toxostoma lecontei*), SSC
- Least Bell's vireo (*Vireo bellii pusillus*), federally endangered, California endangered
- Yellow-headed blackbird (*Xanthocephalus xanthocephalus*), SSC
- Western yellow bat (*Dasypterus xanthinus*), SSC
- Western mastiff bat (*Eumops perotis californicus*), SSC
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*), SSC
- Yuma hispid cotton rat (*Sigmodon hispidus eremicus*), SSC
- American badger (*Taxidea taxus*), SSC

The remaining 10 special-status wildlife species evaluated for potential to occur were determined to have a low potential to occur or are not expected to occur in the Project Area during the life stage associated with their status (e.g., nesting, nesting colony, or wintering).

No USFWS-designated critical habitat for federally listed wildlife species occurs within the Project Area or 5-mile buffer. Designated critical habitat for desert tortoise (*Gopherus agassizii*) occurs approximately 10 miles northeast of the Project Area east of the Chocolate Mountains. Designated critical habitat for desert pupfish is approximately 10 miles west of the Project Area, west of the Salton Sea in the San Felipe Wash area.

4.5 Potential Jurisdictional Aquatic Resources

Potential jurisdictional aquatic resources include wetlands, riparian area, and non-wetland water features potentially subject to the jurisdiction of USACE under CWA Section 404, RWQCB under CWA Section 401 and the California Porter-Cologne Water Quality Control Act, and/or CDFW under CFGC Section 1600 et seq. Additionally, IID drains are hydrologic features that carry flows from the agricultural fields in the Project Area into the Alamo River and also directly into the Salton Sea that may be to subject to agency jurisdiction.

Planning-level mapping of potentially jurisdictional aquatic resources was based primarily on USFWS National Wetlands Inventory data (USFWS 2022a), with adjustments made along the Salton Sea shoreline based on aerial imagery and centerlines for the IID drain system (see Section 4.1). The mapped wetlands and riparian areas, as well as the Salton Sea itself, are likely to be subject to regulatory agency jurisdiction. Shoreline features, IID drains, and other unmapped wetland and non-wetland features may also be subject to regulatory agency jurisdiction.

4.6 Landscape Habitat Linkages and Wildlife Movement

Wildlife species generally inhabit suitable habitat patches distributed across a landscape. These habitat blocks, which may make up the species' home range or breeding territory, support most, if not all, of the species' life history needs (e.g., food resource, mates, refuge). Wildlife corridors contribute to population viability by (1) ensuring the continual exchange of genes between populations, which helps maintain genetic diversity; (2) providing access to adjacent habitat areas, representing additional territory for foraging and mating; (3) allowing for a greater carrying capacity; and (4) providing routes for colonization of habitat lands following local population extinctions or habitat recovery from catastrophic events. Habitat linkages are patches of habitat that function to join two larger patches of habitat. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation (Spencer et al. 2010).

The California Essential Habitat Connectivity Project was a statewide habitat linkage modeling effort that used indices of environmental integrity and other biological inputs to identify large "Natural Landscape Blocks" and "Essential Connectivity Areas" throughout California (Spencer et al. 2010). No Natural Landscape Blocks or Essential Connectivity Areas occur in the Project Area; however, the California Essential Habitat Connectivity Project mapped potential riparian connections along the Alamo River through the Project Area and along the New River along the edge of the Project Area (Figure 4, Landscape Habitat Linkages). The Chocolate Mountains east of the Project Area is identified as a Natural Landscape Block. The California Desert Connectivity Project (Penrod et al. 2012) was another habitat connectivity analysis prepared for the California deserts, including the Project Area, that used least-cost corridor habitat permeability models for four focal species and identified a Desert Linkage Network using "land facet" methods based on the approach described by Beier and Brost (2010). No Desert Linkage Network connections occur in the Project Area.

The Project Area consists primarily of a modified landscape of agricultural lands, developed and disturbed areas (e.g., roads, road shoulders, development), and irrigation canals and drains. Unmanaged and managed wetland habitat occurs in the northern portion of the Project Area, and the Salton Sea and associated shoreline habitats occur along the entire northwestern portion of the Project Area. Small areas of desert scrub habitat occur primarily in the northeastern portion of the Project Area. The Alamo River crosses through the middle of the Project Area, and the New River is located along the southwestern edge of the Project Area. Although the network of roadways and irrigation canals and drains are generally not considered habitat for most wildlife species, the roadways generally

carry low traffic volumes and human presence is generally light in the Project Area, which likely allows for movement of common terrestrial wildlife relatively freely through the Project Area using the roadways and associated shoulders and berms. The wetland habitats, agricultural lands, and Salton Sea and associated shoreline habitats provide nesting, roosting, and foraging habitat for resident, wintering, and migratory birds, as well as terrestrial wildlife. The Alamo River and New River provide movement corridors through the Project Area for terrestrial wildlife and birds. No migratory fish occur in the Project Area, and resident fish species use the system of rivers, agricultural drains, adjacent wetlands, and the Salton Sea for movement. As noted in Section 4.3, Wildlife Diversity, the Salton Sea and Imperial Valley are known as important stopover locations for migratory birds along the Pacific Flyway (Shuford et al. 2000).

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5 Anticipated Project Impacts

This chapter addresses direct, indirect, and cumulative impacts to biological resources that would result from implementation of the Project. Direct impacts would result from land use changes proposed by the Specific Plan that would cause direct removal or conversion of biological resources through grading associated with development, other ground disturbance activities, or habitat modifications. Direct impacts can be both temporary and permanent. Indirect impacts result primarily from adverse edge effects associated with the proposed land use changes, and may be short term related to construction, or long term associated with development in proximity to biological resources. Potential indirect impacts include dust, noise, lighting, soil erosion and sedimentation, runoff, hydrological changes, non-native invasive plant and wildlife species, effects of toxics, and human presence. Cumulative impacts refer to incremental individual environmental effects over the long-term implementation of the Project when considered together with impacts from other Projects in the area. These impacts taken individually may be minor, but are collectively significant because they occur over a period of time.

The impact analysis was quantified by overlaying the proposed land use designations (Figure 5, Project Area Land Use) onto the biological resources within the Project Area to estimate effects. The following assumptions were used to estimate the impacts associated with each proposed Land Use Designation:

- Land use designations where land use intensification would occur under the Specific Plan that would result in impacts to biological resources include the following:
  - Community Opportunity Areas
  - Green Industrial
  - Interim Agricultural Overlay
  - Logistics
  - Manufacturing
  - Playas Renewables
  - Solar
- Land use designations where conservation occurs or where the proposed land uses would maintain, protect, enhance, and/or restore biological resources and ecological function and may be suitable for future mitigation actions are as follows:
  - Conservation
  - River Corridor
  - Playas Restoration

The land use designations provide a reasonable estimate and spatial configuration of where land use intensification (i.e., impacts) and conservation (i.e., impact avoidance or net benefit for biological resources) would occur under the Specific Plan. Infrastructure associated with the land use changes would also be necessary within all these land use designations, including water infrastructure; wastewater/reclamation; stormwater and drainage; energy, telecommunications, and broadband; solid waste; essential services related to police, fire, and health facilities; and transportation and transit facilities. The land uses within each land use designation would be phased. The land use designations and phasing within the Project Area are summarized in Table 2. In assessing the impacts of the proposed project on biological resources, the policies and development and design standards of the Specific Plan were considered part of the project description and are assumed would be required by the County to be implemented by project proponents for projects and activities under the Specific Plan.

Table 2. Land Use Designations and Phasing within the Project Area

Land Use Designation	Phase 1	Phase 2	Phase 3	Total
Land Use Intensification Designations (acres)				
Community Opportunity Areas	816	829	N/A	1,644
Green Industrial	7,289	2,711	8,949	18,950
Logistics	2,318	4,408	636	7,361
Manufacturing	1,835	1,374	2,603	5,812
Playas Renewables	2,313	4,334	N/A	6,647
Solar	1,768	N/A	N/A	N/A
Interim Agricultural Overlay	10,420		N/A	N/A
			Subtotal	*40,415*
Conservation Designations (acres)				
Conservation	8,145	N/A	N/A	8,145
River Corridor	1,042	N/A	N/A	1,042
Playas Restoration	N/A	N/A	2,019	2,019
			Subtotal	*11,206*
			Project Area Total	**51,621**

Notes: N/A = not applicable
The Solar land use designation supports solar development in Phase 1 that would convert to Logistics and Manufacturing in Phase 3, and the acreage is included in the totals for these land use designations. The Interim Agricultural Overlay land use designation in Phases 1 and 2 would convert to Green Industrial and Manufacturing in Phase 3, and the acreage is included in the totals for these land use designations.

5.1 Direct Impacts

5.1.1 Vegetation Communities

Vegetation Communities and Other Land Cover Types

Implementation of land use changes and associated infrastructure according to the Project's proposed land use designations has the potential to result in direct impacts to vegetation communities and other land cover types within the Project Area through the removal or modification due to grading associated with development, other ground disturbance activities, and hydrological changes. Based on the impact assumptions described in the introduction to Chapter 5, Anticipated Project Impacts, Table 3 provides a summary of the impacts and conservation for vegetation communities and other land cover types from the proposed land use designations in the Project Area. Due to changing conditions over time (e.g., receding of the Salton Sea and associated changes in the presence of vegetation communities) and impact avoidance implemented at the Project level, the impact analysis presented here is assumed to be a worst-case assessment based on current conditions and the broad land used designation categories.

Table 3. Impact and Conservation for Vegetation Communities and Other Land Cover Types in the Project Area

Vegetation Communities and Land Cover Types	Land Use Intensification Designations (Acres)	Conservation Designations (Acres)
Vegetation Community		
Salton Sea		
Open Water	3,615	2,865
Shoreline and Playa	3,817	1,102
Wetland Communities		
Freshwater Emergent Wetland	2,094	2,545
Freshwater Forested/Shrub Wetland	290	146
Freshwater Pond	1,509	1,501
Open Water/Lake	26	0
Riparian Communities	330	147
Desert Scrub Communities	1,183	112
Vegetation Community Subtotal	*12,864*	*8,420*
Other Land Covers		
Agriculture	21,108	761
Barren/Rock Outcrop	9	51
Developed and Disturbed	6,434	1,974
Other Land Cover Type Subtotal	*27,551*	*2,786*
Project Area Total	**40,415**	**11,206**

Note: Direct impacts are assumed to occur in the following land use intensification designations: Community Opportunity Areas, Green Industrial, Interim Agricultural Overlay (Green Industrial Phase 3), Interim Agricultural Overlay (Manufacturing Phase 3), Logistics, Manufacturing, Playas Renewables, Solar (Logistics Phase 3), and Solar (Manufacturing Phase 3). Conservation is assumed in land use designations where conservation currently occurs or where the proposed land uses would maintain, protect, enhance, and/or restore biological resources and ecological function to result in a net benefit and may be suitable for future mitigation actions, which includes the following land use designations: Conservation, Playas Restoration, and River Corridor. Impacts from infrastructure development may occur in all designations.

Additionally as described in Section 6.3 of the Specific Plan, Stormwater and Drainage, the River Corridors land use designation would allow for modifications to the Alamo River and New River corridors to enable these watercourses to contain and convey 100-year peak flows. Implementation of river corridor modifications would require resource agency permits and may also facilitate the creation of habitat mitigation opportunities and credits, and implementation of such activities under the LVSP has the potential to result in direct impacts to riparian and other sensitive vegetation communities.

Salton Sea Open Water, Shoreline, and Playa

Salton Sea open water occurs within approximately 3,615 acres of proposed land use designations anticipated to be converted by land use changes, once water no longer covers those areas, including 264 acres of Salton Sea open water that would be converted to Green Industrial and 3,352 acres of Salton Sea open water that would be converted to Playas Renewables. Approximately 2,865 acres of Salton Sea open water occurs in proposed conservation land use designations, including 759 acres within Conservation, 86 acres within River Corridor, and 2,019 acres within Playas Restoration.

Additionally, potential reduced inflows to the Salton Sea resulting from the proposed land use changes in the Project Area has the potential to contribute to accelerated receding of the Salton Sea open water area. Under current conditions, existing active agricultural areas in the Project Area are irrigated with imported surface water delivered by IID. IID delivers an estimated 126,000 acre-feet per year (AFY) to the Project Area for irrigation purposes of which an estimated 40,000 AFY ends up as inflows to existing drains and ultimately discharges to the Salton Sea (Dudek 2024). As new development occurs under the proposed Project, these agricultural land uses would be converted to non-agricultural land uses and the amount of water that is discharged into the local drainage network could be reduced. While the agricultural demand of 126,000 AFY would eventually be substantially reduced or eliminated at full buildout, the proposed total water demand at full buildout for the Project is estimated at approximately 77,776 AFY (Dudek 2024). Depending on specific land uses and how this water demand is used, it is likely that some amount of this water would ultimately be discharged offsite and into the drainage network; however, the specific amount cannot be quantified at this stage.

Salton Sea shoreline and playa occur within approximately 3,817 acres of proposed land use designations anticipated to be converted by land use changes, including 1,224 acres of Salton Sea shoreline and playa that would be converted to Green Industrial and 2,593 acres of Salton Sea shoreline and playa that would be converted to Playas Renewables. Additionally, potential reduced inflows to the Salton Sea resulting from the proposed land use changes in the Project Area has the potential to contribute to expansion of the Salton Sea playa area (see discussion above). Approximately 1,102 acres of Salton Sea shoreline and playa occurs in proposed conservation land use designations, including 924 acres within Conservation and 178 acres within River Corridor areas.

Wetland Communities

Wetland communities (freshwater emergent wetland, freshwater forested/shrub wetland, freshwater pond, and open water/lake) occur within approximately 3,919 acres of proposed land use designations anticipated to be converted by land use changes, including 2,426 acres of wetland communities that would be converted to Green Industrial, 7 acres of Interim Agricultural Overlay that would be converted to Green Industrial in Phase 3, 3 acres of Interim Agricultural Overlay that would be converted to Manufacturing in Phase 3, 756 acres of wetland communities that would be converted to Logistics, 64 acres of wetland communities that would be converted to Manufacturing, and 662 acres of wetland communities that would be converted to Playas Renewables. Approximately 4,193 acres of wetland communities occur in proposed conservation land use designations, including 3,978 acres within Conservation and 215 acres within River Corridor areas.

Additionally, conversion from agricultural to non-agricultural land uses under the proposed Project has the potential to result in a change in hydrology and water quality for wetland communities in the Project Area, primarily through alterations of the water quantity, duration, and frequency discharged into the agricultural drains. The magnitude of the effect on wetland communities will depend on numerous factors that cannot be quantified at this stage, including the water demand/usage of the non-agricultural land uses, whether the non-agricultural land uses utilize new stormwater facilities or the existing agricultural drains, and the stormwater detention for the non-agricultural uses.

Riparian Communities

Riparian communities occur within approximately 330 acres of proposed land use designations anticipated to be converted by land use changes, including 18 acres of riparian communities that would be converted to Community Opportunity Areas, 68 acres of riparian communities that would be converted to Green Industrial, 51 acres of

Interim Agricultural Overlay that would be converted to Green Industrial in Phase 3, 17 acres of Interim Agricultural Overlay that would be converted to Manufacturing in Phase 3, 74 acres of riparian communities that would be converted to Logistics, 36 acres of riparian communities that would be converted to Manufacturing, 3 acres of riparian communities that would be converted to Playas Renewables, 52 acres of Solar that would be converted to Logistics in Phase 3, and 13 acres of Solar that would be converted to Manufacturing in Phase 3. Approximately 147 acres of riparian communities occur in proposed conservation land use designations, consisting of 71 acres within Conservation and 76 acres within River Corridor.

Additionally, conversion from agricultural to non-agricultural land uses under the proposed Project has the potential to result in a change in hydrology and water quality for riparian communities in the Project Area, primarily through alterations of the water quantity, duration, and frequency discharged into the riparian areas. The magnitude of the effect on riparian communities will depend on numerous factors that cannot be quantified at this stage, including the water demand/usage of the non-agricultural land uses, whether the non-agricultural land utilize new stormwater facilities or the existing agricultural drains, and the stormwater detention requirements for the non-agricultural uses.

Desert Scrub Communities

Desert scrub communities occur within approximately 1,183 acres of proposed land use designations anticipated to be converted by land use changes, consisting of 606 acres of desert scrub communities that would be converted to Logistics and 577 acres of Solar that would be converted to Logistics in Phase 3. Approximately 112 acres of desert scrub communities occur in proposed conservation land use designations within Conservation.

Agricultural Lands

Agricultural lands occur within approximately 21,108 acres of proposed land use designations anticipated to be converted by land use changes, including 1,436 acres of agricultural lands that would be converted to Community Opportunity Areas, 3,923 acres of agricultural lands that would be converted to Green Industrial, 8,074 acres of Interim Agricultural Overlay that would be converted to Green Industrial in Phase 3, 961 acres of Interim Agricultural Overlay that would be converted to Manufacturing in Phase 3, 3,927 acres of agricultural lands that would be converted to Logistics, 2,653 acres of agricultural lands that would be converted to Manufacturing, and 134 acres of Solar that would be converted to Manufacturing in Phase 3. Approximately 761 acres of agricultural lands occur in proposed conservation land use designations, consisting of 550 acres within Conservation and 211 acres within River Corridor.

Barren/Rock Outcrop

Barren and rock outcrop occurs within approximately 9 acres of proposed land use designations anticipated to be converted by land use changes within Green Industrial. Approximately 51 acres of barren and rock outcrop occurs in proposed conservation land use designations within Conservation.

Developed and Disturbed Areas

Developed and disturbed areas occur within approximately 6,434 acres of proposed land use designations anticipated to be converted by land use changes, including 190 acres within Community Opportunity Areas, 2,087 acres within Green Industrial, 817 acres of Interim Agricultural Overlay that would be converted to Green Industrial in Phase 3, 490 acres of Interim Agricultural Overlay that would be converted to Manufacturing in

Phase 3, 1,363 acres within Logistics, 456 acres within Manufacturing, 39 acres within Playas Renewables, 7 acres within Solar that would be converted to Logistics in Phase 3, and 986 acres within Solar that would be converted to Manufacturing in Phase 3. Approximately 1,974 acres of developed and disturbed areas occur in proposed conservation land use designations, consisting of 1,699 acres within Conservation and 275 acres within River Corridor.

Sensitive Natural Communities

Potential impacts to all vegetation communities and other land cover types resulting from the proposed land use designations and associated infrastructure are described above. As described in Section 4.1 under the subheading "Sensitive Natural Communities," six CDFW sensitive natural communities occur or have the potential to occur in the Project Area: palo verde–ironwood woodland (*Parkinsonia florida – Olneya tesota* alliance), iodine bush scrub (*Allenrolfea occidentalis* alliance), saltgrass flat (*Distichlis spicata* alliance), arrow weed thickets (*Pluchea sericea* alliance), common threesquare marsh (*Schoenoplectus americanus* alliance), and mesquite thickets (*Prosopis glandulosa – Prosopis velutina – Prosopis pubescens* alliance). These are described below.

Palo Verde–Ironwood Woodland

Desert riparian vegetation was observed along the ephemeral washes within the desert scrub vegetation in the northeastern portion of the Project Area, which support palo verde and ironwood that would likely be mapped as palo verde–ironwood woodland (*Parkinsonia florida – Olneya tesota* alliance). The northeastern portion of the Project Area supporting or potentially supporting this sensitive natural community occurs within the following proposed land use designations: Logistics and Solar (Logistics Phase 3). Implementation of the Project has the potential to result in direct impacts to this sensitive natural community.

Iodine Bush Scrub and Saltgrass Flat

Areas of exposed playa, drier/saltier basins, berms, and other areas within the Project Areas support areas dominated by iodine bush and/or saltgrass that, although highly modified, would likely be mapped as iodine bush scrub (*Allenrolfea occidentalis* alliance) or saltgrass flat (*Distichlis spicata* alliance). These sensitive natural communities are most likely to occur in Salton Sea Shoreline and Playa areas within the following proposed land use designations: Green Industrial, Playas Renewables, Conservation, and River Corridor. Implementation of the Project in the Green Industrial and Playas Renewables designations has the potential to result in direct impacts to this sensitive natural community.

Arrow Weed Thickets

Areas along agricultural drains and edges of riparian areas, wetlands, and drainages support arrowweed that, although highly modified, would likely be mapped as arrow weed thickets (*Pluchea sericea* alliance). This sensitive natural community is most likely to occur in riparian communities within the following proposed land use designations: Community Opportunity Areas, Green Industrial, Interim Agricultural Overlay (Green Industrial Phase 3), Interim Agricultural Overlay (Manufacturing Phase 3), Logistics, Manufacturing, Playas Renewables, Solar (Logistics Phase 3), Solar (Manufacturing Phase 3), Conservation, and River Corridor. Implementation of the Project in the Community Opportunity Areas, Green Industrial, Interim Agricultural Overlay (Green Industrial Phase 3), Interim Agricultural Overlay (Manufacturing Phase 3), Logistics, Manufacturing, Playas Renewables, Solar (Logistics Phase 3), and Solar (Manufacturing Phase 3) designations has the potential to result in direct impacts to this sensitive natural community.

