



Biological Resources Assessment

Wheatland Regional Sewer Pipeline

Wheatland, Yuba County, California
November 2022



Prepared for:

City of Wheatland
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Attachment B: CNPS Inventory of Rare and Endangered Plants Query for the "Wheatland, California" Quadrangle and Eight Surrounding Quadrangles
Attachment C: Wildlife Species Observed within the Study Area

1.0 INTRODUCTION

This report presents the results of a Biological Resources Assessment (BRA) for the Wheatland Regional Sewer Pipeline project (Project). The Project will occur in an eight-mile-long corridor of varying widths, beginning in the City of Wheatland and ending in an area of unincorporated Yuba County. The Project study area (Study Area) covers about 233 acres and is generally located through portions of the City of Wheatland (south on Malone Avenue to east of State Route 65) and unincorporated Yuba County (north on Jasper Lane, west through farmland, and north towards South Beale Road) (**Figure 1**). The Project's begin point is at about latitude 39.007522 north and longitude -121.422697 west and the end point is at about latitude 39.043344 north and longitude -121.476238 west. The Project is located within portions of Township 13 North, Range 5 East and Township 14 North, Ranges 4 and 5 East (MDB&M) of the "Wheatland, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2022).

1.1 Project Description

In total, the Wheatland Regional Sewer Pipeline project includes three basic elements, referred to as the Overall Project: construction of the regional pipeline and associated structures, establishing a new City Public Works Corporation Yard (Corp Yard), and decommissioning of the City's existing wastewater treatment plant (WWTP). Within this document, portions of the Overall Project that are analyzed at the project level, regional pipeline and associated structures and the pump stations and Corp Yard, are referred to as the Project. WWTP decommissioning is analyzed at a programmatic level due to the lack of specificity regarding actions that would need to be taken and a lack of biological resources information within that area. As such, the WWTP is treated separately from the Overall Project throughout this document.

1.1.1 General Project Characteristics

Figure 2 shows the entirety of the Study Area. The eight-mile-long Wheatland Regional Sewer Pipeline would extend from an existing pump station (Malone Pump Station) north to a point of connection with Olivehurst Public Utility District's (OPUD) wastewater system. The alignment begins at Pump Station 1, which would be constructed adjacent to an existing pump station. From this point, the pipeline would head due east, across a largely vacant parcel, then under State Route (SR) 65 and the Union Pacific Railroad (UPRR) mainline track, to proceed east along Sixth Street to Spenceville Road. The alignment generally follows Spenceville Road for about one mile to its intersection with Jasper Lane. Along Spenceville Road, the alignment would pass out of the City of Wheatland (about 0.5-mile east of the Spenceville Road/Jasper Lane intersection) and cross over a culvert at Grasshopper Slough (about 0.3-mile west of the intersection). The pipeline would connect to Pump Station 2, which would be located southeast of the Spenceville Road/Jasper Lane intersection. The site for Pump Station 2 would also house the City's new Corp Yard.

From Pump Station 2, the alignment continues due north along Jasper Lane for about 2.3 miles, crossing Dry Creek about 0.75-mile north of the intersection. From the northmost end of Jasper Lane, the pipeline would turn west and be routed along existing dirt roads to the maximum extent feasible to avoid sensitive habitats and active agricultural land. The pipeline would cross Best Slough about 0.25-mile west of SR 65

before turning north and crossing under two UPRR spur tracks. After crossing the tracks, the pipeline would head west on a short segment of South Beale Road before turning north toward a proposed undercrossing at the UPRR mainline near the intersection of SR 65 and Rancho Road. After this UPRR undercrossing, the alignment continues to Pump Station 3, which marks the northern end of the pipeline. Pump Station 3 will be connected to the OPUD system.

1.1.2 Sewer Pipeline Detail

The pipeline consists of eight miles of pressurized force mains, constructed with high density polyethylene (HDPE) pipe. Sewer pipe sizes would range in size and are preliminarily anticipated to be a 12-inch sewer force main from Pump Station 1 to Pump Station 2 and an 18-inch sewer force main from Pump Station 2 to Pump Station 3 and the point of connection with OPUD's system. The sewer pipeline would typically be buried a minimum of four feet below the existing or planned ground surface. The force main would be installed deeper where it crosses SR 65, the railroad, and certain waterways. The capacity of the sewer pipes and pump stations would be sized to accommodate existing and projected development within the City and the resulting related flow rates for average dry weather and peak flows.

1.1.3 Pipeline Alignment Detail - Crossings

The sewer pipeline alignment was selected with a goal to reduce major crossings to avoid sensitive habitats and sensitive receptors. However, some sewer pipeline crossings could not be avoided and, therefore, require special construction methods and permitting. As currently proposed, the selected alignment would have one California Department of Transportation (Caltrans) crossing at SR 65, four UPRR crossings, and three creek crossings. The following describes details for each crossing.

- **State Route 65:** In accordance with Caltrans requirements, the SR 65 crossing would be constructed using jack-and-bore method and the HDPE carrier pipe installed within a steel casing. Temporary jacking and receiving pits would be placed outside of Caltrans right-of-way. The pipeline is proposed to cross under SR 65 east of Pump Station 1.
- **UPRR in City of Wheatland:** The UPRR mainline crossing would be located near the western terminus of Sixth Street, between C Street and State Street. UPRR has specific pipeline crossing requirements that favor jack-and-bore construction methods. The carrier pipe would be installed in a steel casing set a minimum of five and a half feet below grade to meet UPRR design requirements. Emergency shutoff valves and temporary jacking and receiving pits would be placed outside of UPRR right of way.
- **South Grasshopper Slough Culvert:** An existing 48-inch culvert associated with South Grasshopper Slough crosses under Spenceville Road with approximately six feet of cover. Construction of the pipeline in this area would place the force main above the culvert using open cut construction method. The pipeline cover may be less than four feet deep and additional pipe protection

measures, such as concrete slurry backfill, may need to be implemented to protect the pipe. The crossing could be constructed without direct impacts to Grasshopper Slough.

- **Dry Creek:** The Dry Creek crossing would be located on Jasper Lane, about 0.75-mile north of Spenceville Road. The current proposal is to install the pipeline under Dry Creek via jack-and-bore, though other methods such as attaching the pipeline to the bridge using a steel casing with bolted connections or using horizontal directional drilling (HDD) may be considered. The jack-and-bore and HDD construction methods would require notification of the California Department of Fish and Wildlife (CDFW) pursuant to Section 1600 of the California Fish and Game Code. This biological resource assessment assumes that the crossing would be completed using the jack-and-bore. As proposed, the jack-and-bore at this location would be approximately 1,300 feet long.
- **Best Slough:** The alignment would cross Best Slough east of South Beale Road. The crossing would utilize HDD to place the pipe below the slough. This crossing would require CDFW notification pursuant to Section 1600 of the California Fish and Game Code. As proposed, the jack-and-bore at this location would be approximately 115 feet long
- **UPRR Spur Tracks:** The pipeline would cross two consecutive UPRR spur tracks located south of South Beale Road. Jack-and-bore construction would be used to cross under the two spurs, and the carrier pipe would be installed inside a steel casing in accordance with UPRR standards.
- **UPRR Mainline Track and Drainage Culverts:** This UPRR crossing is located adjacent to the connection point with OPUD's gravity main. The UPRR tracks run parallel to Rancho Road. Like the other UPRR crossings, the mainline track and drainage culverts crossing would be constructed using jack-and-bore method and the carrier pipe will be installed within a steel casing. The jack-and-bore section would also allow the alignment to cross under two existing drainage culverts that run parallel to Rancho Road.

1.1.4 Pump Station Detail

Pump Station 1

Pump Station 1 would be located adjacent to the existing Malone Pump Station, on City-owned property, and south of South Grasshopper Slough. Pump Station 1 would replace the Malone Pump Station. Pump Station 1 would be a three-pump station that would convey all existing flows from the City of Wheatland, as well as flows from the identified infill areas west of the proposed SR 65 realignment. Construction of Pump Station 1 would include but not be limited to trenching for undergrounding utilities, an in-ground wet well structure, and two underground storage tanks capable of storing 40,000 gallons between the incoming sewers and new wet well, and a control building. The control building would provide space for indoor electrical controls and an emergency generator.

Pump Station 1 would be located in a 100-year floodplain zone. Import of fill would be required to raise the overall elevation of the project site approximately two feet above the current elevation for flood protection.

As such, the site would likely require a retaining wall to prevent encroachment into the 30-foot creek setback. Perimeter fencing would be provided, with pass-through gates to allow access to the unimproved area and sewer lines east of the pump station and west of SR 65.

Pump Station 2 and Public Works Corporation Yard

Pump Station 2 would be located on agricultural land north of South Grasshopper Slough. Pump Station 2 would convey all flows from Pump Station 1, and collect flows from future planned development, generally east of Pump Station 2. All wastewater generated by the City would flow through Pump Station 2 as flows are conveyed north to OPUD.