Common Threesquare Marsh

Unmanaged and managed wetlands in the Project Area support areas dominated by cattail and bulrush, and bulrush-dominated wetlands would likely be mapped as common threesquare marsh (*Schoenoplectus americanus* alliance). This sensitive natural community is most likely to occur in wetland communities within the following proposed land use designations: Green Industrial, Interim Agricultural Overlay (Green Industrial Phase 3), Interim Agricultural Overlay (Manufacturing Phase 3), Logistics, Manufacturing, Playas Renewables, Conservation, and River Corridor. Implementation of the Project in the Green Industrial, Interim Agricultural Overlay (Green Industrial Phase 3), Interim Agricultural Overlay (Manufacturing Phase 3), Logistics, Manufacturing, and Playas Renewables designations has the potential to result in direct impacts to this sensitive natural community.

Mesquite Thickets

Remnant patches of mesquite thickets (*Prosopis glandulosa – Prosopis velutina – Prosopis pubescens* alliance) have the potential to occur in desert scrub vegetation in the northeastern portion of the Project Area. The northeastern portion of the Project Area with the potential to support this sensitive natural community occurs within the following proposed land use designations: Logistics and Solar (Logistics Phase 3). Implementation of the Project has the potential to result in direct impacts to this sensitive natural community.

5.1.2 Special-Status Species

Special-Status Plant Species

One special-status plant species, Harwood's milk-vetch, was determined to have a high potential to occur in the northeastern portion of the Project Area in association with desert scrub habitat. The northeastern portion of the Project Area potentially supporting this species occurs within the following proposed land use designations: Logistics and Solar (Logistics Phase 3). Implementation of land use changes and associated infrastructure according to the Project's proposed land use designations has the potential to result in direct impacts to Harwood's milk-vetch through removal of occupied or suitable habitat or individuals.

All other special-status plant species have a low potential to occur or are not expected to occur in the Project Area, and no direct impacts from the Project are anticipated for these other special-status plant species.

Other protected plant species include species of California desert native plants (i.e., species in the genera *Prosopis* and *Parkinsonia* (*Cercidium*) and the species *Senegalia greggii*, *Atriplex hymenelytra*, *Dalea spinosa*, and *Olneya tesota*); however, harvest is prohibited under the California Desert Native Plants Act absent appropriate permits.

Special-Status Wildlife Species

Amphibians and Reptiles

No special-status amphibian or reptile species are known to occur or have a high potential to occur in the Project Area. Three special-status amphibians and reptiles, Couch's spadefoot, Mojave desert tortoise, and flat-tailed horned lizard, have a moderate potential to occur in the Project Area in desert scrub habitats in the northeastern portion of the Project Area or at the edges of agricultural lands. The northeastern portion of the Project Area potentially supporting this species occurs within the following proposed land use designations: Logistics and Solar (Logistics Phase 3). Implementation of land use changes and associated infrastructure according to the Project's proposed land use designations has the potential to result in direct impacts to Couch's spadefoot, Mojave desert tortoise, and flat-tailed horned lizard through removal of occupied or suitable habitat or loss of individuals.

Birds

A total of 12 special-status bird species occur or have a high potential to occur in the Project Area: burrowing owl, redhead, mountain plover, western snowy plover, gull-billed tern, least bittern, loggerhead shrike, California black rail, large-billed savannah sparrow, American white pelican, Yuma Ridgway's rail, and black skimmer. A total of 15 special-status bird species have a moderate potential to occur in the Project Area: lesser sandhill crane, greater sandhill crane, fulvous whistling-duck, white-tailed kite, southwestern willow flycatcher, bald eagle, yellow breasted chat, Gila woodpecker, wood stork, California brown pelican, yellow warbler, Crissal thrasher, LeConte's thrasher, least Bell's vireo, and yellow-headed blackbird. These special-status bird species are associated with most of the habitats within the Project Area, including Salton Sea open water, shoreline, and playa; wetlands; riparian; desert scrub; agricultural lands; and agricultural drains.

These special-status bird habitats occur within all the proposed land use designations anticipated to result in land use conversion, and implementation of land use changes and associated infrastructure would have the potential to result in direct impacts to these 27 special-status bird species through removal of occupied or suitable habitat, foraging habitat, or migratory stopover habitat, or loss of individuals or active nests. Under the design standards of the Specific Plan Section 4.2.4(F), project activities with the potential to impact nesting and special-status bird species would occur outside the bird breeding season (February 15 through August 31) or, if implemented during the nesting season, a preconstruction nesting bird survey would be conducted to avoid nesting bird impacts. Implementation of the land use changes would also have the potential to result in direct impacts from hydrological changes (i.e., water quantity and quality/salinity) in wetland, riparian, and agricultural drain habitats for special-status bird species through dewatering or reduced water flows, durations, and/or frequencies due to the conversion of agricultural land uses to non-agricultural land uses. Potential reduced inflows to the Salton Sea resulting from the proposed land use changes has the potential to contribute to accelerated receding of the Salton Sea and reduced habitat for special-status open water and shoreline birds while expanding playa habitats for special-status birds (see also impact discussion for desert pupfish and vegetation communities). Additionally, the proposed project's potential contribution to reduced waterflows and increased salinity in the agricultural drains and the Salton Sea has the potential to reduce food sources for special-status bird species using these resources. These types of effects were evaluated for the IID Water Conservation and Transfer Project that found the water conservation and fallowing impacts of that project would be less-than-significant for special-status bird species with implementation of a robust set of conservation measures associated with that project's Salton Sea habitat conservation strategy, tamarisk scrub habitat conservation strategy, drain habitat conservation strategy, desert habitat conservation strategy, agricultural field habitat conservation strategy, and burrowing owl conservation strategy (CH2MHill 2002). Implementation of the land use changes would have the potential to facilitate the development of solar energy facilities, geothermal energy facilities, aboveground utility lines, and other structures with the potential to result in bird electrocution or collision, including for special-status bird species. Brine or evaporation ponds associated with geothermal facilities has the potential to expose bird species, including special-status birds, to harmful elements.

Within the Conservation, Playas Restoration, and River Corridor land use designations, the allowable land uses are generally compatible with special-status bird species habitat and are located where existing conservation occurs or where future mitigation may be implemented; however, restoration activities, trails, and infrastructure within these land use designations have the potential to result in similar direct impacts to special-status bird species as described above. As described above, the project's potential contribution to reduced waterflows and increased salinity also has the potential to affect agricultural drain, riparian, and Salton Sea habitats and reduce food sources for special-status bird species in these land use designations. The Specific Plan includes design standards for activities adjacent to the Salton Sea (LVSP Section 4.1.1(A)) and setbacks from conservation areas and river corridor areas (LVSP Section 4.1.1(E).

Fish

One special-status fish species, desert pupfish, is known to occur in the Project Area within drains into and edges of the Salton Sea. Drain and Salton Sea Shoreline and Playa habitats supporting or potentially supporting desert pupfish occur within the following proposed Land Use designations anticipated to result in land use conversions: Green Industrial and Playas Renewables. Implementation of land use changes and associated infrastructure according to the Project's proposed land use designations has the potential to result in direct impacts to desert pupfish through removal of occupied or suitable habitat or individuals. Implementation of the land use changes would also have the potential to result in direct impacts from hydrological changes (i.e., water quantity and quality/salinity) in agricultural drain habitats for desert pupfish through dewatering or reduced water flows, duration, and/or frequencies due to the conversion of agricultural land uses to non-agricultural land uses (see impact discussion above in Section 5.5.1, Vegetation Communities). These types of effects were evaluated for the IID Water Conservation and Transfer Project that found the water conservation and fallowing impacts of that project would be less-than-significant for desert pupfish with implementation of the conservation measures associated with that project (CH2MHill 2002). Of the 30 drains within the Specific Plan area, 14 drains potentially support desert pupfish. As described in the Lithium Valley Specific Plan Water Supply Assessment (Dudek 2025), 126,000 acre-feet per year (AFY) of water deliveries to the LVSP area are for agricultural use and an estimated 40,000 AFY end up as return flows in the agricultural drains. Based on the linear length of drains potentially supporting desert pupfish (49.3%), the total estimated return flows in the desert pupfish drains to would need to maintained to avoid changes in water quantity or quality that may impact desert pupfish would be approximately 19,720 AFY.

Within the Conservation and River Corridor land use designations, the allowable land uses are generally compatible with desert pupfish habitat and are located where existing conservation occurs or where future mitigation may be implemented; however, restoration activities, trails, and infrastructure within these land use designations have the potential to result in similar direct impacts to desert pupfish as described above. As described above, the project's potential contribution to reduced waterflows and increased salinity also has the potential to affect agricultural drain and Salton Sea habitats for desert pupfish in these land use designations. The Specific Plan includes design standards for setbacks from conservation areas and river corridor areas (LVSP Section 4.1.1(E) and bridge design standards (LVSP Section 5.2.1) for drains supporting desert pupfish.

Mammals

No special-status mammal species are known to occur or have a high potential to occur in the Project Area. Five special-status mammal species have a moderate potential to occur in the Project Area: western yellow bat, western mastiff bat, pocketed free-tailed bat, Yuma hispid cotton rat, and American badger. Western mastiff bat and pocketed free-tailed bat have the potential to forage in the Project Area, western yellow bat and Yuma hispid cotton rat have the potential to occur in riparian habitats and agricultural lands, and American badger has the potential to occur in desert scrub habitat and agricultural lands. These special-status mammal species habitats occur within all of the proposed land use designations anticipated to result in land use conversion, and implementation of land use changes and associated infrastructure would have the potential to result in direct impacts to western mastiff bat, pocketed free-tailed bat, western yellow bat, Yuma hispid cotton rat, and American badger through removal of occupied or suitable habitat or loss of individuals. Brine or evaporation ponds associated with geothermal facilities have the potential to expose bat species, including special-status bats, to harmful elements.

Within the Conservation and River Corridor land use designations, the allowable land uses are generally compatible with special-status mammal species and are located where existing conservation occurs or where future mitigation may be implemented; however, restoration activities, trails, or infrastructure within these land use designations have the potential to result in similar direct impacts to special-status mammal species as described above. The Specific Plan includes design standards for setbacks from conservation areas and river corridor areas (LVSP Section 4.1.1(E).

Critical Habitat

No USFWS-designated critical habitat for federally listed species occurs within the Project Area or 5-mile buffer of the Project Area; therefore, no direct impacts would occur to critical habitat from the Project.

5.1.3 Potential Jurisdictional Aquatic Resources

Aquatic resources potentially subject to the jurisdiction of the federal and/or state regulatory agency include wetland and riparian communities, Salton Sea open water and shoreline features, IID drains, and other unmapped wetland and non-wetland features. For the purposes of this analysis, vegetation community and other land cover mapping was used to estimate the impacts to potential jurisdictional aquatic resources; however, the extent of jurisdictional aquatic resources subject to regulatory permitting requirements would require a project-level jurisdictional aquatic resources delineation at the time of implementation. Due to changing conditions over time (e.g., receding of the Salton Sea and associated changes in the presence of aquatic resources) and impact avoidance implemented at the project level, the impact analysis presented here is assumed to be a worst-case assessment based on current conditions and the broad land use designation categories.

Implementation of land use changes and associated infrastructure according to the Project's proposed land use designations has the potential to result in direct impacts to the following potential jurisdictional aquatic resources:

- Potential jurisdictional wetlands: 7,710 acres (Salton Sea shoreline and playa, freshwater emergent wetlands, freshwater forested/shrub wetlands, and freshwater ponds)
- Potential jurisdictional riparian: 330 acres (riparian communities)
- Potential jurisdictional non-wetland waters: 3,641 acres (Salton Sea open water and lake)

Approximately 86.1 linear miles of IID drains occur within the Project's proposed land use designations proposed for land use changes; however, the change in land use designation would not directly impact the IID drains. If the IID drains are used for the conveyance of stormwater from non-agricultural land uses proposed within the Project Area and improvements to the IID drains are necessary, impacts to the potential jurisdictional aquatic resources may occur.

The following potential jurisdictional aquatic resources occur within proposed conservation land use designations:

- Potential jurisdictional wetlands: 5,296 acres (Salton Sea shoreline and playa, freshwater emergent wetlands, freshwater forested/shrub wetlands, and freshwater ponds)
- Potential jurisdictional riparian: 147 acres (riparian communities)
- Potential jurisdictional non-wetland waters: 2,865 acres (Salton Sea open water)

Approximately 25.5 linear miles of IID drains occur within the Project's proposed conservation land use designations; however, the change in land use designation would not directly impact the IID drains. If the IID drains are used for the conveyance of stormwater from non-agricultural land uses proposed within the Project Area and improvements to the IID drains in the conservation land use designations are necessary, impacts to the potential jurisdictional aquatic resources may occur.

5.1.4 Landscape Habitat Linkages and Wildlife Movement

The Project would establish land use designations for conservation that would maintain and facilitate wildlife movement, habitat connectivity, and migration, and other land use designations where land use conversion has the potential to influence wildlife movement, habitat connectivity, and migration.

No statewide habitat linkages identified as Natural Landscape Blocks, Essential Connectivity Areas, Desert Linkage Network connections, or established wildlife movement corridors occur in the Project Area. Therefore, the Project would not result in impacts to modeled linkage areas or established wildlife movement corridors.

The Alamo River and New River have been identified as riparian connections through the Project Area, and these connections are within the proposed River Corridor land use designation. The Alamo River Corridor land use designation is approximately 950 feet wide (475-foot buffer off the river centerline) along the entire length of the Alamo River through the Project Area, and the portions of the New River Corridor land use designation within the Project Area are approximately 785 feet wide (392.5-foot buffer off the river centerline). North/south movement of terrestrial wildlife, bird species, and fish species would be maintained and facilitated by the River Corridor land use designation, providing connectivity between areas within and south of the Project Area to the Salton Sea. Additionally, the Specific Plan includes design standards for setbacks from river corridor areas (LVSP Section 4.1.1(E)) and bridge design standards (LVSP Section 5.2.1) for drains supporting desert pupfish. Therefore, the Project would maintain and facilitate the habitat linkage function and wildlife movement through these areas, and would not result in impacts to these riparian connections.

Wildlife movement, habitat connectivity, and migration would also be facilitated and maintained in areas within the proposed Conservation and Playas Restoration land use designations, and the Project would not result in impacts to wildlife movement or migration through these areas of the Project Area. The Conservation land use designation occurs over existing state and federal conservation designations and local conservation areas, including the CDFW Imperial Wildlife Area Wister Unit, the USFWS Salton Sea Sonny Bono Wildlife Refuge, and the IID Managed Marsh Complex. Additionally, the Conservation land use designation occurs along the lower reaches of the Alamo River Corridor through the Project Area and along portions of the Salton Sea shoreline and playa. The Playas Restoration land use designation occurs in an area currently characterized by Salton Sea open water. Additionally, the LVSP includes design standards for setbacks from conservation areas (LVSP Section 4.1.1(E)). Terrestrial wildlife, bird species, and fish species movement would be maintained and facilitated in these areas.

The proposed land use designations where land use conversion and intensification would occur under the Specific Plan are located throughout the Project Area, potentially influencing the movement, habitat connectivity, and migration of terrestrial wildlife, avian species, and fish species.

Terrestrial Wildlife Species

The majority of the Project Area is currently characterized by a highly modified landscape, and baseline conditions for terrestrial wildlife species movement and habitat connectivity is through the use of the existing network of roads, agricultural drains, edges of development and agricultural fields, and riparian corridors, which is anticipated to continue following land use conversions under the Project. The potential impacts of the Project on special-status terrestrial wildlife species potentially occurring in the Project Area are addressed in Section 5.1.2, Special-Status Species. Terrestrial wildlife species movement would be facilitated and maintained within the Conservation, River Corridor, and Playas Restoration land use designations, which are located on the Alamo and New Rivers, wetlands and agricultural habitats, and portions of the Salton Sea open water. In the relatively intact northeastern portion of the Project Area, wildlife movement and habitat connectivity would remain north, south, and east of the proposed land use conversion areas. The land use conversion to more intensive uses and associated infrastructure may affect terrestrial wildlife movement through the Project Area; however, no established wildlife movement corridors or modeled habitat linkages would be impacted by the Project, and the baseline conditions of the Project Area for terrestrial wildlife movement are currently highly modified/disturbed.

Avian Species

As described in Section 4.3, Wildlife Diversity, the Salton Sea and its shorelines, and the wetlands, riparian areas, and agricultural fields of the Imperial Valley support substantial populations of resident, wintering, and migratory birds, and the region is an Audubon Important Bird Area and a critical North American stopover location along the Pacific Flyway. The potential impacts of the Project on special-status bird species potentially occurring in the Project Area are addressed in Section 5.1.2.

Bird species movement and migration would be facilitated and maintained within the Conservation, River Corridor, and Playas Restoration land use designations, which are located on the Alamo and New Rivers, wetlands and agricultural habitats, and portions of the Salton Sea open water.

Avian movements and migration are more adaptable than terrestrial and aquatic wildlife, and the bird species would be capable of shifting their movements and migrations to other areas of the Salton Sea, playa and shoreline habitats, wetlands, riparian habitats, and agricultural fields throughout the Imperial Valley following land use conversions in the Project Area. The Salton Sea covers approximately 360 square miles (230,400 acres) of water surface area and 120 miles of shoreline habitats (ESA 2022), of which approximately 7,432 acres of Salton Sea open water, shoreline, and playa would be affected by land use changes associated with the Project (3.2% of the Salton Sea). Approximately 20% of Imperial County is irrigated for agricultural purposes, including more than 512,000 acres in the Imperial Valley (County of Imperial 1996, 2015b), of which approximately 21,108 acres of agricultural lands would be affected by land use changes associated with the Project (4.2% of the agricultural lands in Imperial Valley). Additionally, the conversion of agricultural lands to other uses would be phased, with more than 43% of the conversion not occurring until Phase 3. The conversion of 21,108 acres of agricultural lands to other uses under the Project is less than the 50,000 acres of agricultural land evaluated for the IID Water Conservation and Transfer Project, which found that such an effect would result in a less-than-significant impact to wildlife and wildlife habitat due to the abundance of agricultural lands in the Imperial Valley for bird species (CH2MHill 2002). Although there is an abundance of wintering and migratory bird habitat in the Imperial Valley, the land use conversions to more intensive uses and associated infrastructure may affect avian movement through the loss of available habitat for wintering and migratory birds, loss of migrating birds from collision or electrocution, or impeding the use of or access to nesting sites. Additionally, the proposed project's potential contribution to reduced waterflows and increased salinity in the agricultural drains and the Salton Sea has the potential to reduce food sources for migratory birds using these resources.

Fish Species

Fish species movement and habitat connectivity is restricted to aquatic habitats and features, including the system of rivers, agricultural drains, adjacent wetlands, and the Salton Sea. As noted above, fish species movement and habitat connectivity would be facilitated and maintained within the Conservation, River Corridor, and Playas Restoration land use designations, which are located on the Alamo and New Rivers, adjacent wetlands, and portions of the Salton Sea open water. Use of the Salton Sea for fish species movement and habitat connectivity would not be affected by the Project. No migratory fish species occur in the Project Area, and, as described in Section 4.3, Wildlife Diversity, predominantly non-native fish species occur in the Project Area due to the hypersaline conditions of the Salton Sea and other associated aquatic habitats. With the exception of the potential impacts of the Project on desert pupfish addressed in Section 5.1.2, the land use conversion to more intensive uses and associated infrastructure would not appreciably affect movement or habitat connectivity for native fish species. With regard to desert pupfish described in Section 5.1.2, reduced water flows, duration, and/or frequencies due to the conversion of agricultural land uses to non-agricultural land uses could result in direct hydrological changes (i.e., water quantity and quality/salinity) in agricultural drains used by desert pupfish for habitat and movements.

5.2 Indirect Impacts

5.2.1 Vegetation Communities

Vegetation Communities and Other Land Cover Types

The proposed land use designations where land use intensification would occur under the Specific Plan and associated infrastructure have the potential to result in short-term and long-term indirect impacts to vegetation communities, including dust, soil erosion and sedimentation, runoff, hydrological changes, toxics, and non-native invasive plant species. Construction dust and long-term dust generation have the potential to reduce the vigor of and degrade vegetation communities adjacent to land uses developed within the Project Area. Erosion and sedimentation, runoff, hydrological changes, and toxics resulting from land uses developed in the Project Area have the potential to degrade habitat quality or cause type conversion of adjacent vegetation communities. Introduction of non-native invasive plant species resulting from land use development can change species composition and/or cause type conversion of adjacent vegetation communities. However, the 2022 CGP (SWRCB Order No. 2022-0057-DWQ) and the County Code require the development of SWPPPs, including BMPs to address transport of sediment and protect properties from erosion, flooding, or the deposition of mud, debris, or construction-related pollutants. Additionally, the Specific Plan includes standard design conditions for development adjacent to the Salton Sea, including dust suppression mechanisms, such as planting native vegetation, natural ground cover, soil stabilizers, surface roughening, barriers to reduce wind speeds, and shallow flooding (LVSP Section 4.1.1(A)). Furthermore, landscaping within the Specific Plan is required to use native vegetation (LVSP Sections 4.2.4(A)(3) and (4), 4.1.1(A)(2)(a), (A)(2)(e), (D)(3), (E)(5)(e)). The Specific Plan also includes design standards for setbacks from conservation areas and river corridor areas (LVSP Section 4.1.1(E) and perimeter walls and fencing (LVSP 4.2.6) that would avoid and minimize indirect effects in areas supporting vegetation communities.

Sensitive Natural Communities

The proposed land use designations where land use intensification would occur under the Specific Plan and associated infrastructure have the potential to result in short-term and long-term indirect impacts to sensitive natural communities, as described above for vegetation communities and other land cover types.

5.2.2 Special-Status Species

Special-Status Plant Species

The proposed land use designations where land use intensification would occur under the Specific Plan and the associated infrastructure have the potential to result in short-term and long-term indirect impacts to special-status plant species, including dust, soil erosion and sedimentation, runoff, hydrological changes, toxics, and non-native invasive plant species. Construction dust and long-term dust generation have the potential to reduce the vigor of and degrade habitat for special-status plant species adjacent to land uses developed within the Project Area. Erosion and sedimentation, runoff, hydrological changes, and toxics resulting from land uses developed in the Project Area have the potential to degrade habitat quality for adjacent special-status plant species. Introduction of non-native invasive plant species resulting from land use development can degrade habitat quality and outcompete adjacent special-status plant species. However, the 2022 CGP (SWRCB Order No. 2022-0057-DWQ) and the County Code require the development of SWPPPs, including BMPs to address transport of sediment and protect properties from erosion, flooding, or the deposition of mud, debris, or construction-related pollutants. Additionally, the Specific Plan includes standard design conditions for development adjacent to the Salton Sea, including dust suppression mechanisms, such as planting native vegetation, natural ground cover, soil stabilizers, surface roughening, barriers to reduce wind speeds, and shallow flooding (LVSP Section 4.1.1(A)). Furthermore, landscaping within the Specific Plan is required to use native vegetation (LVSP Sections 4.2.4(A)(3) and (4), 4.1.1(A)(2)(a), (A)(2)(e), (D)(3), (E)(5)(e)). The Specific Plan also includes design standards for setbacks from conservation areas and river corridor areas (LVSP Section 4.1.1(E) and perimeter walls and fencing (LVSP 4.2.6) that would avoid and minimize indirect effects in habitat areas potentially supporting special-status plant species.

Special-Status Wildlife Species

The proposed land use designations where land use intensification would occur under the Specific Plan and the associated infrastructure have the potential to result in short-term and long-term indirect impacts—including dust, noise, lighting, soil erosion and sedimentation, runoff, hydrological changes, toxics, non-native invasive plant and wildlife species, and human presence—to special-status wildlife species. Construction dust and long-term dust generation have the potential to reduce the vigor of and degrade habitat for special-status wildlife species adjacent to land uses developed in the Project Area. Noise and lighting during construction and facility operations have the potential to degrade habitat for and alter behavior of special-status wildlife species in the vicinity. Erosion and sedimentation, runoff, hydrological changes, and toxics resulting from land uses developed in the Project Area have the potential to degrade habitat quality for adjacent special-status wildlife species. Introduction of non-native invasive plant and wildlife species resulting from land use development can degrade habitat quality and outcompete adjacent special-status wildlife species. Increased human presence can alter behavior of special-status wildlife species adjacent to land uses developed under the Specific Plan. However, the 2022 CGP (SWRCB Order No. 2022-0057-DWQ) and the County Code require the development of SWPPPs, including BMPs to address transport of sediment and protect properties from erosion, flooding, or the deposition of mud, debris, or construction-related pollutants. Additionally, the Specific Plan includes standard design conditions for development adjacent to the Salton Sea, including dust suppression mechanisms (LVSP Section 4.1.1(A)). Furthermore, landscaping within Specific Plan is required to use native vegetation (LVSP Sections 4.2.4(A)(3) and (4), 4.1.1(A)(2)(a), (A)(2)(e), (D)(3), (E)(5)(e)). The Specific Plan includes design standards for setbacks from conservation areas and river corridor areas (LVSP Section 4.1.1(E), lighting (LVSP Section 4.2.5) and perimeter walls and fencing (LVSP 4.2.6) that would avoid and minimize indirect effects, such as light spill, noise, and human access, into adjacent habitat areas potentially used by special-status wildlife species.

Critical Habitat

No USFWS-designated critical habitat for federally listed species occurs within the Project Area or 5-mile buffer; therefore, no indirect impacts would occur to critical habitat from the Project.

5.2.3 Potential Jurisdictional Aquatic Resources

The proposed land use designations where land use intensification would occur under the Specific Plan and associated infrastructure have the potential to result in short-term and long-term indirect impacts to vegetation communities, including soil erosion and sedimentation, runoff, hydrological changes, toxics, and non-native invasive plant species. Construction dust and long-term dust generation have the potential to reduce the vigor of and degrade jurisdictional aquatic resources adjacent to land uses developed in the Project Area. Erosion and sedimentation, runoff, hydrological changes, and toxics resulting from land uses developed in the Project Area have the potential to degrade water quality and flow or cause type conversion of jurisdictional aquatic resources. Introduction of non-native invasive plant species resulting from land use development can change the species composition or cause type conversion of adjacent jurisdictional aquatic resources. However, the 2022 CGP (SWRCB Order No. 2022-0057-DWQ) and the County Code require the development of SWPPPs, including BMPs to address transport of sediment and protect properties from erosion, flooding, or the deposition of mud, debris, or construction-related pollutants. Additionally, the Specific Plan includes standard design conditions for development adjacent to the Salton Sea, including dust suppression mechanisms, such as planting native vegetation, natural ground cover, soil stabilizers, surface roughening, barriers to reduce wind speeds, and shallow flooding (LVSP Section 4.1.1(A)). Furthermore, landscaping within the Specific Plan is required to use native vegetation (LVSP Sections 4.2.4(A)(3) and (4), 4.1.1(A)(2)(a), (A)(2)(e), (D)(3), (E)(5)(e)). The Specific Plan also includes design standards for setbacks from conservation areas and river corridor areas (LVSP Section 4.1.1(E)) and perimeter walls and fencing (LVSP 4.2.6) that would avoid and minimize indirect effects in areas supporting potential jurisdictional aquatic resources.

5.2.4 Landscape Habitat Linkages and Wildlife Movement

The proposed land use designations where land use intensification would occur under the Specific Plan and the associated infrastructure have the potential to result in noise, lighting, and increased human presence that can alter wildlife species behavior through avoidance or altered movement patterns adjacent to land uses developed under the Specific Plan. However, the Specific Plan includes design standards for lighting (LVSP Section 4.2.5), and perimeter walls and fencing (LVSP 4.2.6) that would avoid and minimize indirect effects, such as light spill, noise, and human access, into adjacent habitat areas potentially used for wildlife movement.

5.3 Cumulative Impacts

The following provides a discussion of the past, present, and reasonably foreseeable projects relevant to the analysis of cumulative impacts for biological resources. The cumulative impact analysis documents cumulatively considerable environmental impacts that cannot be feasibly mitigated or avoided, cumulatively considerable environmental impacts that can be feasibly mitigated or avoided, and environmental impacts that are not cumulatively considerable. The cumulative geographic study area used to assess potential cumulative biological resources impacts includes the entirety of Imperial County. A comprehensive list of 163 cumulative projects within the Imperial Valley region was developed that consists of 75 existing/operational/active projects, 16 projects under

construction, 23 approved but not built projects, 24 projects pending entitlement, 7 projects in planning review, 1 project approved but pending litigation, 7 projects currently on hold, 9 inactive/withdrawn projects, and 1 project with unknown status. These include energy and transmission projects; mineral extraction projects; transportation projects; water projects; residential, commercial, office, industrial, and education projects; restoration projects; a military operation project; and a recreation project.

As described throughout this chapter and Chapter 6, Analysis of Significance, the Project would result in direct and indirect impacts to vegetation communities, special-status plant and wildlife species, potential jurisdictional aquatic resources, and wildlife movement that would be considered significant without mitigation. With implementation of the Biological Resources mitigation measures in Chapter 7, impacts to special-status plant species, terrestrial special-status wildlife species, special-status wildlife species not primarily associated with the Salton Sea or aquatic habitats surrounding the Salton Sea, potential jurisdictional aquatic resources, and wildlife movement would be less than significant with mitigation incorporated. Impacts to special-status bird and fish species primarily associated with the Salton Sea and aquatic habitats surrounding the Salton Sea would be significant and unmitigable.

The Project would result in impacts to vegetation communities that may include riparian habitat or sensitive natural communities; however, these impacts would not result in a substantial adverse effect with avoidance, minimization, and mitigation measures incorporated. The cumulative projects have contributed or could contribute to impacts to riparian habitat and sensitive natural communities, but these projects would be subject to the same or similar regulatory permitting and approval requirements that are intended to avoid, minimize, and mitigate those effects both at a project level and in a regional context. Therefore, the incremental contribution of the land use changes and associated infrastructure according to the Project's proposed land use designations to the cumulative impacts to riparian habitat and sensitive natural communities caused by other past, present, and reasonably foreseeable projects would not be cumulatively considerable or significant.

The Project would result in impacts to special-status plant and wildlife species; however, these impacts would not result in a substantial adverse effect with the avoidance, minimization, and mitigation measures incorporated. Special-status plant species potentially impacted by the Project includes Harwood's milk-vetch. Federal or state listed or fully protected wildlife species potentially impacted by the Project include Mojave desert tortoise, burrowing owl, California black rail, Yuma Ridgway's rail, greater sandhill crane, white-tailed kite, southwestern willow flycatcher, bald eagle, Gila woodpecker, California brown pelican, least Bell's vireo, and desert pupfish. Other special-status wildlife species potentially impacted by the Project include flat-tailed horned lizard, Couch's spadefoot, lesser sandhill crane, redhead, mountain plover, western snowy plover, fulvous whistling-duck, gull-billed tern, yellow-breasted chat, least bittern, loggerhead shrike, wood stork, large-billed savannah sparrow, American white pelican, black skimmer, yellow warbler, Crissal thrasher, LeConte's thrasher, yellow-headed blackbird, western mastiff bat, pocketed free-tailed bat, western yellow bat, Yuma hispid cotton rat, and American badger.

With regard to special-status plant species and terrestrial special-status wildlife species, the cumulative projects have contributed to or could contribute to impacts to these special-status species, but these projects would be subject to the same or similar regulatory permitting and approval requirements that are intended to avoid, minimize, and mitigate those effects both at a project level and in a regional context. Therefore, the incremental contribution of the land use changes and associated infrastructure according to the Project's proposed land use designations to the cumulative impacts to special-status plant species and terrestrial special-status wildlife species caused by other past, present, and reasonably foreseeable projects would not be cumulatively considerable or significant.

With regard to special-status bird and fish species that utilize the Salton Sea, wetland and riparian habitats surrounding the Salton Sea, and agricultural drains draining to the Salton Sea, the cumulative projects have contributed to or could contribute to impacts to these special-status species. Although the cumulative projects would be subject to the same or similar regulatory permitting and approval requirements that are intended to avoid, minimize, and mitigate those effects both at a project level and in a regional context, the potential hydrological changes resulting in reduced water flows, durations, and/or frequencies and increased salinity have the potential to impact habitats used by these species, reduce food sources, and contribute to the accelerated receding of the Salton Sea. With implementation of the Biological Resources mitigation measures in Chapter 7, the project's impacts on these special-status bird and fish species would be less than significant with mitigation incorporated; however, the incremental contribution of the land use changes and associated infrastructure according to the project's proposed land use designations to the cumulative impacts to special-status bird and fish species caused by past, present, and reasonably foreseeable projects would be cumulatively considerable and significant.

The Project would result in impacts to potentially jurisdictional aquatic resources, including wetlands, riparian areas, and non-wetland waters; however, these impacts would not result in a substantial adverse effect with the avoidance, minimization, and mitigation measures incorporated. The cumulative projects have contributed or could contribute to impacts to jurisdictional aquatic resources, but these projects would be subject to the same or similar regulatory permitting and approval requirements that are intended to avoid, minimize, and mitigate those effects both at a project level and in a regional context. Therefore, the incremental contribution of the land use changes and associated infrastructure according to the Project's proposed land use designations to the cumulative impacts to jurisdictional aquatic resources caused by other past, present, and reasonably foreseeable projects would not be cumulatively considerable or significant.

The Project has the potential to result in impacts to wildlife movement; however, these impacts would not result in a substantial adverse effect with the avoidance, minimization, and mitigation measures incorporated. There are no established migratory wildlife corridors or modeled habitat linkages that would be affected by the Project. The baseline condition of the Project Area is highly modified for the movement of terrestrial wildlife, and there are no migratory fish in the Project Area. The Project has the potential to reduce the availability of habitat for wintering and migratory birds, result in collision or electrocution of migrating birds, or impede access to nesting sites. The cumulative projects have contributed or could contribute to impacts to wildlife movement and the loss of habitat for wintering and migratory birds in the Imperial Valley, but these projects would be subject to the same or similar regulatory permitting and approval requirements that are intended to avoid, minimize, and mitigate those effects both at a project level and in a regional context. Therefore, the incremental contribution of the land use changes and associated infrastructure according to the Project's proposed land use designations to the cumulative impacts to wildlife movement caused by other past, present, and reasonably foreseeable projects would not be cumulatively considerable or significant.

As described throughout this chapter and in Chapter 6, the Project would have no impacts related to conflicts with local policies or ordinances protecting biological resources, or provisions of adopted HCPs. Therefore, the Project would not contribute to a cumulative impact.

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6 Analysis of Significance

The State of California has developed guidelines to address the significance of biological resources impacts based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), which provide guidance to inform public agency analysis of whether a proposed project would have a significant environmental impact. For purposes of this BRTR, biological resources impacts would be significant if the Project would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS.
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impact BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Special-Status Plant Species

Although the LVSP design standards would lessen the potential impacts, implementation of the land use changes and infrastructure associated with the proposed land use designations of the Project has the potential to result in substantial adverse effects through direct and indirect impacts to suitable habitat and individuals of one special-status plant species: Harwood's milk-vetch (California Rare Plant Rank 2B.2). With implementation of Mitigation Measure (MM) BIO-1 (Pre-Project Biological Resources Assessment and Report), MM-BIO-2 (General Avoidance and Minimization for Special-Status Biological Resources), MM-BIO-6 (Special-Status Plants Avoidance, Minimization, and Mitigation Plan), and MM-BIO-15 (Compensatory Mitigation for Special-Status Biological Resources) (refer to Chapter 7, Avoidance, Minimization, and Mitigation, for the full text of these measures), the Project would not result in a substantial adverse effect to special-status plant species, and the impact would be less than significant with mitigation incorporated.

Special-Status Wildlife Species

Although the LVSP design standards would lessen the potential impacts, implementation of the land use changes and infrastructure associated with the proposed land use designations of the Project has the potential to result in substantial adverse effects through direct and indirect impacts to suitable habitat and individuals of the following

terrestrial special-status wildlife species and special-status wildlife species not primarily associated with the Salton Sea or aquatic habitats surrounding the Salton Sea: Mojave desert tortoise, burrowing owl, white-tailed kite, southwestern willow flycatcher, bald eagle, Gila woodpecker, least Bell's vireo, flat-tailed horned lizard, Couch's spadefoot, mountain plover, yellow-breasted chat, loggerhead shrike, large-billed savannah sparrow, yellow warbler, Crissal thrasher, LeConte's thrasher, western mastiff bat, pocketed free-tailed bat, western yellow bat, Yuma hispid cotton rat, and American badger. With implementation of MM-BIO-1 (Pre-Project Biological Resources Assessment and Report), MM-BIO-2 (General Avoidance and Minimization for Special-Status Biological Resources), MM-BIO-3 (Hydrological Impact Avoidance, Minimization, and Mitigation Plan), MM-BIO-4 (Nesting and Migratory Bird Management Plan), MM-BIO-5 (Bird and Bat Conservation Strategy), MM-BIO-7 (Special-Status Amphibian and Reptile Avoidance, Minimization, and Mitigation Plan), MM-BIO-8 (Special-Status Bird Avoidance, Minimization, and Mitigation Plan), MM-BIO-10 (Special-Status Mammal Avoidance, Minimization, and Mitigation Plan), MM-BIO-13 (Federal and State Incidental Take Permitting), and MM-BIO-15 (Compensatory Mitigation for Special-Status Biological Resources), the Project would not result in a substantial adverse effect to terrestrial special-status wildlife species and special-status wildlife species not primarily associated with the Salton Sea or aquatic habitats surrounding the Salton Sea, and the impact would be less than significant with mitigation incorporated.

Although the LVSP design standards would lessen the potential impacts, implementation of the land use changes and infrastructure associated with the proposed land use designations of the Project has the potential to result in substantial adverse effects through direct and indirect impacts to suitable habitat and individuals of the following other special-status bird and fish species primarily associated with the Salton Sea and aquatic habitats surrounding the Salton Sea: California black rail, Yuma Ridgway's rail, greater sandhill crane, California brown pelican, western snowy plover, gull-billed tern, American white pelican, redhead, least bittern, lesser sandhill crane, fulvous whistling-duck, wood stork, yellow-headed blackbird, black skimmer, and desert pupfish. Although implementation of MM-BIO-1 (Pre-Project Biological Resources Assessment and Report), MM-BIO-2 (General Avoidance and Minimization for Special-Status Biological Resources), MM-BIO-3 (Hydrological Impact Avoidance, Minimization, and Mitigation Plan), MM-BIO-4 (Nesting and Migratory Bird Management Plan), MM-BIO-5 (Bird and Bat Conservation Strategy), MM-BIO-8 (Special-Status Bird Avoidance, Minimization, and Mitigation Plan), MM-BIO-9 (Desert Pupfish Protection and Relocation Plan), **MM-BIO-13** (Federal and State Incidental Take Permitting), and MM-BIO-15 (Compensatory Mitigation for Special-Status Biological Resources) would reduce the potential impacts to these species, the project has the potential to contribute to reduced waterflows, increased salinity, reduced food sources, and accelerated receding in the Salton Sea and associated aquatic habitats that would result in a substantial adverse effect on special-status bird and fish species primarily associated with the Salton Sea and aquatic habitats surrounding the Salton Sea, and the impact would be significant and unmitigable.

Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?

Although the LVSP design standards would lessen the potential impacts, implementation of the land use changes and infrastructure associated with the proposed land use designations of the Project has the potential to result in substantial adverse effects through direct and indirect impacts to riparian habitat and sensitive natural communities. With implementation of MM-BIO-1 (Pre-Project Biological Resources Assessment and Report), MM- BIO-2 (General Avoidance and Minimization for Special-Status Biological Resources), MM-BIO-3 (Hydrological Impact Avoidance, Minimization, and Mitigation Plan), MM-BIO-11 (Sensitive Natural Communities Avoidance, Minimization, and Mitigation Plan), and MM-BIO-15 (Compensatory Mitigation for Special-Status Biological Resources), the Project would not result in a substantial adverse effect to riparian habitat or sensitive natural communities, and the impact would be less than significant with mitigation incorporated.

Impact BIO-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Although the LVSP design standards would lessen the potential impacts, implementation of the land use changes and infrastructure associated with the proposed land use designations of the Project has the potential to result in substantial adverse effects through direct and indirect impacts to state and federal wetlands. With implementation of MM-BIO-1 (Pre-Project Biological Resources Assessment and Report), MM-BIO-2 (General Avoidance and Minimization for Special-Status Biological Resources), MM-BIO-3 (Hydrological Impact Avoidance, Minimization, and Mitigation Plan), MM-BIO-12 (Jurisdictional Aquatic Resources Avoidance, Minimization, and Mitigation), MM-BIO-14 (Federal and State Jurisdictional Aquatic Resources Permitting), and MM-BIO-15 (Compensatory Mitigation for Special-Status Biological Resources), the Project would not result in a substantial adverse effect to state or federal wetlands, and the impact would be less than significant with mitigation incorporated.