Pump Station 2 would utilize two channel style self-cleaning, submersible pump wet well configurations, built back-to-back with a common wall. Pump Station 2 would include three 400,000-gallon partially above-ground concrete/steel tanks associated with limiting peak flows to OPUD's system. Two tanks would be constructed initially, with the remaining tank added as flows increase.

Pump Station 2 would include a prefabricated cement or block building for the controls and a separate building for a 500-kilowatt standby generator and electrical controls. Because this site is not size constrained, the site would also host the City's new Corp Yard. As a result of decommissioning its existing WWTP and the re-purposing or sale of the site, the City would lose its current base of operations for wastewater personnel, equipment, and controls. Therefore, the new Public Works Corp Yard would be implemented at the Pump Station 2 site and provide the City with facilities needed to staff, maintain, and operate the City's public infrastructure functions.

Pump Station 3

Pump Station 3 would convey all flows from Pump Station 2, serving as a booster pump station, without collecting any additional flows from Pump Station 3's immediate surroundings. As with Pump Station 2, all wastewater generated by Wheatland would flow through Pump Station 3 as the flows are conveyed to OPUD. The configuration of the wet well for this pump station would not be typical as it is only receiving flow from the force main system and it may be located above ground in a stainless-steel building, rather than underground like a typical gravity fed sewage pump station. However, the City is also considering an alternative design that may eliminate the need for a wet well and/or standpipe.

A prefabricated booster pump station, containing three pumps, would be installed within a prefabricated control building. The control building would also include a standby 250-kilowatt generator. Site improvements to Pump Station 3 would include paving, fencing, landscaping, and a biofilter. Additionally, a small swale for stormwater retention/infiltration would be located at Pump Station 3. The site would include an entrance/exit to facilitate service trucks.

City of Wheatland Wastewater Treatment Plant

The Wheatland WWTP, which is located near the southern terminus of Malone Road about 0.75 mile southeast of the Pump Station 1 location, was originally constructed in 1967 and last upgraded in 1990. The plant provides only secondary-level treatment and the Regional Water Quality Control Board (RWQCB)

requires treatment upgrades of any new permit or expansions. The infiltration basins are near the Bear River, below a levee between the river and surrounding developed areas and are subject to flood damage. The plant suffers from a lack of redundancy, sludge drying bed constraints, and general repair needs. For these reasons, the City has elected to construct a pipeline to allow the City to connect to a more modern wastewater treatment plant and decommission the existing facility.

The City has preliminarily determined that decommissioning the WWTP would involve identifying and remediating all hazardous materials above grade and within five feet of the ground surface; removing all structures; properly removing or abandoning in-place any underground piping; and breaching the southernmost berm of the infiltration ponds. This biological resources assessment considers the WWTP decommissioning at a programmatic level only.

Construction Staging Areas

Project construction would involve pieces of equipment that would need to be staged near construction areas. Three main construction equipment storage, vehicle maintenance, fueling, and washing areas are anticipated. The first staging area would generally be located south of Pump Station 1. The second construction staging area would be located at the Pump Station 2 site. The third construction staging area would generally be located adjacent to the Pump Station 3 site. Staging areas for the jack-and-bore and HDD crossings would be located within the defined area of disturbance of the proposed pipeline alignment.

2.0 REGULATORY SETTING

This section describes federal, state and local laws and policies that are relevant to this biological resources assessment.

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 protects species that are federally listed as endangered or threatened with extinction. FESA prohibits the unauthorized “take” of listed species. Take includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such activities. Harm includes significant modifications or degradations of habitats that may cause death or injury to protected species by impairing their behavioral patterns. Harassment includes disruption of normal behavior patterns that may result in injury to or mortality of protected species. Civil or criminal penalties can be levied against persons convicted of unauthorized “take.”

2.1.2 Clean Water Act, Section 404

Section 404 of the Federal Clean Water Act requires that a Department of the Army permit be issued prior to the discharge of any dredged or fill material into waters of the United States, including wetlands. The

U. S. Army Corps of Engineers (USACE) administers this program, with oversight from the U. S. Environmental Protection Agency. Waters of the United States include all navigable waters; interstate waters and wetlands; all intrastate waters and wetlands that could affect interstate or foreign commerce; impoundments of the above; tributaries of the above; territorial seas; and wetlands adjacent to the above.

2.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, any native migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11). Likewise, Section 3513 of the California Fish & Game Code prohibits the “take or possession” of any migratory non-game bird identified under the MBTA. Therefore, activities that may result in the injury or mortality of native migratory birds, including eggs and nestlings, would be prohibited under the MBTA.

2.2 State Regulations

2.2.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires evaluations of project effects on biological resources. Determining the significance of those effects is guided by Appendix G of the CEQA guidelines. These evaluations must consider direct effects on a biological resource within the project site itself, indirect effects on adjacent resources, and cumulative effects within a larger area or region. Effects can be locally important but not significant according to CEQA if they would not substantially affect the regional population of the biological resource. Significant adverse impacts on biological resources would include the following:

- Substantial adverse effects on any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife (CDFW) or the U.S. Fish and Wildlife Service (USFWS) (these effects could be either direct or via habitat modification);
- Substantial adverse impacts to species designated by the CDFW as Species of Special Concern;
- Substantial adverse effects on riparian habitat or other sensitive habitat identified in local or regional plans, policies, or regulations or by CDFW and USFWS;
- Substantial adverse effects on federally protected wetlands defined under Section 404 of the Clean Water Act (these effects include direct removal, filling, or hydrologic interruption of marshes, vernal pools, coastal wetlands, or other wetland types);
- Substantial interference with movements of native resident or migratory fish or wildlife species population, or with use of native wildlife nursery sites;
- Conflicts with local policies or ordinances protecting biological resources (e.g., tree preservation policies); and
- Conflict with provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

2.2.2 State Endangered Species Act

With limited exceptions, the California Endangered Species Act (CESA) of 1984 protects state-designated endangered and threatened species in a way similar to FESA. For projects on private property (i.e., that for which a state agency is not a lead agency), CESA enables CDFW to authorize take of a listed species that is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish and Game Code Section 2081).

2.2.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA), enacted in 1977, allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

2.2.4 Clean Water Act, Section 401

Section 401 of the Clean Water Act requires any applicant for a 404 permit in support of activities that may result in any discharge into waters of the United States to obtain a water quality certification with the RWQCB. This program is meant to protect these waters and wetlands by ensuring that waste discharged into them meets state water quality standards. Because the water quality certification program is triggered by the need for a Section 404 permit (and both programs are a part of the Clean Water Act), the definition of waters of the United States under Section 401 is the same as that used by the USACE under Section 404.

2.2.5 California Water Code, Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne), from Division 7 of the California Water Code, requires any person discharging waste or proposing to discharge waste that could affect the quality of waters of the state to file a report of waste discharge (RWD) with the RWQCB. The RWQCB can waive the filing of a report, but once a report is filed, the RWQCB must either waive or adopt water discharge requirements (WDRs). "Waters of the state" are defined as any surface water or groundwater, including saline waters, within the boundaries of the state.

2.2.6 California Fish and Game Code, Section 1600 – Streambed and Lake Alteration

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code, Section 1602, requires notification to CDFW of any proposed activity that may substantially modify a river, stream, or lake. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

- substantially divert or obstruct the natural flow of any river, stream or lake;

- substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The notification requirement applies to any river, stream, or lake, including those that are dry for periods of time (ephemeral/episodic) as well as those that flow year round (perennial). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. If notification is required and CDFW determines that proposed activity will substantially alter a river, stream, or lake, and may substantially adversely affect existing fish or wildlife resources, it will require that the parties enter into a Lake or Streambed Alteration Agreement (LSAA).

2.2.7 California Fish and Game Code, Section 3503.5 - Raptor Nests

Section 3503.5 of the Fish and Game Code makes it unlawful to take, possess, or destroy hawks or owls, unless permitted to do so, or to destroy the nest or eggs of any hawk or owl.

2.3 Local Regulations

2.3.1 City of Wheatland

The Wheatland Municipal Code does not include any ordinances that address permitting for or requirements directing the management or preservation of biological resources. As the CEQA lead agency, the City of Wheatland will review the Project for consistency with general plan policies that address biological resources.

2.3.2 Yuba County

The Yuba County Code of Ordinances does not include any ordinances that address permitting for or requirements directing the management or preservation of biological resources for projects like the Wheatland Regional Sewer Pipeline. Because the Project will require the construction of structures on land within unincorporated areas of Yuba County, the County will issue building and grading permits consistent with the County Code of Ordinances. The County will review applications for such authorizations for consistency with the Code of Ordinances, as appropriate.