Impact BIO-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Although the LVSP design standards would lessen the potential impacts, implementation of the land use changes and infrastructure associated with the proposed land use designations of the Project has the potential to interfere with the movement of terrestrial, avian, and fish species and impede the use of native wildlife nursery sites. With implementation of MM-BIO-1 (Pre-Project Biological Resources Assessment and Report), MM-BIO-2 (General Avoidance and Minimization for Special-Status Biological Resources), MM-BIO-3 (Hydrological Impact Avoidance, Minimization, and Mitigation Plan), MM-BIO-4 (Nesting and Migratory Bird Management Plan), MM-BIO-5 (Bird and Bat Conservation Strategy), MM-BIO-7 (Special-Status Amphibian and Reptile Avoidance, Minimization, and Mitigation Plan), MM-BIO-8 (Special-Status Bird Avoidance, Minimization, and Mitigation Plan), MM-BIO-9 (Desert Pupfish Protection and Relocation Plan), and MM-BIO-10 (Special-Status Mammal Avoidance, Minimization, and Mitigation Plan), the Project would not result in a substantial adverse effect on wildlife movement or access to native wildlife nursery sites, and the impact would be less than significant with mitigation incorporated.

Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Section 1.3.3, Local, summarizes the Imperial County General Plan Conservation and Open Space Element goals and objectives related to natural resources. The Specific Plan includes applicable zoning and land use regulations implementing policies of the General Plan, and the General Plan would be amended to incorporate applicable elements of the Specific Plan. Therefore, the Project is not anticipated to conflict with the Imperial County General Plan, and no impact would occur.

Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

As described in Section 3.7, Regional Resource Planning Context, there are no adopted HCPs, NCCPs, or other approved local, regional, or state HCPs for the Project Area. Therefore, the Project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP, and no impact would occur.

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7 Avoidance, Minimization, and Mitigation

The following describes the Avoidance, Minimization, and Mitigation Framework for biological resources for the Specific Plan (Section 7.1), and the avoidance, minimization, and mitigation measures for biological resources (Section 7.2).

7.1 Avoidance, Minimization, and Mitigation Framework

To address the anticipated Project impacts identified in Chapter 5 and to aid in implementing the Specific Plan, an Avoidance, Minimization, and Mitigation Framework (Framework) was developed. The Framework establishes mapped Resource Zones within the Specific Plan Area, which are based on the known or potential biological resources within each zone. Within each Resource Zone, the minimum required avoidance, minimization, and mitigation measures are specified in Section 7.2. Project proponents of proposed projects under the Specific Plan would be required, at minimum, to implement the applicable measures specified for the Resource Zone(s) where that project is located (see Figure 6, Avoidance, Minimization, and Mitigation Framework Resource Zones). The County would review and approve projects that comply with these measures and any other project-specific measures/conditions required by the County and other regulatory permitting agencies. The Resource Zones are intended to provide generalized guidance for implementing the Framework; however, the measures applicable to individual projects would be tailored and refined based on the specifics of the project and the resources at the project site. Table 4 lists the mitigation measures from Section 7.2 that apply to each Resource Zone.

Table 4. Avoidance, Minimization, and Mitigation Framework

Resource Zone[1]	Framework Measures[2]
Plan Area-Wide (All Zones)	▪ MM-BIO-2 (General Avoidance and Minimization for Special-Status Biological Resources), as applicable ▪ MM-BIO-3 (Hydrological Impact Avoidance, Minimization, and Mitigation Plan) ▪ MM-BIO-4 (Nesting and Migratory Bird Management Plan) ▪ If applicable to project type, MM-BIO-5 (Bird and Bat Conservation Strategy) ▪ If project would impact federal or state wetlands, riparian areas, or non-wetland waters, MM-BIO-12 (Jurisdictional Aquatic Resources Avoidance, Minimization, and Mitigation) and MM-BIO-14 (Federal and State Jurisdictional Aquatic Resources Permitting) ▪ If project would result in unavoidable take to federal or state listed or state candidate species, MM-BIO-13 (Federal and State Incidental Take Permitting) ▪ If project would result in significant impacts to special-status biological resources requiring compensation, MM-BIO-15 (Compensatory Mitigation for Special-Status Biological Resources)
Salton Sea and Playa	▪ MM-BIO-1A (Pre-Project Biological Resources Assessment and Report) ▪ MM-BIO-8 (Special-Status Bird Avoidance, Minimization, and Mitigation Plan: A. Burrowing Owl; B. California Black Rail and Yuma Ridgway's Rail; D. Other Waterbirds, Wading Birds, Shorebirds, and Wetland and Agricultural Land Birds) ▪ MM-BIO-9 (Desert Pupfish Protection and Relocation Plan) ▪ MM-BIO-11 (Sensitive Natural Communities Avoidance, Minimization, and Mitigation Plan)

Table 4. Avoidance, Minimization, and Mitigation Framework

Resource Zone[1]	Framework Measures[2]
Wetland	▪ MM-BIO-1B (Pre-Project Biological Resources Assessment and Report) ▪ MM-BIO-8 (Special-Status Bird Avoidance, Minimization, and Mitigation Plan: B. California Black Rail and Yuma Ridgway's Rail; D. Other Waterbirds, Wading Birds, Shorebirds, and Wetland and Agricultural Land Birds) ▪ MM-BIO-10 (Special-Status Mammal Avoidance, Minimization, and Mitigation Plan: B. Yuma Hispid Cotton Rat) ▪ MM-BIO-11 (Sensitive Natural Communities Avoidance, Minimization, and Mitigation Plan)
River Corridor	▪ MM-BIO-1C (Pre-Project Biological Resources Assessment and Report) ▪ MM-BIO-8 (Special-Status Bird Avoidance, Minimization, and Mitigation Plan: C. Southwestern Willow Flycatcher, Least Bell's Vireo, and Gila Woodpecker; E. Other Riparian Birds) ▪ MM-BIO-11 (Sensitive Natural Communities Avoidance, Minimization, and Mitigation Plan)
Desert	▪ MM-BIO-1D (Pre-Project Biological Resources Assessment and Report) ▪ MM-BIO-6 (Special-Status Plants Avoidance, Minimization, and Mitigation Plan) ▪ MM-BIO-7 (Special-Status Amphibian and Reptile Avoidance, Minimization, and Mitigation Plan) ▪ MM-BIO-8 (Special-Status Bird Avoidance, Minimization, and Mitigation Plan: A. Burrowing Owl, F. Upland Birds) ▪ MM-BIO-10 (Special-Status Mammal Avoidance, Minimization, and Mitigation Plan: A. Special-Status Bat Species; C. American Badger) ▪ MM-BIO-11 (Sensitive Natural Communities Avoidance and Mitigation Plan)
Agricultural and Developed	▪ MM-BIO-1E (Pre-Project Biological Resources Assessment and Report) ▪ MM-BIO-8 (Special-Status Bird Avoidance, Minimization, and Mitigation Plan: A. Burrowing Owl; D. Other Waterbirds, Wading Birds, Shorebirds, and Wetland and Agricultural Land Birds) ▪ MM-BIO-10 (Special-Status Mammal Avoidance, Minimization, and Mitigation Plan A. Special-Status Bat Species; B. Yuma Hispid Cotton Rat; C. American Badger)

1 Generalized Resource Zones within the Specific Plan Area where the Avoidance, Minimization and Mitigation Framework (Framework) measures may apply. Resource Zones are intended to provide guidance for implementing the Framework; however, the measures applicable to individual projects would be tailored and refined based on the specifics of each project and the resources at the project site.

2 The Framework measures listed for each Resource Zone are intended to guide implementation. The specific measures applicable to individual projects within each zone would vary based on the resources within individual project sites as determined by the results of a Pre-Project Biological Resources Assessment and Report (MM-BIO-1).

7.2 Avoidance, Minimization, and Mitigation Measures

Project proponents implementing projects and activities pursuant to the Lithium Valley Specific Plan shall implement the following avoidance, minimization, and mitigation measures.

MM-BIO-1 Pre-Project Biological Resources Assessment and Report. The project proponents shall conduct a pre-project assessment for special-status biological resources prior to project or activity approval and implementation. The assessment shall include an evaluation of the distribution of the special-status biological resources on the project site, including acres and/or number of individuals of special-status species, riparian habitat, sensitive natural communities, and jurisdictional aquatic resources, and shall include the following surveys and habitat assessments within each Resource Zone:

A. Salton Sea and Playa Resource Zone. For projects within this zone, project proponents shall conduct the following surveys and assessments within the project site:

- **Vegetation community mapping.** Vegetation mapping at the alliance/association levels using the most recent version of the California Department of Fish and Wildife's (CDFW) California Natural Community List and descriptions from the most recent version of the California Native Plant Society's (CNPS) Manual of California Vegetation Online per CDFW's most recent version of the Survey of California Vegetation Classification and Mapping Standards shall be conducted.
- **Special-status wildlife species habitat assessment.** A qualified biologist shall conduct a habitat assessment for special-status wildlife species focusing on habitat for desert pupfish; burrowing owl; California black rail; Yuma Ridgway's rail; and special-status waterbirds, wading birds, and shorebirds. If suitable habitat for desert pupfish, burrowing owl, California black rail, or Yuma Ridgway's rail is identified, protocol or focused, as appropriate, surveys according to U.S. Fish and Wildlife Service (USFWS) protocols or approved CDFW methods shall be conducted to determine presence or absence of the species or the status of occupied habitat in the project area.
- **Jurisdictional aquatic resources delineation.** If vegetation community mapping identifies potential jurisdictional wetlands, riparian areas, or non-wetland waters, a jurisdictional delineation of federal and state wetlands and waters shall be conducted.

B. Wetland Resource Zone. For projects within this zone, project proponents shall conduct the following surveys and assessments within the project site:

- **Vegetation community mapping.** Vegetation mapping at the alliance/association levels using CDFW's California Natural Community List and descriptions from CNPS's Manual of California Vegetation Online per CDFW's Survey of California Vegetation Classification and Mapping Standards shall be conducted.
- **Special-status wildlife species habitat assessment.** A qualified biologist shall conduct a habitat assessment for special-status wildlife species, focusing on habitat for burrowing owl, California black rail, Yuma Ridgway's rail, special-status waterbirds, wading birds, shorebirds, wetland birds, and Yuma hispid cotton rat. If suitable habitat for burrowing owl, California black rail, or Yuma Ridgway's rail is identified, protocol or focused, as appropriate, surveys according to USFWS protocols or approved CDFW methods shall be conducted to determine presence or absence of the species or the status of occupied habitat on the project site.
- **Jurisdictional aquatic resources delineation**. If vegetation community mapping identifies potential jurisdictional wetlands, riparian areas, or non-wetland waters, a jurisdictional delineation of federal and state wetlands and waters shall be conducted.

C. Riparian Corridor Resource Zone. For projects within this zone, project proponents shall conduct the following surveys and assessments within the project site:

- **Vegetation community mapping.** Vegetation mapping at the alliance/association levels using CDFW's California Natural Community List and descriptions from CNPS's Manual of California Vegetation Online per CDFW's Survey of California Vegetation Classification and Mapping Standards shall be conducted.

- **Special-status wildlife species habitat assessment**. A qualified biologist shall conduct a habitat assessment for special-status wildlife species, focusing on habitat for southwestern willow flycatcher, least Bell's vireo, Gila woodpecker, and other special-status riparian birds. If suitable habitat for southwestern willow flycatcher, least Bell's vireo, or Gila woodpecker is identified, protocol or focused, as appropriate, surveys according to USFWS protocols or approved CDFW methods shall be conducted to determine presence or absence of the species or the status of occupied habitat on the project site.
- **Jurisdictional aquatic resources delineation.** If vegetation community mapping identifies potential jurisdictional wetlands, riparian areas, or non-wetland waters, a jurisdictional delineation of federal and state wetlands and waters shall be conducted.

D. Desert Resource Zone. For projects within this zone, project proponents shall conduct the following surveys and assessments within the project site:

- **Vegetation community mapping.** Vegetation mapping at the alliance/association levels using CDFW's California Natural Community List and descriptions from CNPS's Manual of California Vegetation Online per CDFW's Survey of California Vegetation Classification and Mapping Standards shall be conducted.
- **Special-status plant species survey.** Botanical surveys shall be conducted following CDFW's Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities. The surveys shall be seasonally appropriate and conducted at the time of year when species are both evident and identifiable (i.e., blooming, flowering, or fruiting). Botanical surveys in this zone shall also inventory species subject to harvest permits under the California Desert Native Plants Act.
- **Special-status wildlife species habitat assessment**. A qualified biologist shall conduct a habitat assessment for special-status wildlife species, focusing on habitat for desert tortoise, Couch's spadefoot, flat-tailed horned lizard, burrowing owl, loggerhead shrike, LeConte's thrasher, Crissal thrasher, special-status bat species, and American badger. If suitable habitat for desert tortoise is identified, USFWS protocol surveys shall be conducted to determine presence or absence of the species or the status of occupied habitat on the project site.
- **Jurisdictional aquatic resources delineation.** If vegetation community mapping identifies potential jurisdictional wetlands, riparian areas, or non-wetland waters, a jurisdictional delineation of federal and state wetlands and waters shall be conducted.

E. Agricultural and Developed Resource Zone. For projects within this zone, project proponents shall conduct the following surveys and assessments within the project site:

- **Vegetation community mapping.** Vegetation mapping at the alliance/association levels using CDFW's California Natural Community List and descriptions from CNPS's Manual of California Vegetation Online per CDFW's Survey of California Vegetation Classification and Mapping Standards shall be conducted.
- **Special-status wildlife species habitat assessment.** A qualified biologist shall conduct a habitat assessment for special-status wildlife species, focusing on habitat for burrowing owl, special-status wetland and agricultural land birds, Yuma hispid cotton rat, and American badger. If suitable habitat for burrowing owl is identified, CDFW protocol surveys shall be conducted to determine presence or absence of the species or the status of occupied habitat on the project site.

- **Jurisdictional aquatic resources delineation.** If vegetation community mapping identifies potential jurisdictional wetlands, riparian areas, or non-wetland waters, a jurisdictional delineation of federal and state wetlands and waters shall be conducted.

The project proponent shall document the methods and results of the assessment in a Pre-Project Biological Resources Assessment and Report. The report shall include an assessment of the special-status biological resources on the project site and the permanent and temporary impacts to any special-status resource resulting from the project or activity. The Pre-Project Biological Resources Assessment and Report shall also document the required avoidance, minimization, and mitigation measures necessary for project compliance under the Specific Plan approval process. The report shall be reviewed and approved by the County of Imperial (County) prior to the County issuing a notice to proceed for the project. All required avoidance, minimization, and mitigation measures identified in the approved report shall become project conditions to the County's notice to proceed.

MM-BIO-2 General Avoidance and Minimization for Special-Status Biological Resources. In Resource Zones where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence of one or more special-status resources in or adjacent to a project site, the project proponent shall implement the following measures, as applicable:

A. Disturbance Avoidance and Minimization. To the maximum extent practicable, the project proponent shall site and design projects to avoid impacts to special-status biological resources. For special-status biological resources that cannot be avoided, the project proponent shall implement the following to minimize direct and indirect impacts:

  - Use industry standard construction and installation techniques appropriate to the project that minimize new site disturbance, soil erosion and deposition, soil compaction, disturbance to topography, and removal of vegetation.
  - To the maximum extent feasible, previously disturbed areas within the project site shall be used for stockpiling excavated materials, storing equipment, staging and parking trailers and vehicles, and any other temporary work areas.
  - To the maximum extent feasible, native vegetation removal shall be minimized through implementation of crush and drive techniques or through cutting or mowing vegetation, rather than removing it entirely.
  - To the maximum extent feasible, temporary construction work areas that are not permanently converted by project facilities and not used as compensatory mitigation shall be retured to pre-activity conditions through recontouring topography and seeding/planting with native, non-invasive plant species.
  - Project work area boundaries adjacent to special-status biological resources shall be delineated with environmental fencing, staking, or flagging prior to construction to avoid and minimize disturbance outside the approved project work area.

B. Worker Education Program. The project proponent shall conduct a worker education program for all persons employed or otherwise working on behalf of the project proponent on the project site before implementing project construction. The education program shall consist

of a presentation from a qualified biologist that includes on-site resources and the distribution, behavior, and habitat needs of the special-status species or resource, legal protections for those species or resource, penalties for violations, and project-specific protective measures. The project proponent shall provide interpretation for non-English-speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work on the project site. Upon completion of the program, the project proponent shall have employees sign a form stating they attended the program and understand all protection measures. The program shall do the following:

- Be developed by or in consultation with a qualified biologist and consist of an on-site presentation with supporting written material and/or electronic media, including photographs of special-status species, available to all participants.
- Provide an explanation of the function of flagging that designates authorized project areas or resources marked for avoidance and specify the prohibition of soil disturbance or vehicle travel outside designated areas.
- Discuss general safety protocols and protection measures.
- Review avoidance, minimization, and mitigation requirements.
- Explain the sensitivity of the vegetation and habitat within and adjacent to the project site and proper identification of these resources.
- Discuss the locations and types of special-status resources on the project site and adjacent areas, and explain the reasons for protecting these resources.
- Provide contact information for the biologist and instructions for notification of any vehicle/wildlife collisions or dead or injured wildlife species encountered during project construction.

C. Approved Biologist. The project proponent shall designate a qualified biologist responsible for overseeing compliance with applicable mitigation measures.

D. Invasive Plant Species. The project proponent shall minimize the spread of invasive plant species during project construction through the cleaning of vehicles and equipment prior to entering a new project work area; storing vehicles and equipment in paved or cleared areas to the maximum extent practicable; and using certified weed-free mulch, straw, hay bales, or equivalent materials on the project site.

E. Trash Management. The project proponent shall keep all construction work areas free of trash and debris, with particular emphasis on organic wastes that could attract wildlife. All trash shall be covered, kept in closed containers, or otherwise removed from construction sites at regular intervals.

F. Speed Limits. If the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence or potential for special-status wildlife species in the project area, vehicular traffic within construction sites shall not exceed 15 miles per hour on unpaved roads.

G. Inspections of Construction Materials. If the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence or potential for special-status wildlife species in the project area, all construction materials shall be inspected for the presence of special-status wildlife prior to their movement or use. Any special-status wildlife encountered during the course of these inspections shall be allowed to leave the construction area unharmed, or the approved biologist or an appropriately permitted biologist may move the individual out of harm's way before allowing work to continue.

H. Open Trenches. If the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence or potential for special-status wildlife species in the project area, the project proponent shall ensure that all steep-walled trenches or excavations are covered, except when they are actively being used, to prevent the entrapment of wildlife. If trenches cannot be covered, they shall be constructed with escape ramps following up-to-date design standards to facilitate and allow wildlife to exit, or wildlife exclusion fencing shall be installed around the trench(es) or excavation(s). Open trenches and other excavations shall be inspected for the presence of wildlife immediately before backfilling, excavation, and other earthwork.

I. Dust Control Plan. The project proponent shall develop and implement a Dust Control Plan that describes the fugitive dust control measures that shall be implemented and monitored at all locations of proposed facility during construction activities. The project proponent shall submit the plan to the County of Imperial for review and approval prior to the start of construction. The plan shall outline the steps to be taken to minimize fugitive dust generated by construction to such a degree that project-generated visible fugitive dust plumes are prevented from leaving the site. The plan shall describe each active construction activity that may result in the generation of fugitive dust, identify activities likely to be sources of fugitive dust, describe the control measures the project proponent shall apply to each of the sources identified, and identify potential corrective actions.

J. Ponding Prevention. The project proponent shall take measures to prevent water puddling and ponding for extended periods within project construction areas to avoid attracting wildlife. Cessation of watering, recontouring, or other measure shall be implemented if prolonged water ponding occurs within construction areas.

MM-BIO-3 Hydrological Impact Avoidance, Minimization, and Mitigation Plan. The project proponent shall develop and implement a Hydrological Impact Avoidance, Minimization, and Mitigation Plan for each project processed under the Specific Plan, and the plan shall be approved by the County of Imperial (County) prior to project construction. At minimum, the plan shall include the following:

- A detailed description of the existing hydrologic conditions on the project site and the proposed site design and approach for addressing existing flows through the site and stormwater flows generated from the site under the proposed project.
  - If existing agricultural drains are proposed to be used as stormwater conveyance for the project, include site design and description of the capacity of the existing drains to serve the project, if improvements or maintenance of the existing drains are proposed, and assessment of upstream and downstream drainage system connectivity under the proposed condition.

- If new stormwater facilities are proposed for the project, include site design and description of these new facilities and an assessment of upstream and downstream drainage system connectivity under the proposed condition.

- Hydrological modeling using industry standards of existing and proposed conditions for flow rates and quantities in existing drainage features, wetlands, and/or rivers and proposed stormwater facilities (if applicable).
- Testing of existing water quality in existing drainage features, wetlands, or rivers on the project site and predicted changes in water quality resulting from proposed changes in land use and water usage.
- Assessment of the changes in habitat quantity and quality in the existing drainage features, wetlands, and/or rivers on the project site and all such features downstream of the project site to the Salton Sea resulting from the changes in hydrology and water quality from the proposed project.
- Project siting, design features, and measures that shall be implemented to avoid and minimize effects of the proposed hydrological changes on special-status species habitats.
- If the hydrologic analysis for the proposed project determines that the project would reduce water flows or increase salinity in onsite agricultural drains or agricultural drains downstream of the project site that support desert pupfish, the project proponent shall implement actions to maintain their project's contribution to the baseline waterflows and water salinity levels in drains supporting desert pupfish during project construction and over the long-term. Such actions may include but are not limited to implementation of additional water conservation measures and release of conserved water as return flows in the drains, the acquisition of drain mitigation water and release as return flows in the drains, and/or payment into a drain water mitigation fund (if established).
- If the hydrologic analysis for the proposed project determines that the project would result in the loss of occupied federal or state listed or state fully protected bird species habitat, riparian habitat or other sensitive natural communities, or federal and state jurisdiction wetlands and waters on the project site or downstream of the project site as a result of the proposed hydrological changes, such effects shall be offset through the same return flow maintenance actions listed above or such effects shall be considered direct permanent impacts and compensatory mitigation pursuant to MM-BIO-15 shall be provided by the project proponent.
- If habitat for or occurrences of California black rail, Yuma Ridgway's rail, or desert pupfish occur onsite or downstream of project site and proposed project would result in hydrological changes affecting these species, the project proponent shall confer with the County, USFWS, and CDFW, and if necessary, obtain incidental take permits pursuant to MM-BIO-13.

MM-BIO-4 Nesting and Migratory Bird Management Plan. The project proponent shall develop and implement a Nesting and Migratory Bird Management Plan (NMBMP) for each project processed under the Specific Plan to address the design standard for nesting and migratory birds from Specific Plan Section 4.2.4(F), and the NMBMP shall be approved by the County of Imperial (County) prior to project construction. At a minimum, the NMBMP shall include the following:

- **Definitions of active and inactive nests.** Unless modified by the approved project-specific NMBMP, nests of raptors and special-status species shall be considered active upon initiation of nest construction or nest decorating behavior. Nests of non-raptor, non-special-status

species shall be considered active if occupied by eggs or chicks. Certain bird species do not build nests or may be ground-nesting species, and nest status shall be determined by a qualified biologist. Previously active nests become inactive when they no longer contain viable eggs or living young and are not being used by a bird as part of the breeding cycle.

- **Requirements and methods for conducting pre-construction nesting bird surveys by qualified biologists for construction activities with the potential to impact nesting birds (i.e., vegetation clearing and ground-disturbing activities) occurring during the nesting bird season.** Unless modified by the approved, project-specific NMBMP, the nesting bird season shall be defined as February 15 through August 31. Pre-construction nesting bird surveys shall focus on visual searches for nest locations and observations of bird activities to detect nesting activities (e.g., courtship behavior, territorial displays, nest material or food carrying). Biologists conducting the surveys shall be experienced bird surveyors familiar with standard nest locating techniques, and their qualifications shall be subject to review by the County. Surveys shall cover all potential nesting habitat within the project site and within 500 feet of the project site for raptors and within 300 feet for non-raptors. During the nesting bird season, pre-construction nesting bird surveys shall be conducted for the work area no more than 3 days prior to the start of the vegetation clearing and ground-disturbing construction activities, unless modified by the approved, project-specific NMBMP.
- **Default buffer distances for active nests from construction activities and procedures for modifying active nest buffer distances.** The project-specific NMBMP shall identify species or groups of species that are relatively tolerant and intolerant of construction activities and specify appropriate buffer distances. Unless modified by the approved project-specific NMBMP, the standard nest buffer distance shall be 300 feet for all nests and 500 feet for raptor nests within which vegetation clearing and ground-disturbance activities shall not occur for active nests. The project-specific NMBMP shall identify other construction activities allowable within nest buffers. Buffer distance reductions may be proposed and implemented after NMBMP approval if recommended by the biologist following the nest buffer distance reduction approval process provided in the NMBMP.
- **Nest monitoring by qualified biologists for active nests.** The project proponent shall be responsible for monitoring implementation and conformance with the NMBMP. The NMBMP shall include monitoring measures to track active nests, bird nesting activity, project-related disturbances, and nest outcomes. Unless modified by the approved project-specific NMBMP, nest monitoring shall continue for the duration of construction activities in nesting habitat during the nesting bird season.
- **Requirements and methods for conducting pre-construction surveys for roosting and wintering birds by qualified biologists for construction activities with the potential to impact bird roosts and stopover areas for wintering birds (i.e., vegetation clearing and ground-disturbing activities).** A pre-construction survey for roosting and wintering birds shall be conducted year-round and may be conducted in conjunction with pre-construction nesting bird surveys if during the nesting bird season. Biologists conducting the surveys shall be experienced bird surveyors familiar with bird identification, and their qualifications shall be subject to review by the County. Surveys shall cover all potential roosting and wintering habitat within the project site. Pre-construction surveys shall be conducted for the work area no more than 3 days prior to the start of the vegetation clearing and ground-disturbing construction activities, unless modified by the approved, project-specific NMBMP. If non-nesting roosting or wintering birds are encountered on

the project site during pre-construction surveys, biological monitoring shall be conducted during vegetation clearing and ground-disturbance activities to monitor for and clear roosting and wintering birds from work areas, unless modified by the approved, project-specific NMBMP.

- Reporting and compliance procedures. The project proponent shall submit the findings of the pre-construction surveys to the County, including time, date, and duration of surveys; survey personnel; list of species observed; mapping of the nest locations and boundaries of any buffer zones; and other reporting and compliance procedures identified in the approved, project-specific NMBMP.

MM-BIO-5 Bird and Bat Conservation Strategy. For projects with the potential for bird and bat electrocution or collision with above-ground lines, wires, fences, solar panels, or reflective building windows, or for projects with brine or evaporation ponds with the potential for bird and bat exposure to harmful elements, the project proponent shall develop and implement a Bird and Bat Conservation Strategy approved by the County of Imperial. The Bird and Bat Conservation Strategy shall describe baseline conditions for bird and bat species present within the project site based on information collected during the Pre-Project Biological Resources Assessment; assess potential risk to birds and bats based on the specific project; and specify conservation measures designed to avoid, minimize, or mitigate potential effects of electrocution, collision, or exposure to harmful elements. Above-ground electrical and communication lines shall be designed consistent with the Avian Power Line Interaction Committee's Suggested Practices for Avian Protection on Power Lines (2006 or most recent version) and Reducing Avian Collisions with Power Lines (2012 or most recent version), or using comparable design measures for minimizing electrocution and collision. Projects with reflective surfaces presenting collision risk shall incorporate design and minimization measures, such as special glass, surface treatments, architectural features, landscaping, or other measures, per the U.S. Fish and Wildlife Service's 2021 (or most recent version) Reducing Bird Collisions with Building Glass Best Practices. Projects with brine or evaporation ponds shall incorporate design measures, such as pond netting, or other deterrents.

MM-BIO-6 Special-Status Plant Avoidance, Minimization, and Mitigation Plan. For projects within the Desert Resource Zone where the Pre-Project Biological Resources Assessment and Report (MM- BIO-1) identifies the presence of special-status plant species or occupied habitat, the project proponent shall prepare and implement a Special-Status Plant Avoidance, Minimization, and Mitigation Plan approved by the County of Imperial that includes, at minimum, the following:

- Project siting, design features, and measures that shall be implemented to avoid and minimize impacts to special-status plant individuals and occupied habitat. Avoided special-status plant individuals and occupied habitat shall be buffered by a minimum of 25 feet from project construction activities and project facilities.
- Where avoidance of special-status plant occupied habitat is not feasible, mitigation actions that shall be implemented to compensate for impacts to the special-status plant species, consistent with the compensatory mitigation requirements of MM-BIO-15. The mitigation plan shall specify the specific compensatory mitigation actions to be implemented to offset the habitat loss for the special-status plant species resulting from the project. If on- or off-site habitat restoration or enhancement is a component of the compensatory mitigation, the mitigation plan shall also include specifications for transplantation, soil salvage, and/or seed

collection; restoration/enhancement design and installation techniques; habitat maintenance; success criteria; monitoring; and reporting.

MM-BIO-7 Special-Status Amphibian and Reptile Avoidance, Minimization, and Mitigation Plan. For projects in the Desert Resource Zone where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence of special-status amphibian or reptile species and/or occupied habitat, the project proponent shall prepare and implement a Special-Status Amphibian and Reptile Avoidance, Minimization, and Mitigation Plan approved by the County of Imperial that includes, at minimum, the following:

- Project siting, design features, and measures that shall be implemented to avoid and minimize impacts to special-status amphibian and reptile individuals and occupied habitat.
- Mojave Desert Tortoise. For project sites where desert tortoise, sign, and/or occupied habitat are present and take is unavoidable, the project proponent shall obtain an Incidental Take Permit; implement the conditions of such permit pursuant to MM-BIO-13; and implement pre-construction exclusion fencing, clearance, and relocation of the project site, as follows:
    - Exclusion fencing, clearance, and relocation: Exclusion fencing shall be installed along the perimeter of the construction work area prior to vegetation clearing or ground-disturbance activities. After exclusion fencing installation, pre-construction clearance surveys shall be conducted and Mojave desert tortoise found within excluded areas shall be relocated to nearby suitable habitat outside the construction area by an authorized desert tortoise biologist. If Mojave desert tortoises are detected within construction work areas during construction, activities immediately adjacent to the occurrence shall be halted and the authorized biologist shall capture and relocate the individual. Biological monitors shall regularly monitor the site during construction for exclusion fencing integrity and presence of Mojave desert tortoise within work areas.
    - Clearance and relocation: For project sites where exclusion fencing is not feasible, such as linear facilities, an authorized biologist shall conduct daily pre-construction clearance surveys of the construction area during vegetation clearing and ground-disturbance activities, and Mojave desert tortoises found within work areas shall be relocated to nearby suitable habitat outside the construction area. Weekly biological monitoring shall occur in suitable habitat following vegetation clearing and ground-disturbance activities.
    - If avoidance of the occupied habitat is not feasible, specific mitigation actions shall be implemented to compensate for impacts to the occupied Mojave desert tortoise habitat from the project, consistent with the compensatory mitigation requirements of MM-BIO-15. The mitigation plan shall specify the specific compensatory mitigation actions to be implemented to offset the habitat loss for Mojave desert tortoise resulting from the project.
- Couch's Spadefoot. For project sites where Couch's spadefoot are present or with suitable or occupied water sources on or within 500 feet, a 500-foot buffer shall be established around the water source and the buffer shall be fenced, staked, or flagged. No construction activities shall occur within the 500-foot buffer area. If avoidance of the occupied water source or buffer is not feasible, the project proponent shall avoid the occupied water source and buffer area during the breeding season (May through September).

- **Flat-Tailed Horned Lizard.** For project sites where flat-tailed horned lizard or occupied habitat are present, the project proponent shall implement pre-construction exclusion fencing, clearance, and relocation of the project site, as follows:
    - Exclusion fencing, clearance, and relocation: Exclusion fencing shall be installed along the perimeter of the construction work area prior to vegetation clearing or ground-disturbance activities. After exclusion fencing installation, pre-construction clearance surveys shall be conducted and flat-tailed horned lizards found within excluded areas shall be relocated to nearby suitable habitat outside the construction area by a qualified biologist. If flat-tailed horned lizards are detected within construction work areas during construction, activities immediately adjacent to the occurrence shall be halted and the approved biologist shall capture and relocate the individual. Biological monitors shall regularly monitor the site during construction for exclusion fencing integrity and presence of flat-tailed horned lizards within work areas.
    - Clearance and relocation: For project areas where exclusion fencing is not feasible, such as linear facilities, a qualified biologist shall conduct daily pre-construction clearance surveys of the construction area during vegetation clearing and ground-disturbance activities, and flat-tailed horned lizards found within work areas shall be relocated to nearby suitable habitat outside the construction area. Weekly biological monitoring shall occur in suitable habitat following vegetation clearing and ground-disturbance activities.
    - If avoidance of the occupied habitat is not feasible, specific mitigation actions shall be implemented to compensate for impacts to the occupied flat-tailed horned lizard habitat from the project, consistent with the compensatory mitigation requirements of MM-BIO-15. The mitigation plan shall specify the specific compensatory mitigation actions to be implemented to offset the habitat loss for flat-tailed horned lizard resulting from the project.

MM-BIO-8 Special-Status Bird Avoidance, Minimization, and Mitigation Plan

A. Burrowing Owl. For projects in the Salton Sea and Playa, Desert, and Agricultural and Developed Resource Zones where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence of burrowing owl or occupied habitat, the project proponent shall prepare and implement a Special-Status Bird Avoidance, Minimization, and Mitigation Plan approved by the County of Imperial (County) that includes, at minimum, the following:

- If the Pre-Project Biological Resources Assessment was conducted more than 1 year prior to construction, pre-construction surveys shall be conducted within suitable burrowing owl habitat according to the guidelines contained in the California Department of Fish and Wildlife's (CDFW) Staff Report on Burrowing Owl Mitigation (2012), or most current CDFW methods; otherwise, presence shall be assumed based on the Pre-Project Biological Resources Assessment results.
- Project siting, design features, and measures that shall be implemented to avoid and minimize impacts to special-status bird individuals and occupied habitat.

- If burrowing owls are nesting within the construction work area, the project proponent shall avoid active nests consistent with the measures in the approved Nesting and Migratory Bird Management Plan (MM-BIO-4).
- If burrowing owls are present within or adjacent to the project site, construction activities shall be postponed until burrowing owls are no longer present. If postponement of construction activities is not feasible, the project proponent shall implement the following measures to minimize and mitigate the impacts:
    - The project proponent shall implement measures consistent with the practices identified in CDFW's Staff Report on Burrowing Owl Mitigation (2012 or most recent version) to avoid potential impacts to nesting and nonbreeding burrowing owls. Measures may include the use of buffer zones, visual screens (e.g., hay bales monitored during the day and removed at night to prevent raptor perching; screens shall not exceed 4 feet in height and shall be at least 30 feet from active burrows), monitoring, or other measures during construction.
    - Active or potentially active burrows with sign shall be avoided. To confirm the status of suspected unoccupied burrows, project proponent shall use noninvasive, such as wildlife cameras, to verify potential burrows are unoccupied. Verified unoccupied burrows shall be collapsed prior to implementing construction activities in accordance with the current CDFW-approved guidelines.
    - If avoidance of active burrows is unavoidable, the species is listed or a candidate for listing under the California ESA, and take of the species would occur, the project proponent shall obtain an Incidental Take Permit and implement the conditions of such permit pursuant to MM-BIO-13.
    - Unavoidable impacts to occupied habitat shall, at minimum, be subject to the compensatory mitigation requirements as described in MM-BIO-15.

B. California Black Rail and Yuma Ridgway's Rail. For projects in the Salton Sea and Playa and Wetland Resource Zones where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence of California black rail and/or Yuma Ridgway's rail and/or occupied habitat, the project proponent shall prepare and implement a Special-Status Bird Avoidance, Minimization, and Mitigation Plan approved by the County that includes, at minimum, the following:

- If the Pre-Project Biological Resources Assessment was conducted more than 1 year prior to construction, pre-construction focused surveys shall be conducted within suitable marsh habitat according to current U.S. Fish and Wildlife Service (USFWS) protocol and/or methods approved by CDFW; otherwise, presence shall be assumed based on the Pre-Project Biological Resources Assessment results.
- Project siting, design features, and measures that shall be implemented to avoid and minimize impacts to special-status bird individuals or occupied habitat.
- If California black rail or Yuma Ridgway's rail are present within or adjacent to the project site, the project proponent shall implement the following measures to avoid take of these fully protected species unless the project is a water agency infrastructure project, transportation project, or wind or solar project; the take is unavoidable; and the project proponent has obtained the appropriate state and federal Incidental Take Permits (MM-BIO-13):

- Construction activities in occupied habitat within a project site shall avoid the nesting and fledging season (February 15 through September 15).
- Construction activities in suitable habitat within a project site shall only be conducted outside of the nesting and fledging season after a qualified biologist has determined the species is not present and with biological construction monitoring. If California black rail or Yuma Ridgway's rail are detected in the work area, all construction activities in the area shall halt and activities shall not proceed until the birds have left the work area.
- If California black rails and Yuma Ridgway's rails are not within the project site but are detected within 500 feet of a construction work area, construction activities within the project site with the potential to alter water levels in adjacent occupied habitat shall not occur during the nesting and fledging season.
- If California black rails and Yuma Ridgway's rails are not within the project site but are detected within 500 feet of a construction work area, construction activities within the project site shall be avoided within 500 feet of the adjacent occupied habitat during the nesting and fledging season. If avoidance of construction activities within 500 feet of adjacent occupied habitat is not feasible, the project proponent shall prepare a noise study to predict the maximum noise levels in adjacent occupied habitat. If predicted noise levels would exceed 60 A-weighted decibels equivalent continuous sound level (dBA L_{eq}) in adjacent occupied habitat during the nesting and fledging season, the project proponent shall implement noise attenuation measures, such as noise walls, on the project site between the noise-generating construction activities and the adjacent occupied habitat to reduce noise levels to below 60 dBA.

- Occupied marsh habitat directly impacted by the project site shall be subject to the compensatory mitigation requirements as described in MM-BIO-15. The mitigation plan shall specify the specific compensatory mitigation actions to be implemented to offset the habitat loss for the rail species resulting from the project.
- If the project is a water agency infrastructure project, transportation project, or wind or solar project for which the state can issue an Incidental Take Permit for California black rail or Yuma Ridgway's rail and take is unavoidable, the project proponent shall obtain the appropriate state and federal Incidental Take Permits and implement the conditions of such permits pursuant to MM-BIO-13.

C. Southwestern Willow Flycatcher, Least Bell's Vireo, and Gila Woodpecker**.** For projects in the Riparian Corridor Resource Zone where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence of southwestern willow flycatcher, least Bell's vireo, and/or Gila woodpecker and/or occupied habitat, the project proponent shall prepare and implement a Special-Status Bird Avoidance, Minimization, and Mitigation Plan approved by the County that includes, at minimum, the following:

- If the Pre-Project Biological Resources Assessment was conducted more than 1 year prior to construction, pre-construction focused surveys shall be conducted within suitable riparian habitat according to current USFWS protocol and/or methods approved by CDFW; otherwise, presence shall be assumed based on the Pre-Project Biological Resources Assessment results.

- Project siting, design features, and measures that shall be implemented to avoid and minimize impacts to special-status bird individuals and occupied habitat.
- If least Bell's vireo, southwestern willow flycatcher, and/or Gila woodpecker are nesting within the construction work area or within 300 feet, the project proponent shall avoid active nests consistent with the measures in the approved Nesting and Migratory Bird Management Plan (MM-BIO-4).
- Occupied riparian habitat directly impacted by the project shall be subject to the compensatory mitigation requirements as described in MM-BIO-15. The mitigation plan shall specify the specific compensatory mitigation actions to be implemented to offset the habitat loss for southwestern willow flycatcher, least Bell's vireo, or Gila woodpecker resulting from the project.
- If take of these listed species is unavoidable, the project proponent shall obtain an Incidental Take Permit and implement the conditions of such permit pursuant to MM-BIO-13.

D. Other Waterbirds, Wading Birds, Shorebirds, and Wetland and Agricultural Land Birds (redhead, mountain plover, western snowy plover, gull-billed tern, least bittern, large-billed savannah sparrow, American white pelican, black skimmer, lesser sandhill crane, greater sandhill crane, fulvous whistling-duck, bald eagle, wood stork, California brown pelican, and yellow-headed blackbird). For projects in the Salton Sea and Playa, Wetland, and Agricultural and Developed Resource Zones where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence of waterbirds, wading birds, shorebirds, and/or wetland and agricultural land birds, the project proponent shall prepare and implement a Special-Status Bird Avoidance, Minimization, and Mitigation Plan approved by the County that includes, at minimum, the following:

- Project siting, design features, and measures that shall be implemented to avoid and minimize impacts to special-status bird individuals and occupied habitat.
- If these bird species are nesting within the construction work area, the project proponent shall avoid active nests consistent with the measures in the approved Nesting and Migratory Bird Management Plan (MM-BIO-4).
- If feasible, construction activities shall be postponed until these species are no longer present. If postponement of construction activities is not feasible, the project proponent shall conduct pre-construction roosting and wintering surveys within 1 week of the start of vegetation clearing or ground-disturbance activities, consistent with the measures in the approved Nesting and Migratory Bird Management Plan (MM-BIO-4). If non-nesting roosting or wintering birds are encountered on the project site during pre-construction surveys, biological monitoring shall be conducted during vegetation clearing or ground disturbance activities to monitor for and clear roosting and wintering birds from work areas, consistent with the measures in the approved Nesting and Migratory Bird Management Plan (MM-BIO-4),

E. Other Riparian Birds (white-tailed kite, yellow-breasted chat, and yellow warbler). For projects in the Riparian Corridor Resource Zone where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence of these other riparian birds, the project proponent shall prepare and implement a Special-Status Bird Avoidance, Minimization, and Mitigation Plan approved by the County that includes, at minimum, the following:

- Project siting, design features, and measures that shall be implemented to avoid and minimize impacts to special-status bird individuals and occupied habitat.
- If these bird species are nesting within the construction work area, the project proponent shall avoid active nests consistent with the measures in the approved Nesting and Migratory Bird Management Plan (MM-BIO-4).
- If white-tailed kites are present within or adjacent to the project site, the project proponent shall implement the measures to avoid take of this fully protected species unless the project is a water agency infrastructure project, transportation project, or wind or solar project; the take is unavoidable; and the project proponent has obtained the appropriate state and federal Incidental Take Permits (MM-BIO-13).