3.0 METHODOLOGY

3.1 Literature Review

A list of special-status species with potential to occur within the Study Area was developed by conducting a query of the following databases:

- California Natural Diversity Database (CNDDDB) (CNDDDB 2022) query of the Study Area and a 5-mile radius around the Study Area;
- USFWS Information for Planning and Conservation (IpaC) (USFWS 2022) query for the Study Area (**Attachment A**);
- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2022) query of the “Wheatland, California” USGS topo quadrangle, and the eight surrounding quadrangles (**Attachment B**);
- Western Bat Working Group (WBWG) Species Matrix (WBWG 2022); and
- Cornell Laboratory of Ornithology’s eBird database (Cornell Laboratory of Ornithology 2022).

In addition, any special-status species that are known to occur in the region, but that were not identified in any of the above database searches were also analyzed for their potential to occur within the Project area.

For the purposes of this Biological Resources Assessment, special-status species is defined as those species that are:

- listed as threatened or endangered, or proposed or candidates for listing by the USFWS or National Marine Fisheries Service;
- listed as threatened or endangered and candidates for listing by CDFW;
- identified as Fully Protected species or species of special concern by CDFW;
- identified as Medium or High priority species by the WBWG; and
- plant species considered to be rare, threatened, or endangered in California by the CNPS and CDFW [California Rare Plant Rank (CRPR) 1, 2, and 3]:
 - CRPR 1A: Plants presumed extinct.
 - CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
 - CRPR 2A: Plants extirpated in California, but common elsewhere.
 - CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
 - CRPR 3: Plants about which the CNPS needs more information – a review list.

3.2 Field Surveys

Madrone biologist Matt Shaffer assessed the suitability of habitats on-site to support special-status species on 29 June 2021. The Study Area was comprehensively surveyed on foot by walking through all accessible areas. A list of all wildlife species observed during these field surveys is included as **Attachment C**.

Mr. Shaffer and Madrone biologist Daria Snider completed an aquatic resources delineation (ARD) of the Study Area in June and July 2021. Water features and data points were mapped in the field with a GPS unit capable of sub-meter accuracy (Arrow 100). Three-parameter data (vegetation, soils, and hydrology) were collected at each data point, documenting wetland/waters or upland status, as appropriate. The delineation was performed in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (USACE 2008a), and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b). The delineation map was

prepared in accordance with the *Updated Map and Drawing Standards for the South Pacific Division Regulatory Program* (USACE 2016a). The most recent National Wetland Plant List (Lichvar et al. 2016) was used to determine the wetland indicator status of plants observed in the Study Area. The Jepson eFlora (Jepson Flora Project 2022) was used for plant nomenclature, except where it conflicted with the nomenclature in the National Wetland Plant List, which was given priority on the data sheets. The City will submit the ARD to the USACE along with a request for a jurisdictional determination.

Finally, Ms. Snider conducted protocol-level rare plant surveys of the Study Area in June and July of 2021 and May of 2022 in accordance with the *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000), the *Botanical Survey Guidelines of the California Native Plant Society* (CNPS 2001), and *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). A report detailing the methods and results of this survey is included as **Attachment E**.

Note that some portions of the Study Area are within areas that were inaccessible during the aquatic resource delineation and rare plant surveys, including the Union Pacific Railroad right-of-way. Because access to these areas was limited or not available, aquatic resources were mapped using aerial photography or from adjacent accessible areas.

4.0 EXISTING CONDITIONS

The Study Area is located within and to the north and northeast of the City of Wheatland. The southern portion of the Study Area primarily runs along 6th Street, Spenceville Road, and Jasper Lane between urban and rural residences and agricultural fields (**Figure 3**). In the northern portion of the Study Area, the alignment runs west along farm roads through orchards and other agricultural fields and incorporates annual brome grassland and irrigated pastures. Ruderal and disturbed areas occur along the edges of fields and roadways.

The bulk of the aquatic resources mapped within the Study Area are roadside ditches along the roads, and irrigation ditches that service the agricultural fields in the area. Seasonal wetlands and seasonal wetland swales are present in the annual brome grasslands and hay fields. The Study Area crosses two major intermittent drainages: Dry Creek on Jasper Lane, and Best Slough in the northern portion of the Study Area.

The Study Area is extremely flat, with lower elevations along the Best Slough and Dry Creek channels. Elevations range from about 80 feet above mean sea level at Pump Station 1 to a high of about 110 feet at the Spenceville Road/Jasper Lane intersection near Pump Station 2. From Pump Station 2, the elevation gradually drops to a low of about 75 feet at Best Slough.

Surrounding land uses are largely consistent with land uses within the Study Area (rural residential and agriculture).

4.1 Terrestrial Vegetation Communities

Table 1 summarizes and Figure 3 shows the terrestrial vegetation communities in the Study Area. A brief description of each type follows.

Table 1. Vegetation Communities in the Study Area

Vegetation Community	Amount in Study Area (acres)
Annual brome grassland	66.2
Armenian blackberry bramble	1.8
Canarygrass grassland	1.7
Dirt road	3.1
Disced field	7.0
Eucalyptus woodland	2.3
Hay Field	15.2
Irrigated field crop	1.3
Irrigated pasture	17.4
Orchard	51.0
Perennial creek ¹	1.6
Rice field	11.1
Riparian woodland	0.7
Ruderal	8.2
Rural residential	12.6
Sandbar willow riparian scrub	0.5
Urban	30.1
Valley oak woodland	1.4
TOTAL²	233.2

¹ Listed and shown on Figure 3 for geographical reference. Discussed in the aquatic resources section (Section 4.3) below.

² Summation errors may occur due to rounding.

4.1.1 Annual Brome Grassland

The annual brome grasslands within the Study Area occur primarily in the northern portion of the Study Area. Dominant plant species in this community includes soft brome (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), medusahead grass (*Elymus caput-medusae*), wild oat (*Avena fatua*), perennial ryegrass (*Festuca perennis*), brome fescue (*F. bromoides*), rattail fescue (*F. myuros*), filaree (*Erodium botrys*), rose clover (*Trifolium hirtum*), and hairy hawkbit (*Leontodon saxatilis*).

4.1.2 Armenian Blackberry Bramble

The Armenian blackberry (*Rubus armeniacus*) brambles are monocultures of Armenian blackberry, as this species forms dense patches that shade out all other vegetation. These brambles occur primarily in the northern portion of the Study Area.

4.1.3 Canarygrass Grassland

An extensive floodplain area south of Best Slough in the northern portion of the Study Area is a canarygrass grassland. This area supports approximately 70% cover of Harding grass (*Phalaris aquatica*). Perennial ryegrass and broad-leaved pepperweed (*Lepidium latifolium*) co-dominate this area, and coyote brush (*Baccharis pilularis*) is scattered throughout. The density of these perennial species appears to preclude almost any other vegetation from establishing in this area.

4.1.4 Eucalyptus Woodland

A Eucalyptus woodland occurs along the eastern edge of an irrigation ditch in the northern portion of the Study Area. This woodland is a monoculture of red gum (*Eucalyptus camaldulensis*), as these trees produce chemicals that have allelopathic effects on other plant species.

4.1.5 Hay Field

The hay fields are similar to the annual brome grasslands but are dominated by perennial ryegrass and are mowed regularly.

4.1.6 Irrigated Pasture

The irrigated pastures are fields grazed by horses and cattle that are comprised of a variety of facultative plant species, such as perennial ryegrass (*Festuca perennis*), Baltic rush (*Juncus balticus*), and reed fescue (*Festuca arundinacea*).

4.1.7 Riparian Woodland

Riparian woodland occurs along the edges of portions of Best Slough and Dry Creek. This vegetation community is dominated by Oregon ash (*Fraxinus latifolia*), Fremont's cottonwood (*Populus fremontii*) and buttonwillow (*Cephalanthus occidentalis*). Other common plant species in this community are black willow (*Salix gooddingii*), poison-oak (*Toxicodendron diversilobum*), Armenian blackberry, and South American vervain (*Verbena bonariensis*). This community is considered a Sensitive Natural Community by CDFW (CDFW 2018).

4.1.8 Sandbar Willow Riparian Scrub

Sandbar willow (*Salix exigua*) riparian scrub occurs along the edges of some of the irrigation ditches in the northern portion of the Study Area. This community is almost entirely a monoculture of sandbar willow, but other plants common in the adjacent ditches also occur, including tall nutsedge (*Cyperus eragrostis*) and slender willowherb (*Epilobium ciliatum*).

4.1.9 Valley Oak Woodland

A few stands of Valley oak (*Quercus lobata*) woodland have been mapped within the Study Area. These occur both as narrow strips along the edges of roadways and as larger stands in more natural settings. This community is typically mature Valley oak trees with an annual brome grassland understory, with an occasional shrub layer and very little herbaceous vegetation. Common shrubs observed in the Valley oak woodland within the Study Area include California rose (*Rosa californica*), olive (*Olea europaea*), and Armenian blackberry (*Rubus armeniacus*). This community is considered a Sensitive Natural Community by CDFW (CDFW 2022).