F. Upland Birds (loggerhead shrike, LeConte's thrasher, and Crissal thrasher). For projects in the Desert Resource Zone where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence of these upland birds, the project proponent shall prepare and implement a Special-Status Bird Avoidance, Minimization, and Mitigation Plan approved by the County that includes, at minimum, the following:

- Project siting, design features, and measures shall be implemented to avoid and minimize impacts to special-status bird individuals and occupied habitat.
- If these bird species are nesting within the construction work area, the project proponent shall avoid active nests consistent with the measures in the approved Nesting and Migratory Bird Management Plan (MM-BIO-4).

MM-BIO-9 Desert Pupfish Protection and Relocation Plan. For projects in the Salton Sea and Playa Resource Zone where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence of desert pupfish or occupied habitat, the project proponent shall prepare and implement a Desert Pupfish Protection and Relocation Plan approved by the County of Imperial, U.S. Fish and Wildlife Service, and California Department of Fish and Wildlife that includes, at minimum, the following:

- Project siting, design features, and measures that shall be implemented to avoid and minimize impacts to desert pupfish individuals and occupied habitat.
- Requirements and methods for conducting pre-construction surveys to assess species presence and spawning within and immediately adjacent to work areas.
- Avoidance of construction activities in occupied habitat (e.g., shallow shoreline areas, drain mouths/channels) during the desert pupfish spawning season (April through October).
- Requirements and methods for species capture (e.g., trapping in the drains for construction), or trapping, dip netting, and seining in drained habitat or if the water level is dropped, and transport methods to minimize handling and stress, as well as exposure to heat, low dissolved oxygen, and crowding.
- Identification of suitable locations for release of captured desert pupfish within or adjacent to the Specific Plan area.

- Compensatory mitigation requirements (as described in MM-BIO-15) if occupied desert pupfish habitat is directly impacted by the project. The mitigation plan shall specify the specific compensatory mitigation actions to be implemented to offset the habitat loss for desert pupfish resulting from the project.
- If take of desert pupfish is unavoidable, the project proponent shall obtain an Incidental Take Permit and implement the conditions of such permit pursuant to MM-BIO-13.

MM-BIO-10 Special-Status Mammal Avoidance, Minimization, and Mitigation Plan

A. Special-Status Bat Species. For projects in the Desert and Agricultural and Developed Resource Zones where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence of special-status bat species, the project proponent shall prepare and implement a Special-Status Mammal Avoidance, Minimization, and Mitigation Plan approved by the County of Imperial (County) that includes, at minimum, the following:

- Project siting, design features, and measures that shall be implemented to avoid and minimize impacts to special-status bat species individuals or occupied habitat.
- If western yellow bat or other special-status bat species day or night roosts are identified on the project site, a 200-foot buffer shall be established around the roost and the buffer shall be fenced, staked, or flagged. If avoidance of the occupied roost and buffer is not feasible, a qualified biologist shall identify the species of bat and type of roost to identify appropriate species-specific avoidance and mitigation measures for implementation. No construction shall occur within 200 feet of an active maternal roost during the pupping season. If the roost is in vegetation (e.g., palm trees or tree hollow), a qualified biologist shall monitor the roost for bat emergence, and vegetation shall be removed prior to return to the roost. If the roost is in cliffs, crevices, rock outcrops, or structures, eviction and exclusion techniques shall be employed.

B. Yuma Hispid Cotton Rat. For projects in the Wetland and Agricultural and Developed Resource Zones where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence of Yuma hispid cotton rat, the project proponent shall prepare and implement a Special-Status Mammal Avoidance, Minimization, and Mitigation Plan approved by the County that includes, at minimum, the following:

- Project siting, design features, and measures that shall be implemented to avoid and minimize impacts to Yuma hispid cotton rat individuals or occupied habitat.
- For project sites where Yuma hispid cotton rats are present, construction activities that would result in the removal of occupied habitat shall occur outside of the breeding season.

C. American Badger. For projects in the Desert and Agricultural and Developed Resource Zones where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies the presence of American badger, the project proponent shall prepare and implement a Special-Status Mammal Avoidance, Minimization, and Mitigation Plan approved by the County that includes, at minimum, the following:

- Project siting, design features, and measures that shall be implemented to avoid and minimize impacts to American badger individuals or occupied habitat.

- If active or potentially inactive dens are present within the project construction area, a qualified biologist shall conduct a pre-construction survey prior to vegetation clearing or ground-disturbance activities. Dens determined to be potentially inactive shall be passively excluded using one-way doors and excavated/collapsed once it has been established that the den is empty. If an active den is detected within the work area during the breeding/pupping season, the project proponent shall avoid the den until the qualified biologist determines the den is no longer active.

MM-BIO-11 Sensitive Natural Communities Avoidance, Minimization, and Mitigation Plan. For projects in the Salton Sea and Playa, Wetland, Riparian, and Desert Resource Zones where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies riparian habitat or other sensitive natural communities, the project proponent shall prepare and implement a Sensitive Natural Communities Avoidance, Minimization, and Mitigation Plan approved by the County of Imperial that includes, at minimum, the following:

- Project siting, design features, and measures that shall be implemented to avoid and minimize impacts to riparian habitat and sensitive natural communities. Avoided sensitive natural communities shall be buffered by a minimum of 25 feet from project construction activities and project facilities.
- Where avoidance of riparian habitat and other sensitive natural communities is not feasible, mitigation actions shall be implemented to compensate for impacts to the riparian habitat and sensitive natural community from the project consistent with the compensatory mitigation requirements of MM-BIO-15. The mitigation plan shall specify the specific compensatory mitigation actions to be implemented to offset the habitat loss for the special-status plant species resulting from the project. If on- or off-site habitat restoration or enhancement is a component of the compensatory mitigation, the mitigation plan shall also include specifications for use of seed material, cuttings, and container plants; restoration/enhancement design and installation techniques; a habitat maintenance program; success criteria; monitoring; and reporting.
- If riparian habitat or other sensitive natural community is a federal or state jurisdictional aquatic resource, the project proponent shall obtain appropriate federal and/or state permits and implement the conditions of such permits pursuant to MM-BIO-14.

MM-BIO-12 Jurisdictional Aquatic Resources Avoidance, Minimization, and Mitigation. For project sites where the Pre-Project Biological Resources Assessment and Report (MM-BIO-1) identifies jurisdictional aquatic resources, the project proponent shall implement project siting, design features, and other measures to avoid impacts. If impacts to jurisdictional aquatic resources are unavoidable, the project proponent shall implement the applicable minimization measures below, mitigate impacts to jurisdictional aquatic resources according to MM-BIO-15, and obtain and implement the conditions of federal and/or state jurisdictional aquatic resource permits (MM-BIO-14).

- Operation of vehicles and equipment in ponded or flowing water shall be minimized.
- Road building, construction activities, and vegetation clearing within aquatic resources shall be minimized.
- Silt fencing, silt containment devices, and other water quality best management practices shall be employed to avoid and minimize erosion, sedimentation, and off-site transport of sediment and pollutants.

- Material stockpiles shall be placed such that they cause minimal interference with on-site drainage patterns.
- Petroleum products and other pollutants from the equipment entering wetlands and waterways shall be avoided and minimized.

MM-BIO-13 Federal and State Incidental Take Permitting. The project proponent shall obtain federal and/or state Incidental Take Permits for take of federally listed species and/or state-listed or candidate species resulting from the project, as documented in the Pre-Project Biological Resources Assessment and Report (MM-BIO-1), that cannot be avoided through implementation of avoidance and minimization measures. The project proponent shall not begin construction until necessary Incidental Take Permits have been obtained, and the project proponent shall implement all permit conditions.

MM-BIO-14 Federal and State Jurisdictional Aquatic Resources Permitting. The project proponent shall obtain federal and/or state jurisdictional aquatic resource permits for impacts to federal and/or state jurisdictional wetlands and waters from the project, as documented in the Pre-Project Biological Resources Assessment and Report (MM-BIO-1), that cannot be avoided through implementation of avoidance and minimization measures. The project proponent shall not begin construction until necessary aquatic resources permits have been obtained, and the project proponent shall implement all permit conditions.

MM-BIO-15 Compensatory Mitigation for Special-Status Biological Resources. The project proponent shall provide compensatory mitigation for projects processed under the Specific Plan that cause significant permanent or temporary impacts to special-status biological resources, as documented in the Pre-Project Biological Resources Assessment and Report (MM-BIO-1), that are not avoided and minimized through implementation of the avoidance and minimization measures.

The project proponent shall fulfill the compensatory mitigation obligations for special-status biological resources through one or a combination of the following actions: (1) pay the applicable habitat mitigation fee if established and approved by the County of Imperial; (2) purchase agency-approved mitigation/conservation bank or in-lieu fee program credits; (3) preserve on-site habitat in perpetuity through recordation of a conservation easement or other legal protection mechanism, land management in perpetuity, and funding of management activities through the calculation and deposit of an endowment fund; (4) acquire off-site habitat land and preserve in perpetuity through recordation of a conservation easement or other legal protection mechanism, land management in perpetuity, and funding of management activities through the calculation and deposit of an endowment fund; or (5) restore or enhance on- or off-site habitat with preservation in perpetuity through recordation of a conservation easement or other legal protection mechanism, land management in perpetuity, and funding of management activities through the calculation and deposit of an endowment fund. Mitigation land or actions that provide habitat value for more than one resource shall accomplish the mitigation obligations for those resources (i.e., compensatory mitigation may be "stacked"). Compensatory mitigation shall be required for direct impacts to special-status resources, as specified below.

- **Special-Status Plant Species.** Unavoidable direct permanent impacts to occupied habitat for special-status plant species shall be compensated at a 2:1 ratio (i.e., provide 2 acres of compensatory habitat for 1 acre of impact). Unavoidable direct temporary impacts to occupied habitat for special-status plant species shall be compensated at a 1:1 ratio.

- **Special-Status Wildlife Species.** Unavoidable impacts to occupied habitat for Mojave desert tortoise, burrowing owl, California black rail, Yuma Ridgway's rail, southwestern willow flycatcher, least Bell's vireo, Gila woodpecker, or desert pupfish shall be compensated at a 3:1 ratio for direct permanent impacts and at a 1:1 ratio for direct temporary impacts (or as specified in the federal or state Incidental Take Permit obtained through implementation of MM-BIO-13). Unavoidable direct permanent and temporary impacts to occupied habitat for flat-tailed horned lizard shall be compensated at a 1:1 ratio.
- **Riparian Habitat and Other Sensitive Natural Communities.** Unavoidable direct permanent impacts to sensitive natural communities shall be compensated at a 1:1 ratio. Unavoidable direct temporary impacts to sensitive natural communities shall be compensated at a 1:1 ratio.
- **Federal and State Jurisdictional Wetlands and Waters.** Unavoidable direct permanent impacts to federal and state jurisdictional wetlands and waters shall be compensated at a 1:1 ratio (or as specified in the federal and state aquatic resources permits obtained through implementation of MM-BIO-14). Unavoidable direct temporary impacts to federal and state jurisdictional wetlands and waters shall be compensated at a 1:1 ratio (or as specified in the federal and state aquatic resources permits obtained through implementation of MM-BIO-14).

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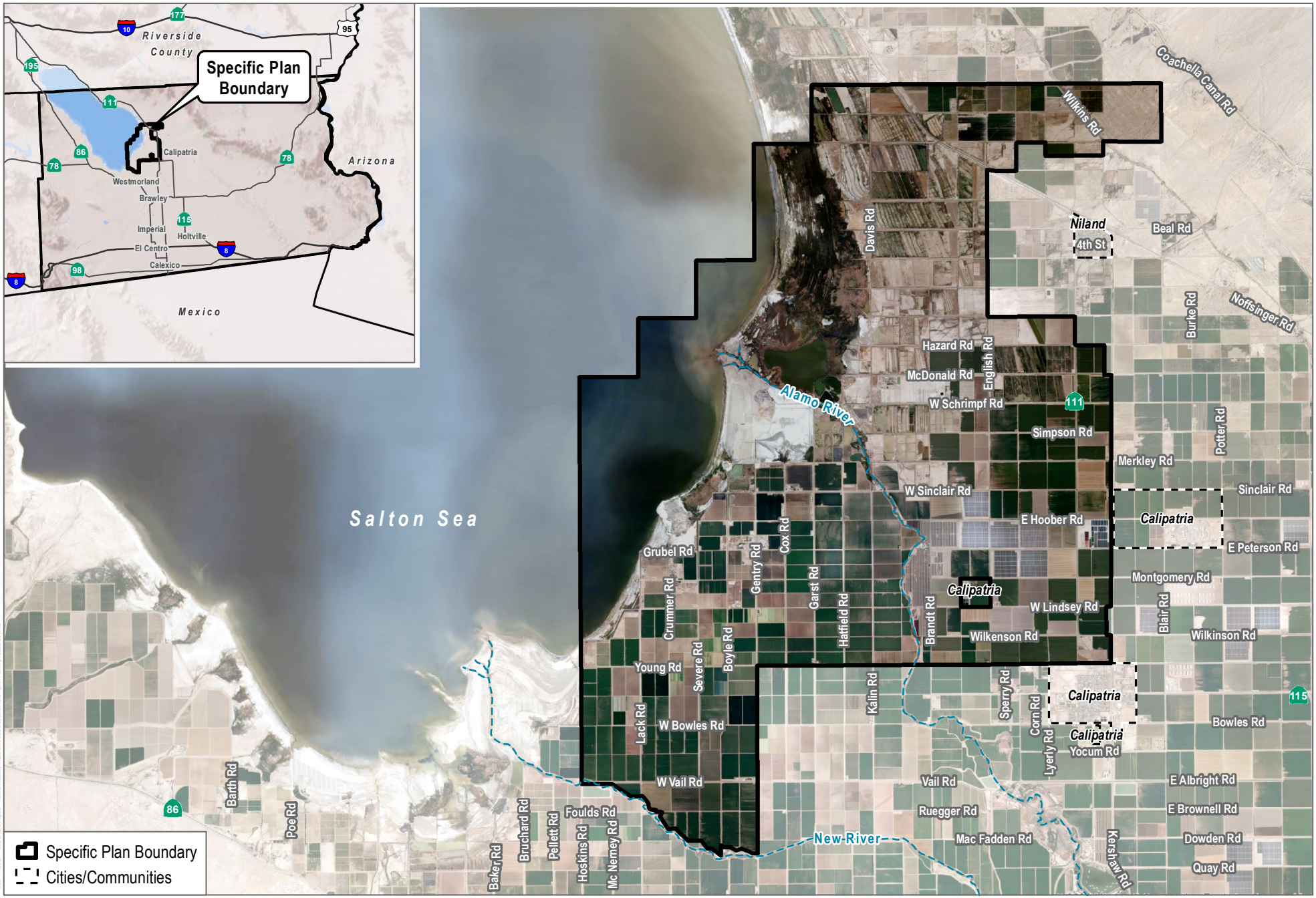

SOURCE: Open Street Map; Bing Maps (2022-12-06)

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FIGURE 1

Planning Area

Lithium Valley Specific Plan

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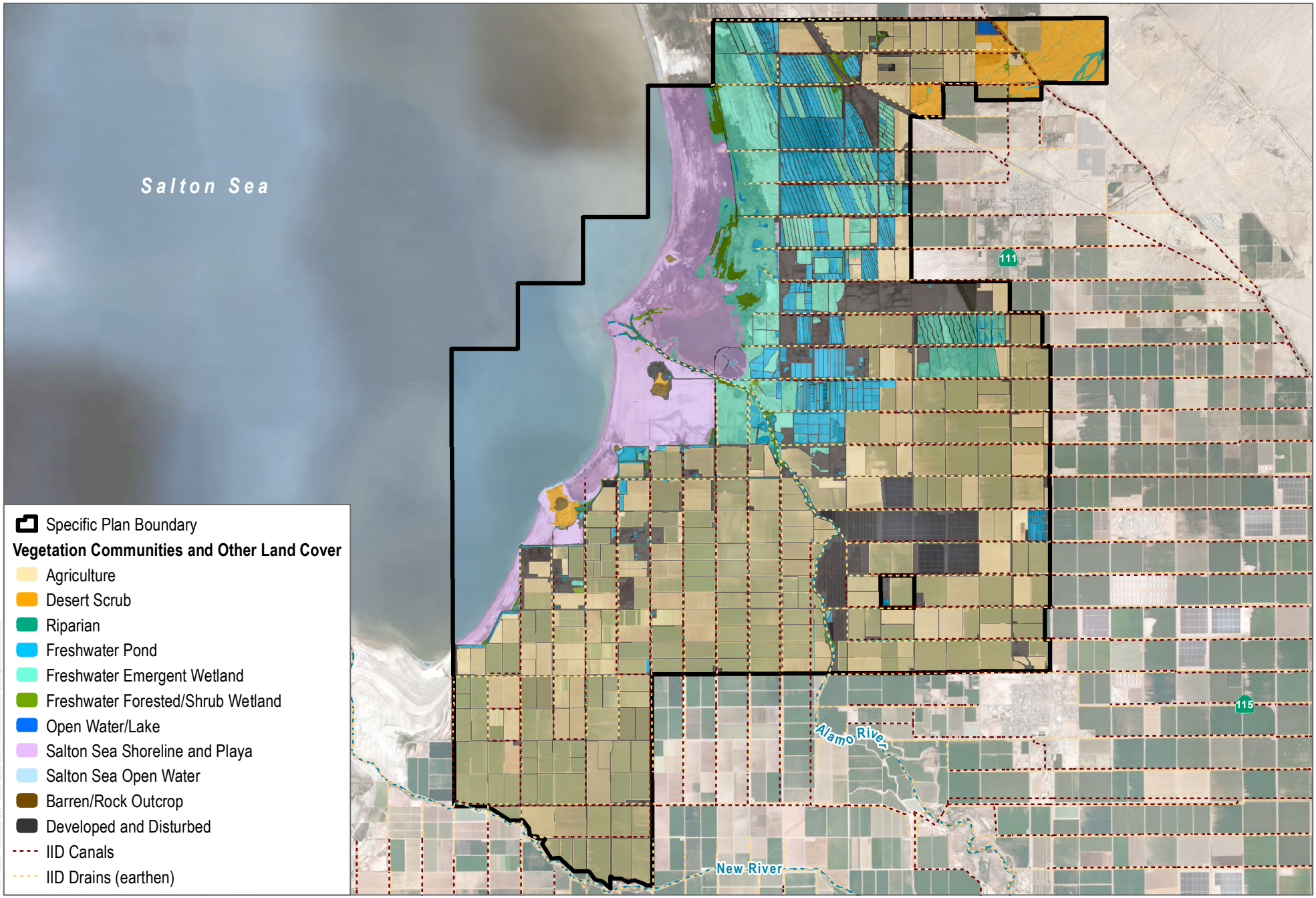

SOURCE: USWFS NWI; CA Dept. Water Resources 2018; Open Street Map; Bing Maps (2022-12-06)