4.1.10 High Intensity Agriculture

A substantial portion of the Study Area is comprised of high intensity agricultural crops, including rice fields, irrigated field crops, orchards, and disced fields. Rice fields are primarily occupied by rice (*Oryza sativa*), but also support a number of marsh species such as broad-leaved arrowhead (*Sagittaria latifolia*) and blue mud plantain (*Heteranthera limosa*), especially around the edges. The irrigated field crops were freshly planted in grass that was unidentifiable at the time of the 2021 survey, and aerial photograph review indicates that these fields are regularly irrigated. They appear heavily maintained and likely support a monoculture of the crop plant. The orchards within the Study Areas support almost exclusively the tree crop being grown with very little herbaceous weedy vegetation in the understory. The predominant tree crop is European plum (*Prunus domestica*), but there are also some English walnut (*Juglans regia*) orchards. Quite a few fields in the northern portion of the Study Area were disced and being graded during the field survey. During a subsequent survey, it appeared that these fields were being prepared to be planted with a tree crop, but no planting had occurred. All of these high intensity agricultural crops are heavily maintained, and almost entirely comprised of cultivated non-native plants.

4.1.11 Ruderal

Ruderal areas are areas dominated primarily by forbs that occur largely in the unmaintained areas adjacent to agricultural fields or roadways. Dominant plant species in the ruderal areas include Russian thistle (*Salsola tragus*), bristly ox-tongue (*Helminthotheca echioides*), cheese weed (*Malva neglecta*), toothpick weed (*Ammi visnaga*), panicked willow-herb (*Epilobium brachycarpum*), black mustard (*Brassica nigra*), wild radish (*Raphanus sativus*), prickly wild lettuce (*Lactuca serriola*), and grass species typical of the annual brome grasslands.

4.1.12 Developed

Developed areas include areas mapped as urban, rural residential, and dirt roads. These are areas of predominantly impermeable surfaces (pavement, buildings, etc.), regularly maintained dirt roadways, or areas of maintained landscaping adjacent to residential or commercial/industrial development. These areas generally do not support special-status species habitat, apart from foraging perches for raptors or possibly but unlikely, nesting in landscape trees.

4.2 Soils

The Natural Resources Conservation Service identifies six soil mapping units within the Study Area (NRCS 2022) (**Figure 4**): Hollenbeck silty clay loam, 0 to 1 percent slopes (131); Conejo loam, 0 to 1 percent slopes, MLRA 17 (141); Conejo loam, 0 to 2 percent slopes, MLRA 17 (142); Horst silt loam, 0 to 2 percent slopes (170); Redding gravelly loam, 0 to 8 percent slopes, MLRA 17 (208); and San Joaquin loam, 0 to 1 percent slopes (214). None of the soil mapping units are considered moderately or strongly alkaline; however, units (208) and (214) is somewhat acidic, and unit (131) has a high clay content. No soils derived from serpentine or gabbro occur within the Study Area.

4.3 Aquatic Resources

The Study Area supports perennial creeks, seasonal marsh, seasonal wetland, seasonal wetland swale, vernal pool, and three types of ditches (drainage ditch, irrigation ditch, and roadside ditch). **Figure 5** shows and **Table 2** summarizes the acreages of aquatic resources by type.

Table 2. Aquatic Resources in the Study Area

Aquatic Resource Type	Amount in Study Area (acres)
<i>Wetlands</i>	
Seasonal Marsh	0.199
Seasonal Wetland	1.170
Seasonal Wetland Swale	1.935
Vernal Pool	0.922
<i>Other Waters</i>	
Perennial Creek	1.624
Drainage Ditch	2.016
Irrigation Ditch	0.531
Roadside Ditch	2.724
TOTAL	11.121

4.3.1 Wetlands

4.3.1.1 Seasonal Marsh

Two areas of seasonal marsh totaling about 0.199 acre are present in the Study Area. One marsh area is adjacent to a drainage ditch that follows and abuts a section of railroad track at the edge of an irrigated pasture (Sheet 1 of **Figure 5**). The other marsh area is within an area of canarygrass grassland that is adjacent to a dirt road that travels between an established orchard and the grassland (Sheet 2 of **Figure 5**). These marsh features are dominated by perennial facultative wetland plant species such as Baltic rush and tall nutsedge.

4.3.1.2 Seasonal Wetland

A number of depressional seasonal wetlands totaling 1.170 acres are present in the Study Area. These features are concentrated in the northern part of the Study Area (Sheets 1 and 2 of **Figure 5**), but a single seasonal wetland is located at the site of Pump Station 2 and the proposed Public Works Corp Yard, in an area that is currently used for hay production (Sheet 7 of **Figure 5**). The seasonal wetlands are shallow depressional wetlands that are dominated by facultative grasses and forbs characteristic of disturbed areas, including perennial ryegrass, Mediterranean barley (*Hordeum marinum*), toad rush (*Juncus bufonius*), hyssop loosestrife (*Lythrum hyssopifolium*), coyote-thistle (*Eryngium castrense*), and shining peppergrass (*Lepidium nitidum*).

4.3.1.3 Seasonal Wetland Swale

About 1.935 acres of seasonal wetland swales are present in the Study Area. These features are concentrated at the northern end of the pipeline alignment (Sheets 1 and 2 of **Figure 5**). The seasonal wetland swales are dominated by similar plant species as the depressional seasonal wetlands but are gently sloping wetlands as opposed to confined depressions.

4.3.1.4 Vernal Pool

The Study Area supports a total of 0.922 acre of vernal pools. These features are concentrated on the north end of the alignment (Sheets 1 and 2 of **Figure 5**), but a single vernal pool is located at the site of Pump Station 2 and the proposed Corp Yard, in an area that is currently used for hay production (Sheet 7 of **Figure 5**). Vernal pools are seasonal wetlands underlain by a hardpan that results in a perched water table. This perched water table extends the hydroperiod of vernal pools, which results in a unique flora that occupies these features. The vernal pools within the Study Area are dominated by wavy-stemmed popcorn flower (*Plagiobothrys undulatus*), smooth goldfields (*Lasthenia glaberrima*), Great Valley coyote-thistle, and Mediterranean beard grass (*Polypogon maritimus*).

4.3.2 Other Waters

4.3.2.1 Perennial Creek

Two perennial creeks pass through the Study Area. These include Best Slough near the northern end of the pipeline alignment (Sheets 1 and 2 of **Figure 5**) and Dry Creek where the creek crosses under Jasper Lane (Sheet 6 of **Figure 5**). The perennial creeks are primarily unvegetated within the channel due to the depth of the water, but aquatic species, such as parrot's feather (*Myriophyllum aquaticum*), pond weed (*Potamogeton* species), and water primrose (*Ludwigia peploides*) occur sporadically. The banks support a diverse suite of perennial hydrophytes, such as rice cutgrass (*Leersia oryzoides*), smartweed (*Persicaria* species), Australian rush (*Juncus usitatus*), Santa Barbara sedge (*Carex barbarae*), and dallisgrass (*Paspalum dilatatum*).

4.3.2.2 Ditches

Three types of ditches occur within the Study Area. These include several segments of drainage ditch (about 2.016 acres total) that convey runoff from developed and agricultural areas; about 0.531 acre of irrigation ditches that convey irrigation water to local farming operations; and about 2.724 acres of roadside ditches that convey stormwater runoff along paved roadways. The roadside ditches are either unvegetated or occupied by weedy ruderal vegetation; these features are ephemeral and convey flow only during and immediately following rain events. The irrigation ditches are mostly unvegetated within the channel as there are either dry (when not conveying flow to fields) or full of several feet of water in the summer when they are conveying flow to the fields. The edges of the irrigation channels support weedy wetland vegetation, such as tall nutsedge, dallisgrass, willowherb (*Epilobium brachycarpum*), and smartweed. The drainage ditches drain both agricultural runoff and stormwater, and they are generally vegetated by marshy vegetation, such as creeping spikerush (*Eleocharis macrostachya*) and cattails (*Typha latifolia*), and bordered by Fremont's cottonwood, black willow (*Salix gooddingii*) and South American vervain (*Verbena bonariensis*).

5.0 RESULTS

5.1 Impact Assessment

5.1.1 Project Impact Areas

The Project would result in temporary as well as permanent impacts. Permanent impacts would be associated with the three pump stations and the Corp Yard. Because final locations for the pump station features have not been determined, this biological resources assessment assumes that the entire parcel (or section of parcel within the Study Area) upon which each of the pump stations is located would be permanently impacted. The Corp Yard would be co-located with Pump Station 3, so impacts associated with the Corp Yard will be assessed as part of Pump Station 3. Primary construction storage and staging areas would also be co-located with the pump stations, so impacts associated with storage and staging will be assessed as part of each pump station.

The remaining project impacts associated with pipeline installation are within defined limits of disturbance, as shown on **Figure 7**. Impacts along the pipeline alignment are considered to be temporary except where trees may need to be removed and in the case of vernal pool and seasonal wetland aquatic resources, which may be permanently impacted due to irreversible hydrologic interruption as a result of trenching. Topsoil and ditch spoil excavated during pipeline installation will be temporarily stockpiled within the limits of disturbance and used to backfill excavated areas.

Finally, impacts associated with decommissioning of the WWTP are considered permanent. Most of the property is developed and/or disturbed. The property is upslope of the Bear River, though a portion of the site is within the levee-protected channel of the river. It is within the Federal Emergency Management Agency (FEMA) Special Flood Hazard Area Zone AE.

5.1.2 Impact Criteria

Table 3 provides a list of special-status species that were evaluated, including their listing status, habitat associations, and their potential to occur in the Study Area. The following criteria were used to determine each species' potential for occurrence on the site:

- Present: Species occurs on the site based on CNDDDB records, and/or was observed on the site during field surveys.
- High: The site is within the known range of the species and suitable habitat exists.
- Moderate: The site is within the known range of the species and very limited suitable habitat exists.
- Low: The site is within the known range of the species and there is marginally suitable habitat or the species was not observed during protocol-level surveys conducted on-site.
- Absent/No Habitat Present: The site does not contain suitable habitat for the species, the species was not observed during protocol-level floristic surveys conducted on-site, or the site is outside the known range of the species.

Figure 6 shows CNDDDB plant and wildlife occurrences within five miles of the Study Area. The locations of special-status species observed in the Study Area during project-related surveys are shown on Figure 3. The following is a discussion of vegetation and aquatic resources present in the Study Area and special-status plant and animal species with potential to occur on the site.

Table 3. Special-Status Species with Potential to Occur within the Wheatland Regional Sewer Study Area

Scientific Name (Common Name)	Federal Status	State Status	Habitat Requirements	Potential for Occurrence
Plants				
<i>Astragalus tener</i> var. <i>ferrisiae</i> Ferris' milk-vetch	None	CRPR 1B.1	Vernally mesic alkaline areas within valley and foothill grassland.	No Habitat Present. Alkaline soils do not occur within the Study Area.
<i>Delphinium recurvatum</i> recurved larkspur	None	CRPR 1B.2	Poorly drained, fine alkaline soils in chenopod scrub, cismontane woodland, and valley and foothill grasslands between 10 and 2,400 feet.	No Habitat Present. Alkaline soils do not occur within the Study Area.
<i>Downingia pusilla</i> Dwarf downingia	None	CRPR 2B.2	Vernal pools and other depressional wetlands.	High. Suitable habitat occurs in vernal pools, seasonal wetlands, and seasonal wetland swales within the Study Area.
<i>Gratiola hetersepala</i> Boggs Lake hedge-hyssop	None	CE, CRPR 1B.2	Marshes and swamps (lake margins), Vernal pools.	High. Suitable habitat occurs in vernal pools and seasonal wetlands within the Study Area.
<i>Juncus leiospermus</i> var. <i>ahartii</i> Ahart's dwarf rush	None	CRPR 1B.2	Valley and foothill grassland (mesic), Vernal pools.	High. Suitable habitat occurs in vernal pools, seasonal wetlands, and seasonal wetland swales within the Study Area.
<i>Legenere limosa</i> Legenere	None	CRPR 1B.1	Vernal pools and other depressional wetlands.	High. Suitable habitat occurs in vernal pools, seasonal wetlands, and seasonal marshes within the Study Area.
<i>Monardella venosa</i> Veiny monardella	None	CRPR 1B.1	Cismontane woodland, Valley and foothill grassland.	No Habitat Present. This plant was last documented in the Marysville area in 1854, and it is considered possibly extirpated from the area (CNDDDB 2022).
<i>Navarretia myersii</i> ssp. <i>myersii</i> Pincushon navarretia	None	CRPR 1B.1	Vernal pools with acidic soils.	High. Suitable habitat occurs in vernal pools, seasonal wetlands, and seasonal wetland swales within the Study Area.
<i>Pseudobahia bahiifolia</i> Hartweg's golden sunburst	FE	CE, CRPR 1B.1	Cismontane woodland, Valley and foothill grassland on clay, often acidic soils.	No Habitat Present. This plant was last documented in the Marysville area in 1847, and it is considered extirpated from the area (CNDDDB 2022).
<i>Sagittaria sanfordii</i> Sanford's arrowhead	None	CRPR 1B.2	Marshes and swamps (assorted shallow freshwater).	High. Suitable habitat occurs in the creeks and ditches within the Study Area.
<i>Wolffia brasiliensis</i> Brazilian watermeal	None	CRPR 2B.3	Marshes and swamps (assorted shallow freshwater).	High. Suitable habitat occurs in the creeks and ditches within the Study Area.

Table 3. Special-Status Species with Potential to Occur within the Wheatland Regional Sewer Study Area

Scientific Name (Common Name)	Federal Status	State Status	Habitat Requirements	Potential for Occurrence
Invertebrates				
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT	--	Vernal pools.	High. Suitable habitat occurs in vernal pools and seasonal wetlands within the Study Area.
<i>Danaus plexippus</i> Monarch butterfly	FC	--	Areas with milkweed species for oviposition and larval feeding and a diversity of blooming nectar resources for adult feeding during migration and breeding.	Low. Two prominent clumps of milkweed (<i>Asclepias</i> species) plants were observed in the northern portion of the Study Area, but there is relatively low diversity of nectar resources due to the highly agricultural nature of the Study Area.
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	FT	--	Dependent upon elderberry (<i>Sambucus</i> species) shrubs as primary host species.	Low. A single elderberry shrub was documented in the Study Area in poor health. It was surveyed for exit holes of this species, and no exit holes were found.
<i>Lepidurus packardii</i> Vernal pool tadpole shrimp	FE	--	Vernal pools.	High. Suitable habitat occurs in vernal pools and seasonal wetlands within the Study Area.
Fish				
<i>Acipenser medirostris</i> Green sturgeon	FT	--	Spawns in the Sacramento, Feather, and Yuba Rivers. Spawning occurs primarily in cool sections of mainstem rivers in deep pools with substrate containing small to medium sized sand, gravel, cobble, or boulder.	Low. This species could migrate or disperse through the Study Area via Best Slough and Dry Creek. Both Best Slough and Dry Creek are tributary to the Bear River, within which the species has been recorded from its confluence with the Feather River to the Camp Far West dam.
<i>Hypomesus transpacificus</i> Delta smelt	FT	CE	Adults are found in the brackish open surface waters of the Delta and Suisun Bay. Though spawning has never been observed, it is believed to occur in tidally influenced sloughs and drainages on the freshwater side of the mixing zone.	No Habitat Present. No tidally influenced sloughs or drainages are present within the Study Area.

Table 3. Special-Status Species with Potential to Occur within the Wheatland Regional Sewer Study Area

Scientific Name (Common Name)	Federal Status	State Status	Habitat Requirements	Potential for Occurrence
<i>Oncorhynchus mykiss irideus</i> Steelhead - California Central Valley DPS	FT	--	This anadromous species returns to small, cool, well-oxygenated, freshwater streams tributaries to spawn.	Low. There is a low potential for the species to migrate or disperse through the Study Area via Best Slough and Dry Creek. Both Best Slough and Dry Creek are tributary to the Bear River, which provides spawning habitat for and is designated as critical habitat for this species (NMFS 2014).
<i>Oncorhynchus tshawytscha</i> Chinook salmon - Central Valley spring-run ESU	FT	CT	This anadromous species returns to cool, well-oxygenated, freshwater streams and rivers to spawn.	Low. There is a low potential for this species to migrate or disperse through the Study Area via Best Slough and Dry Creek. Both Best Slough and Dry Creek are tributary to the Bear River, which is tributary to the Sacramento River. A portion of the lower Bear River provides rearing and/or migration habitat for this species and is designated as critical habitat (NMFS 2014).
Amphibians				
<i>Rana draytonii</i> California red-legged frog	FT	CSC	Breeds in permanent to semi-permanent aquatic habitats including lakes, ponds, marshes, creeks, and other drainages.	No Habitat Present. No documented occurrences of this species within five miles of the Study Area. Aquatic resources within the Study Area do not provide suitable breeding habitat for the species primarily due to the extended hydroperiod and presence of predators (bullfrogs and fish). Area is well outside of designated critical habitat for this species.
<i>Spea hammondi</i> Western spadefoot	--	CSC	Breeds in seasonal wetlands, vernal pools, and ephemeral stock ponds. Upland habitat typically consists of annual grassland or oak savannah with sandy or loose soils.	Low. Suitable aquatic habitat occurs in vernal pools within the Study Area. Suitable upland habitat in adjacent grasslands on sandy soils is quite limited, minimizing the potential for this species to occur within the Study Area.