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FIGURE 2

Vegetation Communities and Other Land Cover

Lithium Valley Specific Plan

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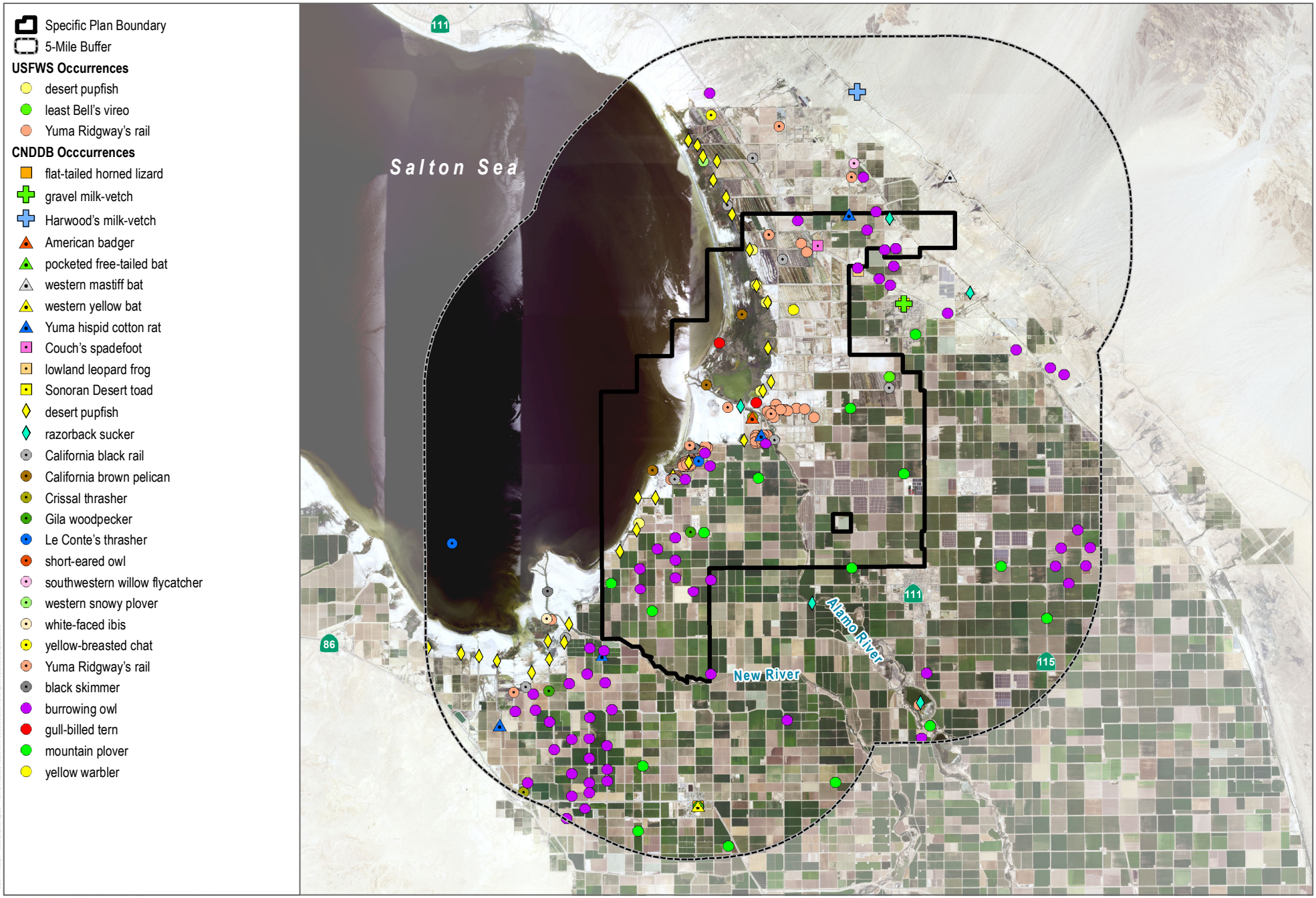

SOURCE: USWFS NWI; CA Dept. Water Resources 2018; Open Street Map; NAIP 2020

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FIGURE 3

Special-Status Plant and Wildlife Occurrences

Lithium Valley Specific Plan

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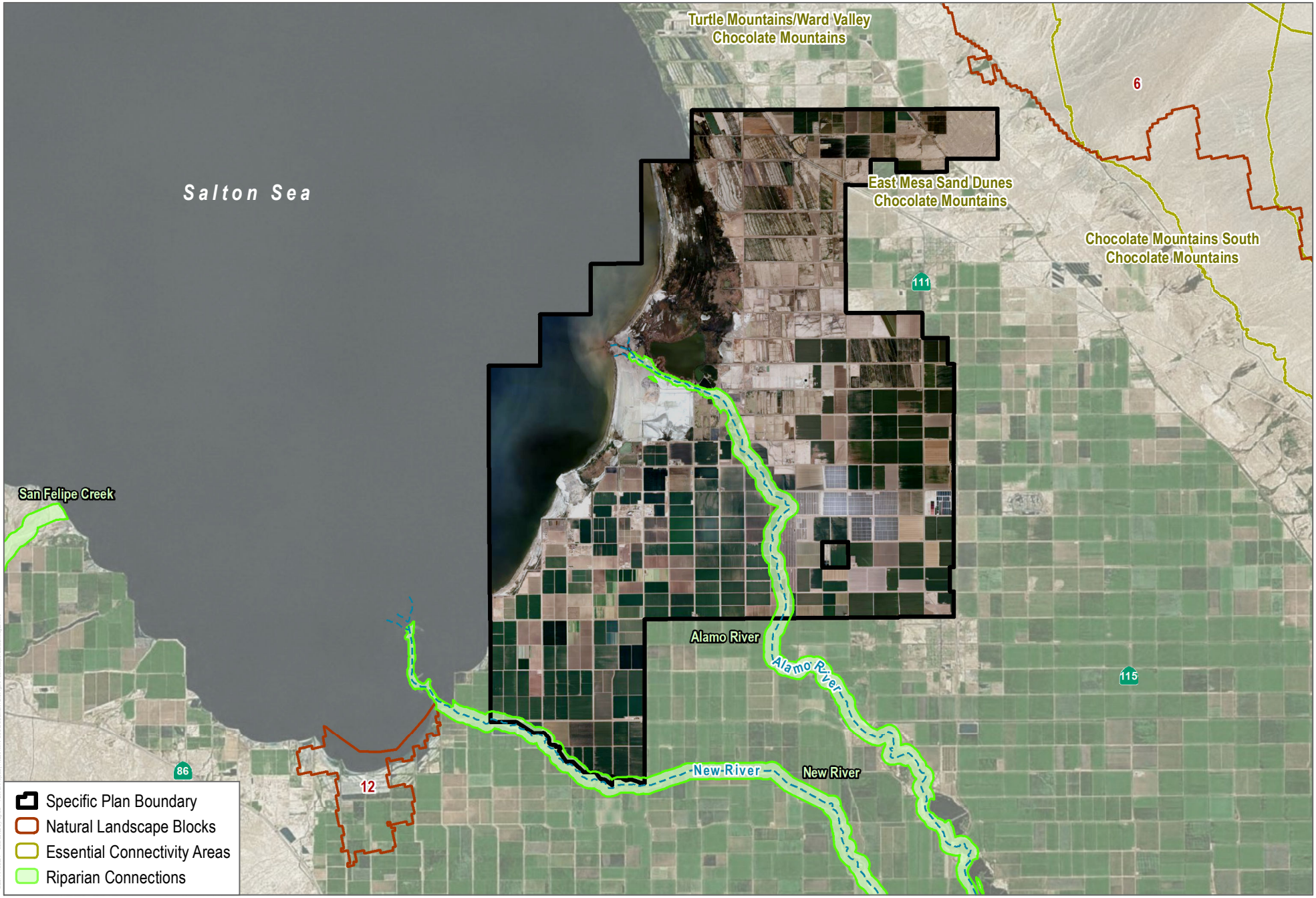

SOURCE: CDFW; Open Street Map; Bing Maps

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FIGURE 4

Landscape Habitat Linkages

Lithium Valley Specific Plan

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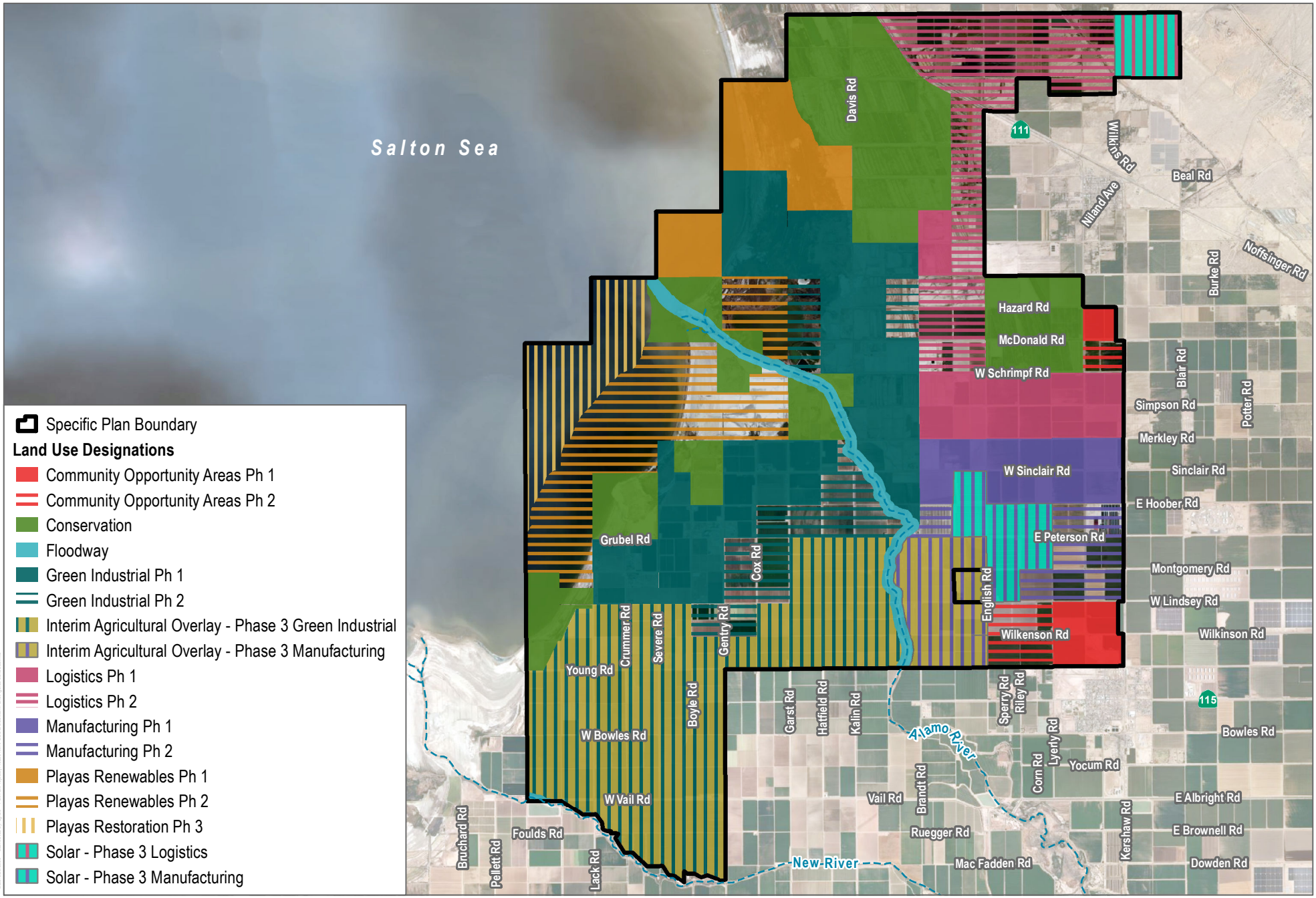

SOURCE: Rick Engineering 2025; Open Street Map; Bing Maps (2022-12-06)

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FIGURE 5

Project Area Land Use

Lithium Valley Specific Plan

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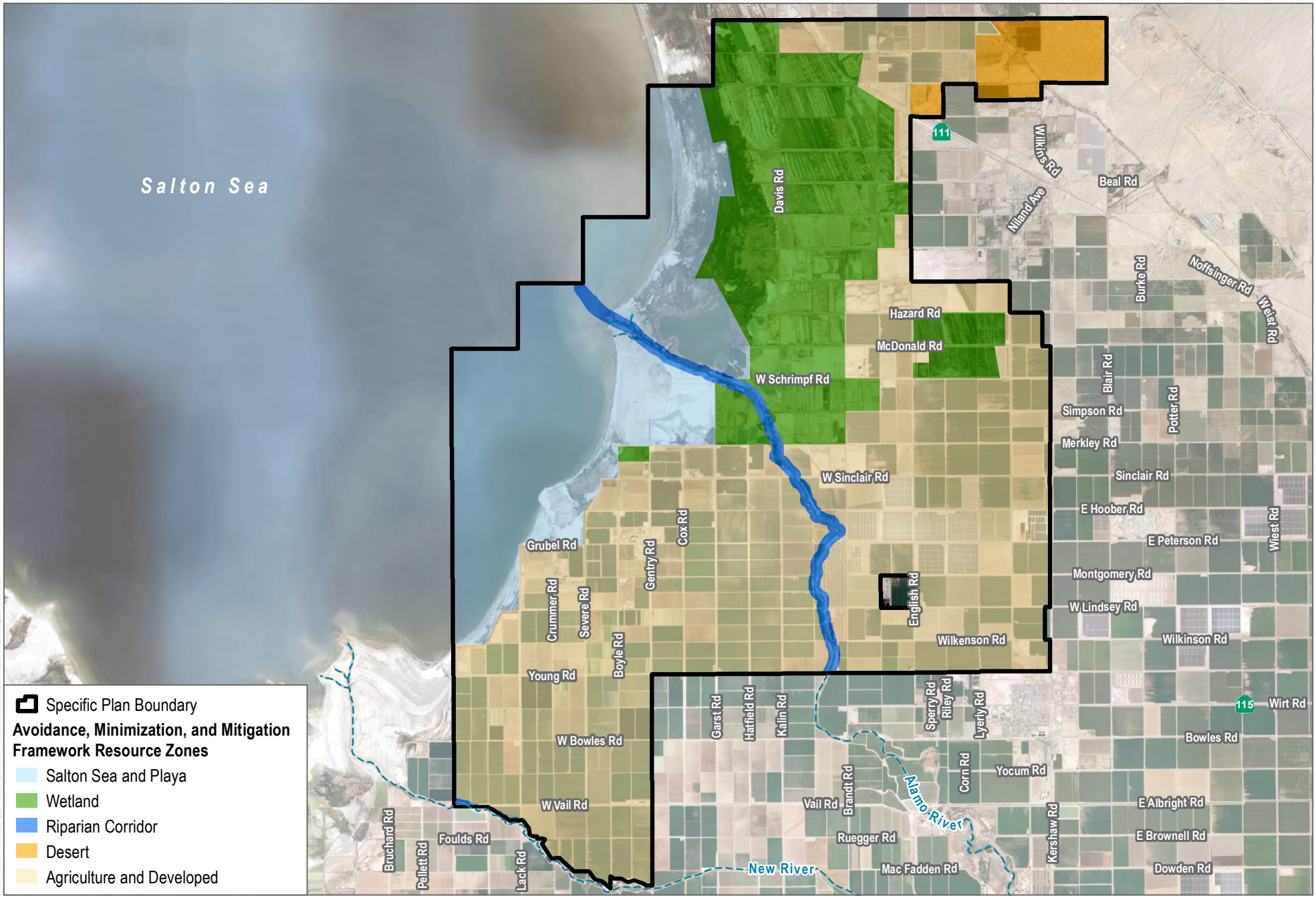

SOURCE: Open Street Map; Bing Maps (2022-12-06)

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FIGURE 6

Avoidance, Minimization, and Mitigation Framework Resource Zones

Lithium Valley Specific Plan

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Appendix A

U.S. Fish and Wildlife Species Information for Planning and Consultation Report

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Imperial County, California

Local office

Carlsbad Fish And Wildlife Office

(760) 431-9440
(760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
Southwestern Willow Flycatcher Empidonax traillii extimus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered
Western Snowy Plover Charadrius nivosus nivosus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened
Yuma Ridgway's Rail Rallus obsoletus yumanensis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3505	Endangered

Reptiles

NAME	STATUS
Desert Tortoise Gopherus agassizii There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4481	Threatened

Fishes

NAME	STATUS
Desert Pupfish Cyprinodon macularius Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7003	Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week

12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

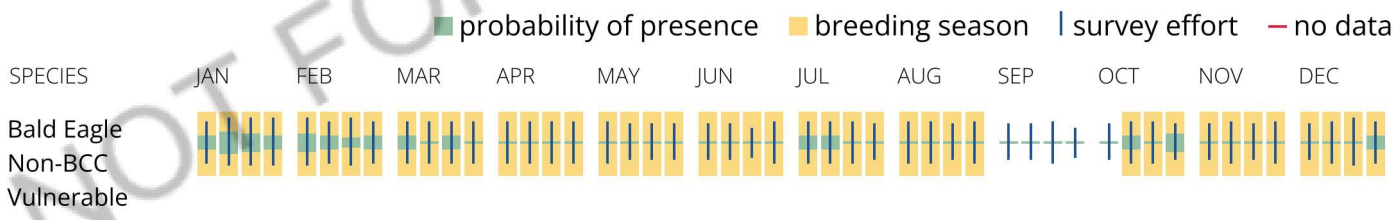
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Avocet Recurvirostra americana This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 21 to Aug 10
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Bendire's Thrasher Toxostoma bendirei This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9435	Breeds Mar 15 to Jul 31
Black Skimmer Rynchops niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
Clark's Grebe Aechmophorus clarkii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31

Costa's Hummingbird Calypte costae — Breeds Jan 15 to Jun 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9470

Gila Woodpecker Melanerpes uropygialis — Breeds Apr 1 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/5960

Gull-billed Tern Gelochelidon nilotica — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9501

Lawrence's Goldfinch Spinus lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Leconte''s Thrasher Toxostoma lecontei — Breeds Feb 15 to Jun 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8969

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Mountain Plover Charadrius montanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3638

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Willet Tringa semipalmata — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

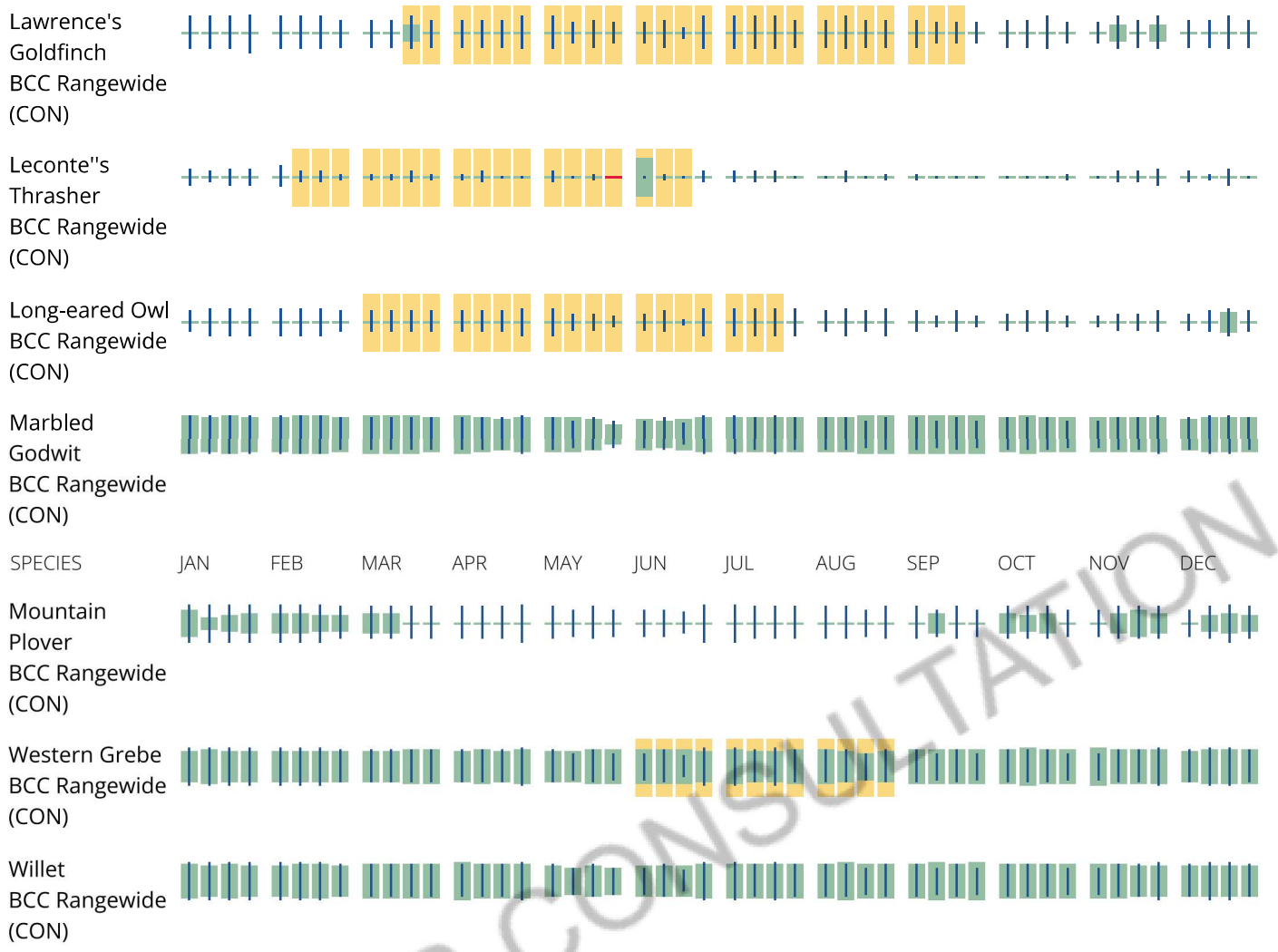
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid

cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to

you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

This location overlaps the following National Wildlife Refuge lands:

LAND	ACRES
SONNY BONO SALTON SEA NATIONAL WILDLIFE REFUGE	37,264.55 acres

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also

been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Appendix B

Special-Status Plant Species
Potential to Occur in the Project Area

Special-Status Plant Species Potential to Occur in the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Abronia villosa var. *aurita*	chaparral sand-verbena	None/None/1B.1	Chaparral, Coastal scrub, Desert dunes; Sandy/annual herb/(Jan)Mar–Sep/ 245–5,245	Not expected to occur. Suitable habitat is absent in the Project Area, the Project Area is outside of the species' known elevation range, and there are no CNDDB records in the Project Area or 5-mile buffer.
Astragalus insularis var. *harwoodii*	Harwood's milk-vetch	None/None/2B.2	Desert dunes, Mojavean desert scrub; Gravelly (sometimes), Sandy (sometimes)/annual herb/Jan–May/0–2,325	High potential to occur in northeastern portion of the Project Area; low potential to occur elsewhere in Project Area. One CNDDB occurrence within the 5-mile buffer of the Project Area.
Astragalus magdalenae var. *peirsonii*	Peirson's milk-vetch	FT/SE/1B.2	Desert dunes/perennial herb/Dec–Apr/195–740	Not expected to occur. No suitable desert dunes habitat in Project Area and outside species' known elevation range. Known from the Algodones Dunes well southeast of the Project Area. No CNDDB records in the Project Area or 5-mile buffer.
Astragalus sabulonum	gravel milk-vetch	None/None/2B.2	Desert dunes, Mojavean desert scrub, Sonoran Desert scrub; Flats, Gravelly (sometimes), Roadsides, Sandy (usually), Washes/annual/perennial herb/Feb–June/-,200–3,050	Low potential to occur in northeastern portion of Project Area; not expected elsewhere in Project Area. Outside known species' known elevation range; one CNDDB occurrence (1906) within the 5-mile buffer of Project Area.
Chylismia arenaria	sand evening-primrose	None/None/2B.2	Sonoran Desert scrub/annual/ perennial herb/Nov–May/-,230–3,000	Low potential to occur in northeastern portion of Project Area; not expected elsewhere in Project Area. Outside known species' known elevation range; several CNDDB occurrences east of

Special-Status Plant Species Potential to Occur in the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
				Project Area in the Chocolate Mountains.
Colubrina californica	Las Animas colubrina	None/None/2B.3	Mojavean desert scrub, Sonoran Desert scrub/perennial deciduous shrub/Apr–June/35–3,280	Low potential to occur in northeastern portion of Project Area; not expected elsewhere in Project Area. Several CNDDB occurrences well east of Project Area in the Chocolate Mountains.
Cylindropuntia munzii	Munz's cholla	None/None/1B.3	Sonoran Desert scrub/perennial stem/May/490–1,965	Low potential to occur in northeastern portion of Project Area; not expected elsewhere in Project Area. Suitable habitat exists but outside of the species' known elevation range. One large CNDDB occurrence in the Chocolate Mountains east of the Project Area.
Ditaxis claryana	glandular ditaxis	None/None/2B.2	Mojavean desert scrub, Sonoran Desert scrub; Sandy/perennial herb/ Oct–Mar/0–1,525	Low potential to occur in northeastern portion of Project Area; not expected elsewhere in Project Area. One CNDDB occurrence (1978) east of the Project Area.
Euphorbia abramsiana	Abrams' spurge	None/None/2B.2	Mojavean desert scrub, Sonoran Desert scrub; Sandy/annual herb/ (Aug)Sep–Nov/-15–4,295	Low potential to occur. Known from one CNDDB occurrence (1912) south of the Project Area buffer in the Imperial Valley; possibly extirpated.
Euphorbia platysperma	flat-seeded spurge	None/None/1B.2	Desert dunes, Sonoran Desert scrub/annual herb/Feb–Sep/215–330	Not expected to occur. Nearest CNDDB occurrence (1987) is in the Superstition Mountains well southwest of the Project Area;

Special-Status Plant Species Potential to Occur in the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
				Project Area outside the species' known elevation range.
Malperia tenuis	brown turbans	None/None/2B.3	Sonoran Desert scrub/annual herb/(Feb)Mar–Apr/50–1,095	Not expected to occur. Nearest CNDDB occurrence (1926) is in the Fish Mountains well west of the Project Area; majority of Project Area outside the species' known elevation range.
Petalonyx linearis	narrow-leaf sandpaper-plant	None/None/2B.3	Mojavean desert scrub, Sonoran Desert scrub; Rocky (sometimes), Sandy (sometimes)/perennial shrub/(Jan–Feb) Mar–May (June–Dec)/-80–3,655	Not expected to occur. Nearest CNDDB occurrence (1949) is in the Chocolate Mountains well north of the Project Area; Project Area outside the species' known elevation range.
Pholisma sonorae	sand food	None/None/1B.2	Desert dunes, Sonoran Desert scrub/perennial herb (parasitic)/(Mar)Apr–June/ 0–655	Not expected to occur. No suitable desert dunes habitat in Project Area. Known from the Algodones Dunes well southeast of the Project Area. No CNDDB records in the Project Area or 5-mile buffer.
Salvia greatae	Orocopia sage	None/None/1B.3	Mojavean desert scrub, Sonoran Desert scrub/perennial evergreen shrub/Mar–Apr/-135–2,705	Low potential to occur in northeastern portion of the Project Area; not expected elsewhere. Suitable habitat exists in northeastern portion of Project Area but outside the species' known elevation range. Nearest CNDDB occurrence (1990) north of the Project Area in the Chocolate Mountains.
Xylorhiza cognata	Mecca-aster	None/None/1B.2	Sonoran Desert scrub/perennial herb/Jan–June/65–1,310	Not expected to occur. Nearest CNDDB occurrences well north of

Special-Status Plant Species Potential to Occur in the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
				the Project Area northeast of the Salton Sea; Project Area outside the species' known elevation range.
Xylorhiza orcuttii	Orcutt's woody-aster	None/None/1B.2	Sonoran Desert scrub/perennial herb/Mar–Apr/0–1,195	Not expected to occur. Nearest CNDDB occurrences well west of the Project Area west of the Salton Sea.

CNDDB = California Natural Diversity Database

Status

Federal

Threatened (FT)

State

Endangered (SE)

California Rare Plant Rank (CRPR)

Plants presumed extinct in California (1A)

Plants rare, threatened, and endangered in California and elsewhere (1B)

Plants presumed extirpated in California but common elsewhere (2A)

Plants rare, threatened, or endangered in California but more comment elsewhere (2B)

.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 Moderately threatened in California (20–80% occurrences threatened / moderate degree and immediacy of threat)

.3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Appendix C

Special-Status Wildlife Species
Potential to Occur in the Project Area

Special-Status Wildlife Species Potential to Occur in the Project Area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Amphibians				
Incilius alvarius	Sonoran desert toad	None/SSC	Desert and semi-arid habitats including desert scrub, semi-arid grasslands and woodlands; usually associated with large permanent streams	Not expected to occur. There is one CNDDB occurrence within the 5-mile buffer of the Project Area from 1916. Likely extirpated from California.
Lithobates yavapaiensis	lowland (=Yavapai, San Sebastian and San Felipe) leopard frog	None/SSC	Streams, river side channels, springs, and artificial and natural ponds in desert scrub, grassland, woodland, and pinyon–juniper woodland	Not expected to occur. There is one CNDDB occurrence within the 5-mile buffer of the Project Area from 1940. Likely extirpated from California.
Scaphiopus couchii	Couch's spadefoot	None/SSC	Desert and arid areas including desert washes, desert riparian, palm oasis, desert succulent scrub, and desert scrub habitats; also cultivated cropland	Moderate potential to occur in remnant desert scrub or adjacent agricultural lands. There is one CNDDB occurrence from 2007 within the Project Area.
Birds				
Antigone canadensis canadensis (wintering)	lesser sandhill crane	None/SSC	Winter foraging in cropland, grazed and mowed grassland, pasture, alfalfa fields, and shallow wetlands; roosting sites are flooded and support several inches of water	Moderate potential for wintering. No CNDDB/USFWS occurrences in the Project Area or within 5 miles but suitable habitats are present.
Antigone canadensis tabida (nesting and wintering)	greater sandhill crane	None/FP, ST	Winter foraging in cropland, grazed and mowed grassland, pasture, alfalfa fields, and shallow wetlands; roosting sites are flooded and support several inches of water	Moderate potential for wintering. No CNDDB/USFWS occurrences in the Project Area or within 5 miles but suitable habitats are present.
Asio flammeus (nesting)	short-eared owl	BCC/SSC	Grassland, prairies, dunes, meadows, irrigated lands, and saline and freshwater emergent wetlands	Low potential to occur. Outside breeding range but potential during migration or as winter visitor. There is one CNDDB occurrence within the 5-mile buffer of the Project Area.
Athene cunicularia	burrowing owl	BCC/SC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Occurs. There are 61 CNDDB occurrences within the Project Area and 5-mile buffer.

Special-Status Wildlife Species Potential to Occur in the Project Area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Aythya americana (nesting)	redhead	None/SSC	Nests in deep (>3 ft) permanent or semi-permanent wetlands of at least 1 acre; 75% open water; emergent tules, *Scirpus* spp., and Typha spp. 3 feet in height; winters in coastal estuaries and large, deep ponds, lakes, and reservoirs of the interior	High potential for nesting and suitable habitat present in the Project Area; however, no CNDDB/USFWS occurrence within the Project Area or 5-mile buffer.
Buteo swainsoni (nesting)	Swainson's hawk	None/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Low potential to occur. Outside breeding range but potential during migration. There are no CNDDB/USFWS occurrence within the Project Area or 5-mile buffer.
Charadrius montanus (wintering)	mountain plover	BCC/SSC	Winters in shortgrass prairies, plowed fields, open sagebrush, and sandy deserts	High potential for wintering. There are 16 CNDDB occurrences within the Project Area and 5-mile buffer, and suitable habitat is present.
Charadrius nivosus nivosus (nesting)	western snowy plover	FT (Pacific Coast population only), BCC/SSC	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	High potential to occur (interior population). Known from around the Salton Sea and suitable nesting habitat in the Project Area. One CNDDB occurrence in the Project Area.
Circus hudsonius (nesting)	northern harrier	BCC/SSC	Nests in open wetlands (marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes); also in drier habitats (grassland and grain fields); forages in grassland, scrubs, rangelands, emergent wetlands, and other open habitats	Low potential to occur for breeding as Project Area is outside the breeding range; however, species observed and winters in the Project Area. No CNDDB/USFWS records in the Project Area or 5-mile buffer
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	Low potential to occur. No CNDDB/USFWS records in the Project Area or 5-mile buffer; however, species may occur as occasional visitor and suitable habitat is present.
Dendrocygna bicolor (nesting)	fulvous whistling-duck	None/SSC	Nests in freshwater wetlands, especially shallow impoundments managed for rice	Moderate potential to occur. There are no CNDDB/USFWS records in the Project Area

Special-Status Wildlife Species Potential to Occur in the Project Area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
			production and temporarily flooded grasslands; also nests in pastures, haylands, and small grain fields adjacent to rice fields	or 5-mile buffer, but suitable habitat is present and it was previously known to nest in the Project Area.
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Moderate potential to occur. There are no CNDDB/USFWS records in the Project Area or 5-mile buffer, but suitable habitat is present.
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Moderate potential to occur. There is only one CNDDB and one USFWS occurrence within the 5-mile buffer, and suitable habitat is present.
Falco peregrinus anatum (nesting)	American peregrine falcon	FPD/FP, SCD	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	Low potential to occur. Suitable nesting sites are generally absent from the Project Area and no CNDDB/USFWS records in the Project Area or 5-mile buffer.
Gelochelidon nilotica (nesting colony)	gull-billed tern	BCC/SSC	Nests at the Salton Sea and in estuaries in San Diego County; forages in emergent wetland, lakes, mudflats, cropland, and grassland	High potential to occur. Suitable nesting colony habitat exists and there are four CNDDB occurrences within the Project Area and 5-mile buffer.
Haliaeetus leucocephalus (nesting and wintering)	bald eagle	FPD/FP, SE	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	Moderate potential to occur. Suitable nesting habitat is absent, however, suitable foraging resources exist. No CNDDB/USFWS records occur in the Project Area or 5-mile buffer.
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Moderate potential to occur. Potentially suitable nesting habitat exists and there is one CNDDB occurrence within the 5-mile buffer of the Project Area.
Ixobrychus exilis (nesting)	least bittern	None/SSC	Nests in freshwater and brackish marshes with dense, tall growth of aquatic and semi-aquatic vegetation	High potential to occur. Suitable nesting habitat exists. They are known from the Salton Sea basin; however, there are no

Special-Status Wildlife Species Potential to Occur in the Project Area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
				CNDDB/USFWS records in the Project Area or 5-mile buffer.
Lanius ludovicianus (nesting)	loggerhead shrike	None/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	High potential to occur. Suitable nesting habitat exists; however, there are no CNDDB/USFWS records in the Project Area or 5-mile buffer.
Laterallus jamaicensis coturniculus	California black rail	None/FP, ST	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	High potential to occur. Known from suitable habitat areas along the southern edge of the Salton Sea and there are eight CNDDB occurrences within the Project Area and 5-mile buffer.
Melanerpes uropygialis	Gila woodpecker	BCC/SE	Nests and forages in Saguaro cacti, riparian woodland, and residential areas	Moderate potential to occur. Suitable nesting trees limited in the Project Area; there are three CNDDB occurrences (from 1946, 1949, and 1950) within the site and 5-mile buffer zone.
Mycteria americana	wood stork	None/SSC	Nests in freshwater and marine-estuarine forested habitats; forages in natural and artificial wetlands; roosts in trees, usually over water	Moderate potential to occur. Suitable foraging habitat is present but nesting habitat is limited or absent. No CNDDB/USFWS records in the Project Area or 5-mile buffer.
Passerculus sandwichensis rostratus (wintering)	large-billed savannah sparrow	None/SSC	Nests and forages in open, low saltmarsh vegetation, including low halophytic scrub	High potential to occur. Suitable wintering habitat is present; however, there are no CNDDB/USFWS records in the Project Area or 5-mile buffer.
Pelecanus erythrorhynchos (nesting colony)	American white pelican	BCC/SSC	Nests colonially on sandy, earthen, or rocky substrates on isolated islands in freshwater lakes; minimal disturbance from predators; access to foraging areas on inland marshes, lakes, or rivers; winters on shallow coastal bays, inlets, and estuaries	High potential to occur. Suitable nesting colony habitat is present and species is known from the Salton Sea; however, there are no CNDDB/USFWS records in the Project Area or 5-mile buffer.

Special-Status Wildlife Species Potential to Occur in the Project Area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Pelecanus occidentalis californicus (nesting colonies and communal roosts)	California brown pelican	FPD/FP, SCD	Forages in warm coastal marine and estuarine environments; in California, nests on dry, rocky offshore islands	Moderate potential to occur. Suitable nesting colony habitat may occur in the Project Area, and the species is known from the Salton Sea and there are four CNDDB occurrences within the Project Area and 5-mile buffer.
Rallus obsoletus yumanensis	Yuma Ridgway's rail	FE/FP, ST	Freshwater marsh dominated by Typha spp., *Scirpus* spp., *Schoenoplectus* spp., and *Bolboschoenus* spp.; mix of riparian tree and shrub species along the marsh edge; many occupied areas are now man-made, such as managed ponds or effluent-supported marshes	High potential to occur. Known from suitable habitat areas along the southern edge of the Salton Sea and there are 13 CNDDB and 109 USFWS occurrences within the Project Area and 5-mile buffer.
Rynchops niger (nesting colony)	black skimmer	BCC/SSC	Nests on barrier beaches, shell banks, spoil islands, and saltmarsh; forages over open water; roosts on sandy beaches and gravel bars	High potential to occur. Suitable nesting colony habitat exists and there are three CNDDB occurrences within the Project Area.
Setophaga petechia (nesting)	yellow warbler	None/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Moderate potential to occur. Suitable habitat exists and there is one CNDDB occurrence within the Project Area.
Toxostoma crissale	Crissal thrasher	None/SSC	Nests and forages in desert riparian and desert wash; dense thickets of sagebrush and other shrubs such as mesquite, iron catclaw acacia, and arrowweed willow within juniper and pinyon–juniper woodlands	Moderate potential to occur. Limited suitable habitat exists and there are three CNDDB occurrences within the Project Area and 5-mile buffer.
Toxostoma lecontei	LeConte's thrasher	BCC/SSC	Nests and forages in desert wash, desert scrub, alkali desert scrub, desert succulent, and Joshua tree habitats; nests in spiny shrubs or cactus	Moderate potential to occur. Limited suitable habitat exists and there are two CNDDB occurrences within the Project Area and 5-mile buffer.

Special-Status Wildlife Species Potential to Occur in the Project Area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Moderate potential to occur. Suitable nesting habitat is present and there is one USFWS occurrence within the Project Area.
Xanthocephalus xanthocephalus (nesting)	yellow-headed blackbird	None/SSC	Nests in marshes with tall emergent vegetation, often along borders of lakes and ponds; forages in emergent wetlands, open areas, croplands, and muddy shores of lacustrine habitat	Moderate potential to occur. Suitable habitat exists; however, there are no CNDDB/USFWS records within the Project Area.
Fishes				
Cyprinodon macularius	desert pupfish	FE/SE	Desert springs, small streams, and marshes below 1,515 meters (5,000 feet) above mean sea level; tolerates high salinities, high water temperatures, and low dissolved-oxygen concentrations	High potential to occur. Suitable habitat exists and there are 29 CNDDB and 18 USFWS occurrences within the Project Area and 5-mile buffer.
Xyrauchen texanus	razorback sucker	FE/FP, SE	Found in the Colorado River bordering California	Low potential to occur. Extirpated from prior range. There are 5 CNDDB occurrences (1944, 1949, 1958, 1974, and 1994) within the Project Area and 5-mile buffer. The latest observation was from a water impoundment off the East Highline Canal and were translocated out of the Imperial Valley.
Mammals				
Dasypterus xanthinus	western yellow bat	None/SSC	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Moderate potential to occur for roosting and foraging. Limited suitable habitat; there is CNDDB occurrence within the 5-mile buffer of the Project Area.
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff	Moderate potential to occur for foraging; low potential to occur for roosting. Limited suitable habitat and roost locations are

Special-Status Wildlife Species Potential to Occur in the Project Area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
			is vertical or nearly vertical, trees, and tunnels	absent; there is one CNDDB occurrence within the 5-mile buffer of the Project Area.
Nyctinomops femorosaccus	pocketed free-tailed bat	None/SSC	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings	Moderate potential to occur for foraging; low potential to occur for roosting. Limited suitable habitat and roost locations are absent; there is one CNDDB occurrence within the 5-mile buffer of the Project Area.
Sigmodon hispidus eremicus	Yuma hispid cotton rat	None/SSC	Dense vegetation in moist and inundated wetlands, agricultural fields, and irrigation ditches.	Moderate potential to occur. There is suitable habitat and there are four CNDDB occurrences within the Project Area and 5-mile buffer.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Moderate potential to occur. Suitable dry habitats are limited; there one CNDDB occurrence (1937) within the Project Area.
Reptiles				
Gopherus agassizii	Mojave desert tortoise	FT/SE	Arid and semi-arid habitats in Mojave and Sonoran Deserts, including sandy or gravelly locations along riverbanks, washes, sandy dunes, canyon bottoms, desert oases, rocky hillsides, creosote flats, and hillsides	Moderate potential to occur in northeastern most portion of the Project Area east of the East Highline Canal; low potential to occur elsewhere in Project Area. The nearest species occurrences are east of the Chocolate Mountains well east of the Project Area and separated by the Coachella Canal.
Phrynosoma mcallii	flat-tailed horned lizard	None/SSC	Desert washes and flats with sparse low-diversity vegetation cover and sandy soils	Moderate potential to occur in the northeastern most portion of the Project Area north of Niland east of Highway 111 within the species range; there is one CNDDB occurrence (1929) within the Project Area 5-mile buffer.

Special-Status Wildlife Species Potential to Occur in the Project Area

Scientific Name	Common Name	Status (Federal/State)	Habitat	Potential to Occur
Invertebrates				
Bombus crotchii	Crotch's bumble bee	None/SC	Open grassland and scrub habitats with suitable floral resources.	Low potential to occur. Outside the current known species range; there is one CNDDB occurrence (1948) approximately 8 miles south of the Project Area.
Danaus plexippus	Monarch	FC/None	Wind-protected tree groves with nectar sources and nearby water sources. Overwintering sites in California are along the coastline.	Low potential to overwinter in Project Area. May migrate through the Project Area. No recorded occurrences in the Project Area or Project Area 5-mile buffer.

CNDDB = California Natural Diversity Database; USFWS = U.S. Fish and Wildlife Service

Status

Federal

Endangered (FE)
Threatened (FT)
Candidate (FC)
Proposed Threatened (FPT)
Proposed for Delisting (FPD)
Delisted (FD)
Birds of Conservation Concern (BCC)

State

Endangered (SE)
Threatened (ST)
Candidate (SC)
Candidate for Delisting (SCD)
Species of Special Concern (SSC)