Table 3. Special-Status Species with Potential to Occur within the Wheatland Regional Sewer Study Area

Scientific Name (Common Name)	Federal Status	State Status	Habitat Requirements	Potential for Occurrence
Reptiles				
<i>Actinemys marmorata</i> Western pond turtle	--	CSC	Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	High. Best Slough, Dry Creek, and drainage and irrigation ditches in the Study Area represent suitable aquatic habitat for the species. Adjacent non-urban uplands represent suitable upland habitat for the species.
<i>Thamnophis gigas</i> Giant garter snake	FT	CT	Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	Low. Best Slough, Dry Creek, and drainage and irrigation ditches in the Study Area represent marginal aquatic habitat for the species. Adjacent non-urban uplands within 300 feet of aquatic habitat represent marginal upland habitat for the species.
Birds				
<i>Agelaius tricolor</i> Tricolored blackbird	--	CT	Colonial nester in cattails, bulrush, or blackberries associated with marsh habitats.	Present. Patches of cattails within irrigation ditches and extensive Armenian blackberry brambles in the Study Area provide habitat for the species. Open areas adjacent to the Study Area and provide suitable foraging habitat for this species. Individuals observed during field surveys of the Study Area. No nesting individuals were observed.
<i>Athene cunicularia</i> Burrowing owl	--	CSC	Nests in abandoned ground squirrel burrows associated with open grassland habitats.	Moderate. Very few ground squirrel burrows were observed within the Study Area; however, occasional burrows and debris in annual grasslands and other open areas could provide habitat.

Table 3. Special-Status Species with Potential to Occur within the Wheatland Regional Sewer Study Area

Scientific Name (Common Name)	Federal Status	State Status	Habitat Requirements	Potential for Occurrence
<i>Buteo swainsoni</i> Swainson's hawk	--	CT	Nests in large trees, preferably in riparian areas. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors.	Present. Trees throughout the Study Area provide suitable nesting habitat for Swainson's hawk; and the annual brome grasslands, hay fields, irrigated pastures, and fields supporting low-growing crops represent suitable foraging habitat for the species. This species was observed perched and flying in the Study Area during surveys in 2021.
<i>Circus hudsonius</i> Northern harrier	--	CSC	Nests in emergent wetland/marsh, open grasslands, or savannah habitats. Forages in open areas such as marshes, agricultural fields, and grasslands.	High. Nesting and foraging habitat is present within annual brome grasslands, hay fields, irrigated pastures, and rice fields throughout the Study Area.
<i>Elanus leucurus</i> White-tailed kite	--	CFP	Open grasslands, fields, and meadows are used for foraging. Isolated trees in close proximity to foraging habitat are used for perching and nesting.	Present. Trees throughout the Study Area provide suitable nesting habitat for white-tailed kite; and the annual brome grasslands, hay fields, irrigated pastures, and fields supporting low-growing crops represent suitable foraging habitat for the species. This species was observed flying in the Study Area during surveys in 2021.
<i>Lanius ludovicianus</i> Loggerhead shrike	--	CSC	Open grasslands, fields, and meadows are used for foraging. Isolated trees and shrubs in close proximity to foraging habitat are used for perching and nesting.	High. Nesting and foraging habitat is present in small trees and shrubs within annual brome grasslands, hay fields, irrigated pastures, and rice fields throughout the Study Area.
<i>Laterallus jamaicensis coturniculus</i> California black rail	--	CT	Nests and forages in salt, brackish, and fresh marshes with abundant vegetative cover.	No Habitat Present. This species requires extensive, dense marshes, and the marshes within the study area are quite small, fragmented, and sparse.

Table 3. Special-Status Species with Potential to Occur within the Wheatland Regional Sewer Study Area

Scientific Name (Common Name)	Federal Status	State Status	Habitat Requirements	Potential for Occurrence
<i>Melospiza melodia</i> Song sparrow 'Modesto' population	--	CSC	Nest in emergent freshwater marshes dominated by tules and cattails as well as riparian willow thickets. This species also nests in riparian forests of valley oak with a blackberry understory, along vegetated irrigation canals and levees, and in recently planted valley oak restoration sites (Shuford and Gardali 2008).	High. Suitable habitat is present along the larger ditches and in riparian woodlands along Best Slough and Dry Creek.
<i>Riparia riparia</i> Bank swallow	--	CT	Colonial nester preferring vertical cliffs and banks with fine textured/sandy soils associated with riparian zones along streams, rivers, and lakes.	No Habitat Present. No suitable sandy cliffs or river banks are present along waterways in the Study Area.
Mammals				
<i>Antrozous pallidus</i> Pallid bat	--	CSC	Roosts in crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating bark, deciduous trees in riparian areas, and fruit trees in orchards), bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings (WBWG 2022).	High. Suitable roosting habitat for this species is present in trees throughout the Study Area.
<i>Lasiurus blossevillei</i> Western red bat	--	CSC	Roosts primarily in the foliage of trees or shrubs (WBWG 2018). Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores) (WBWG 2022).	High. Suitable roosting habitat for this species is present in trees throughout the Study Area.
<i>Lasiurus cinereus</i> Hoary bat	--	CSC	Roosts in dense foliage of medium to large trees proximate to water.	High. Suitable roosting habitat for this species is present in trees adjacent to Dry Creek within the Study Area.
<i>Myotis yumanensis</i> Yuma myotis	--	CSC	Roosts in buildings, mines, caves, or crevices proximate to water.	Low. Rural residential buildings near Dry Creek and Best Slough may provide roosting habitat for this species. The Study Area does not support mines, caves, or crevices proximate to water.

Table 3. Special-Status Species with Potential to Occur within the Wheatland Regional Sewer Study Area

Scientific Name (Common Name)	Federal Status	State Status	Habitat Requirements	Potential for Occurrence
<u>Status Codes:</u>				
CFP - CDFW Fully Protected		CE - California Endangered		
CRPR - California Rare Plant Rank		FE - Federally Endangered		
CSC - CDFW Species of Concern		FT - Federally Threatened		
CT - California Threatened		FC - Federal Candidate		

5.2 Vegetation Communities

Construction of the three pump stations and the Corp Yard would result in about 30.1 acres of permanent impacts to vegetation communities. Table 4 summarizes and Figure 7 shows the estimated permanent impact acreages by vegetation community type.

Table 4. Permanent Vegetation Community Impacts Associated with Construction of Pump Stations and Corp Yard

Vegetation Community	Impact Area (acres)
Annual brome grassland	0.5
Dirt road	0.1
Hay field	15.2
Irrigated pasture	9.1
Ruderal	4.8
Urban	0.2
Valley oak woodland	0.2
Total	30.1

Pipeline installation may result in permanent impacts to vegetation communities as a result of tree removal, while temporary vegetation community impacts may result from grading and clearing the pipeline right-of-way, temporary stockpiling of topsoil and ditch spoil, and equipment use in the defined area of disturbance. The number, type, and/or size of trees that may need to be removed is unknown.

Table 5 summarizes and Figure 7 shows the expected temporary vegetation community impacts based on the current pipeline alignment.

Table 5. Temporary Vegetation Community Impacts Associated with Construction of the Pipeline Alignment

Aquatic Resource Type	Impact Area (acres)
Annual brome grassland	3.1
Canarygrass grassland	0.1
Dirt road	1.4
Disced field	1.3
Eucalyptus woodland	0.3
Irrigated field crop	0.5
Orchard	10.7
Rice fields	1.9
Ruderal	0.9
Rural residential	1.0
Urban	8.8
Valley oak woodland ¹	0.2
Total	30.2

¹ Applies to the community type only; the number, type, and location of trees that may be removed have yet to be determined. Such removals may be considered permanent impacts.

Temporary disturbance areas within or near sensitive communities such as Valley oak woodland would be limited to designated work areas while the extent of temporary disturbance areas in developed portions of the Study Area (such as along roads) may be more permissive if sensitive resources are not present.

5.3 Aquatic Resources

A total of 0.332 acre of aquatic resources are within the footprints of the three pump stations. **Table 6** summarizes and **Figure 7** shows these impact areas and location of potentially impacted features.

Table 6. Aquatic Resource Impacts Associated with Construction of the Pump Stations and Corp Yard

Aquatic Resource Type	Impact Area (acres)
<i>Wetlands</i>	
Seasonal wetland	0.008
Vernal pool	0.006
<i>Other Waters</i>	
Drainage ditch	0.0268
Roadside ditch	0.050
Total	0.332

Seasonal wetland and vernal pool impacts would occur as a result of developing Pump Station 2 and the Corp Yard. The drainage ditch impacts would occur as a result of Pump Station 1 construction and roadside ditch impacts would occur as a result of developing Pump Stations 2 and 3. All of these impacts would be permanent.

Installation of the pipeline between the pump stations would result in a total of 0.124 acres of aquatic resource impacts, including 0.081 acre of wetlands (seasonal wetland and vernal pool) and 0.043 acre of other waters (drainage, irrigation, and roadside ditches). Impacts to vernal pools and seasonal wetlands are considered permanent, while impacts to the other waters (ditches) are considered to be temporary. **Table 7** summarizes the aquatic resource impacts by resource type along the pipeline alignment.

Table 7. Aquatic Resource Impacts Along the Pipeline Alignment

Aquatic Resource Type	Impact Area (acres)
<i>Wetlands</i>	
Seasonal wetland	0.042
Vernal pool	0.039
<i>Other Waters</i>	
Drainage ditch	0.001
Irrigation ditch	<0.001
Roadside ditch	0.042
Total	0.124

Impacts would occur as a result of grading and clearing the pipeline right-of-way, trenching, temporary stockpiling of topsoil and ditch spoil, and equipment use in adjacent work areas.

The Dry Creek and Best Slough crossings (jack-and-bore and HDD, respectively) would not result in direct impacts to the creeks.

5.4 Special-Status Plants

Special-status plant surveys of accessible portions the Study Area in spring 2021 and spring 2022 did not locate any special-status plants within the survey area. However, because portions of the Study Area were inaccessible during the surveys (Union Pacific Railroad right-of-way and properties to which access was not granted), it is possible that special-status plants may occur in these non-surveyed areas. If any of these areas are within the final pipeline alignment, the City will need to obtain permission to access and survey for special-status plant species prior to construction. Based on a literature review and local knowledge, seven special-status plant species have the potential to occur within these areas (Table 3). Detailed results of the final special-status plant survey report will be provided under separate cover.

5.5 Invertebrates

5.5.1 Vernal Pool Branchiopods

The seasonal wetlands and vernal pools provide suitable habitat for the federally-threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and federally-endangered vernal pool tadpole shrimp (*Lepidurus packardii*). The life cycles of both vernal pool fairy shrimp and vernal pool tadpole shrimp are adapted to seasonally inundated features such as vernal pools, seasonal wetlands, and seasonal wetland swales. Fairy shrimp and tadpole shrimp embryos survive the dry season in cyst form. Cysts “hatch” soon after pools become inundated during the wet season.

The CNDDDB lists several occurrences of vernal pool fairy shrimp and vernal pool tadpole shrimp within five miles of the Study Area, with the most recent occurrences recorded in 2016. Many of these known populations are present in permanently preserved areas (CNDDDB 2022). The potential for occurrence of vernal pool fairy shrimp and vernal pool tadpole shrimp is high due to the presence of suitable habitat within the Study Area.

The Project will result in permanent impacts to a total 0.095 acre of suitable vernal pool branchiopod habitat (0.050 acre of seasonal wetland and 0.045 acre of vernal pool).

5.5.2 Valley Elderberry Longhorn Beetle

The federally threatened Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) may occur in the Study Area if the species’ host plant (*Sambucus* sp.) is present and provides suitable habitat. The Valley elderberry longhorn beetle is completely dependent on this host plant, which occurs in riparian and

other woodland communities in California's Central Valley and the associated foothills (USFWS 1999). Female beetles lay their eggs in crevices on the stems or on the leaves of living elderberry plants. When the eggs hatch, larvae bore into the stems. The larval stages last for one to two years. The fifth instar larvae create emergence holes in the stems and then plug the holes and remain in the stems through pupation (Talley 2003). Adults emerge through the emergence holes from late March through June. The short-lived adult beetles forage on leaves and flowers of elderberry shrubs.

Surveys of the Study Area located a single elderberry shrub in the northern part of the pipeline alignment, but the shrub was in poor health and no Valley elderberry longhorn beetle exit holes were observed. **Figure 3** shows the location of this elderberry shrub. The CNDDDB lists four presumed extant occurrences of this species within five miles of the Study Area, the most recent of which was recorded in 2011 (CNDDDB 2022).

The elderberry shrub is well outside of the proposed limits of disturbance, and as a result, Valley elderberry longhorn beetle is not expected to be impacted by the Project.

5.5.3 Monarch

The monarch butterfly (*Danaus plexippus*), a candidate for listing under the FESA, occupies and breeds in areas near overwintering sites throughout the year, as well as dispersing over multiple generations to occupy and breed throughout the state in the spring through fall (USFWS 2020). Adult monarch butterflies require a diversity of blooming nectar resources during breeding and migration (spring through fall). Monarchs also need milkweed (for both oviposition and larval feeding) embedded within this diverse nectaring habitat.

The Study Area supports two clumps of woolly milkweed (*Asclepias eriocarpa*) plants in the northern portion of the Study Area, but there is relatively low diversity of nectar resources due to the agricultural nature of the Study Area. The likelihood of this Monarch utilizing the Study Area is low.

Neither of the milkweed patches is within or adjacent to the proposed limits of disturbance, and as a result, monarch is not expected to be impacted by the Project.

5.6 Fish

5.6.1 Green Sturgeon

The green sturgeon (*Acipenser medirostris*) is listed as threatened under the FESA. This species spawns in the Sacramento, Feather, and Yuba Rivers. Green sturgeon has not been documented spawning in the Bear River but is known to occur from the river's confluence with the Feather River upstream to the Camp Far West dam, which is upstream of the Study Area (CNDDDB 2022).

The CNDDDB identifies one occurrence of this species in the vicinity of the Study Area, in the lower Bear River (Occurrence 4; CNDDDB 2022). Perennial creeks in the Study Area are tributary to the Bear River, and the

species could occur in these tributaries. However, because the Project would avoid direct impacts to Dry Creek, Best Slough, and the Bear River, it would not affect green sturgeon.

5.6.2 Chinook Salmon – Central Valley Spring Run

Perennial creeks in the Study Area are tributary to the Bear River. The National Marine Fisheries Service (NMFS) identifies the lower Bear River as critical habitat for the anadromous state- and federally listed threatened Chinook salmon – Central Valley Spring Run ESU (*Oncorhynchus tshawytscha*) (NMFS 2014).

The CNDDDB does not identify any occurrences of this species within the Study Area. However, the lower Bear River provides rearing and/or migration habitat for chinook salmon and this species could use Best Slough and/or Dry Creek. The potential for this species to occur in the Study Area is low.

Because the Project would avoid direct impacts to Dry Creek, Best Slough, and the Bear River, it would not affect Central Valley spring run Chinook salmon.

5.6.3 Steelhead – Central Valley DPS

NMFS identifies the lower Bear River as critical habitat for the anadromous Steelhead – Central Valley DPS (*Oncorhynchus mykiss irideus*), which is federally listed as threatened (NMFS 2014).

The CNDDDB does not identify any occurrences of this species within the Study Area. However, the Bear River is known to support spawning habitat for steelhead, and it is possible that steelhead could use Best Slough and/or Dry Creek within the Study Area. The potential for this species to occur in the Study Area is low.

Because the Project would avoid direct impacts to Dry Creek, Best Slough, and the Bear River, it would not affect Central Valley steelhead.

5.7 Amphibians

5.7.1 Western Spadefoot

The Study Area has the potential to support western spadefoot (*Spea hammondi*), a California species of special concern. This amphibian is nocturnal and forages in grassland, scrub, and chaparral habitats for a variety of invertebrates such as insects and worms. This species breeds from January to May in vernal pools, pools in ephemeral stream courses, and other fish-free water features. Females commonly lay more than 500 eggs in one season. The tadpoles develop in 3 to 11 weeks and must complete their meta-morphosis before the temporary pools dry. breeds in seasonal wetlands, vernal pools, and ephemeral stock ponds. Upland habitat typically consists of annual grassland or oak savannah with sandy or loose soils.

Suitable aquatic habitat occurs in vernal pools within the Study Area. Suitable upland habitat in adjacent grasslands on sandy soils is quite limited, minimizing the potential for this species to occur within the Study Area. The potential for this species to occur in the Study Area is low.

This species could be directly impacted if it is present in the 0.045 acre of vernal pools present on the pump station sites and within the pipeline limits of disturbance.

5.8 Reptiles

5.8.1 Western Pond Turtle

The western pond turtle (*Actinemys marmorata*) is a California species of special concern. Favored habitats include streams, large rivers and canals with slow-moving water, aquatic vegetation, and open basking sites. Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates such as insects and worms, but will also consume small fish, frogs, mammals, and some plants. Western pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid- to late spring in adjacent open grasslands or sandy banks.

This species has been recorded within five miles of the Study Area, in Best Slough upstream and in Dry Creek downstream of the Study Area (CNDDDB 2022). Suitable aquatic habitat for this species occurs in drainage and irrigation ditches as well as Best Slough and Dry Creek. Uplands within the vicinity of aquatic habitat may provide suitable upland habitat for western pond turtle. Given the type and quality of habitat in the Study Area, the potential for occurrence of this species is high.

This species could be affected if it is present in the 0.269 acre of drainage ditch or <0.001 acre of irrigation ditch features that would be directly or temporarily impacted during construction, or in uplands immediately surrounding Best Slough or other aquatic habitat. As proposed, the Dry Creek crossing would use an approximate 1,300 foot jack-and-bore (with the northern bore pit approximately 600 feet away and the southern bore pit approximately 700 feet way from the creek), so impacts to adjacent upland habitat for western pond turtle at Dry Creek are not expected. Both bore pits for the Best Slough Crossing are within 100 feet of Best Slough.

5.8.2 Giant Garter Snake

Giant garter snake (*Thamnophis gigas*) is listed as threatened under the state and federal ESAs. This species is generally associated with larger canals, irrigation ditches, and other semi-permanent to permanent aquatic sites with slow moving water and an abundance of emergent vegetation.

Best Slough, Dry Creek, and drainage and irrigation ditches in the Study Area provide marginally suitable habitat for giant garter snake. The CNDDDB lists a single occurrence of this species within five miles of the Study Area (Occurrence 108), but this record is incomplete and notes the species had been sighted there

prior to but not during 1986-87 targeted surveys of the area. This occurrence is south of and near the Bear River just east of Highway 70 near the Yuba-Sutter County line, downstream of the Study Area. Given the type and quality of habitat in the Study Area, the potential for occurrence of this species is low.

This species could be affected if it is present in the 0.269 acre of drainage ditch or <0.001 acre of irrigation ditch features that would be directly or temporarily impacted during construction. It could also be impacted if upland areas within 300 feet of impacted drainage and irrigation ditches or Best Slough are disturbed during construction. As noted in **Section 5.8.1** above, the Dry Creek crossing bore pits would be more than 300 feet from the drainage, but the Best Slough bore pits would be within 100 feet of the slough.

5.9 Birds

5.9.1 Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*), which is currently in decline throughout the state, is listed as threatened under the CESA. Historically, colonies were established in freshwater marshes dominated by cattails (*Typha* spp.) and bulrushes (*Scirpus* or *Schoenoplectus* spp.). More recently, this species has utilized non-native mustards (*Brassica* spp.), blackberries (*Rubus* spp.), thistles (*Cirsium* spp.), and mallows (*Malva* spp.) as nesting substrate. Since the 1980s, the largest colonies have been observed in the San Joaquin Valley in cultivated fields of triticale, which is a hybrid of wheat and rye often grown as livestock fodder. This current trend of nesting in active agricultural fields has further imperiled the species as nestlings typically have not fledged by the time the triticale is harvested.

Tricolored blackbirds were present in the Study Area at the time of Madrone's fieldwork. A flock of about 20 tricolored blackbirds was observed perched and calling in an area of cattails adjacent to an agricultural area in the center portion of the alignment and several others were heard calling from eucalyptus trees in the northern portion of the Study Area. **Figure 3** shows the locations of these observations.

This species could be impacted if it is nesting in or immediately adjacent to the limits of disturbance for the pump station sites or pipeline alignment during construction and construction activity results in the disturbance of active nests and/or loss of nesting habitat.

5.9.2 Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a California species of special concern. This species typically inhabits dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel, but may also use man-made structures such as culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. The breeding season extends from February 1 through August 31 (CBOC 1993, CDFG 2012).

Very few ground squirrel burrows were observed during surveys of the Study Area. However, occasional burrows and debris in annual grasslands and other open areas could provide habitat for this species. The CNDDDB lists a single occurrence of burrowing owl within five miles of the Study Area, near the town of Sheridan. The Cornell Lab of Ornithology database (eBird) lists one active burrow on private property north of the northern end of this study area (Cornell Lab 2022). There is a moderate likelihood for this species to occur in the Study Area.

This species could be impacted if it is present in suitable habitats (annual brome grassland and other open areas) at the pump station sites or within the pipeline limits of disturbance and/or in immediately adjacent areas and construction activity results direct effects to owls in occupied burrows.

5.9.3 Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is listed as threatened under CESA. Breeding pairs typically nest in tall trees associated with riparian corridors, and forage in grassland, irrigated pasture, and cropland with a high density of rodents. The Central Valley populations breed and nest in the late spring through early summer before migrating to Central and South America for the winter (Shuford and Gardali 2008).

Swainson's hawks were observed in two locations during surveys of the Study Area. A Swainson's hawk was observed soaring over an area of annual brome grassland in the northern portion of the pipeline alignment and a second was observed perched and calling from a eucalyptus tree along Dry Creek where it crosses under Jasper Lane. **Figure 3** shows the locations of these observations. Trees within the Study Area provide suitable nesting habitat for this species.

Construction could directly impact this species if it is nesting within or near the limits of disturbance and construction activity results in the loss of a nest tree(s) or nest abandonment. Construction activity would result in the loss of suitable foraging habitat at the pump stations (0.5 acre of annual brome grassland, 9.1 acres of irrigated pasture, and 15.2 acres of hay field).

5.9.4 Northern Harrier

The northern harrier (*Circus hudsonius*) is a California species of special concern. This raptor is known to nest within the Central Valley, along the Pacific Coast, and in northeastern California. It is a ground nesting species, and typically utilizes emergent wetland/marsh, open grasslands, or savannah habitats. Foraging occurs within a variety of open habitats such as marshes, agricultural fields, and grasslands (Shuford and Gardali 2008).

Nesting and foraging habitat for northern harrier is present within annual brome grasslands, hay fields, irrigated pastures, and rice fields throughout the Study Area. The CNDDDB lists one occurrence of this species within five miles of the Study Area. The Cornell eBird database lists several recent records for this species along the pipeline alignment (Cornell Lab 2022). The potential for occurrence of this species in the Study Area is high.

Construction could directly impact this species if it is nesting within or near the limits of disturbance and construction activity results in the loss of a nest tree(s) or nest abandonment. Construction activity would result in the loss of suitable foraging habitat at the pump stations (0.5 acre of annual brome grassland, 9.1 acres of irrigated pasture, and 15.2 acres of hay field).

5.9.5 White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is a CDFW fully protected species. This species is a year-round resident in the Central Valley and is primarily found in or near foraging areas such as open grasslands, meadows, farmlands, savannahs, and emergent wetlands. White-tailed kites typically nest from March through June in trees within riparian, oak woodland, and savannah habitats of the Central Valley and Coast Range (Shuford and Gardali 2008).

A white-tailed kite was observed in the Study Area during surveys in 2021. Trees throughout the Study Area provide suitable nesting habitat for white-tailed kite, and the annual brome grasslands, hay fields, irrigated pastures, and fields supporting low-growing crops represent suitable foraging habitat.

Construction could directly impact this species if it is nesting within or near the limits of disturbance and construction activity results in the loss of a nest tree(s) or nest abandonment. Construction activity would result in the loss of suitable foraging habitat at the pump stations (0.5 acre of annual brome grassland, 9.1 acres of irrigated pasture, and 15.2 acres of hay field).

5.9.6 Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is a California species of special concern. Loggerhead shrikes nest in small trees and shrubs in woodland and savannah vegetation communities, and forage in open habitats throughout California (Shuford and Gardali 2008). The nesting season ranges from March through June.

Small trees and shrubs within annual brome grasslands, hay fields, irrigated pastures, and rice fields in the Study Area provide nesting and foraging habitat for this species. The CNDDDB does not show any occurrences of loggerhead shrike in the Study Area, but the Cornell eBird database shows recent sightings along and near the pipeline alignment (Cornell Lab 2022). The potential for the species to occur in the Study Area is high.

Construction could directly impact this species if it is nesting within or near the limits of disturbance and construction activity results in the loss of a nest tree(s) or nest abandonment. Construction activity would result in the loss of suitable foraging habitat at the pump stations (0.5 acre of annual brome grassland, 9.1 acres of irrigated pasture, and 15.2 acres of hay field).

5.9.10 Song Sparrow “Modesto” Population

The “Modesto” population of song sparrow (*Melospiza melodia*) is a California species of special concern. The Modesto song sparrow is endemic to California, where it resides only in the north-central portion of the Central Valley (Shuford and Gardali 2008). The highest densities of this species occur in the Butte Sink area of the Sacramento Valley and in the Sacramento–San Joaquin River Delta. This species prefers freshwater marshes dominated by tules (*Scirpus* spp) and cattails (*Typha* spp.) as well as riparian willow (*Salix* spp.) thickets. The species also nests in riparian forests of Valley oak having a sufficient understory of blackberry and along vegetated irrigation canals and levees (Shuford and Gardali 2008).

Riparian woodlands adjacent to perennial creeks and vegetated areas along the larger ditches within the Study Area provide suitable habitat for this species. The CNDDDB includes one record of Modesto song sparrow within five miles of the Study Area (Occurrence #86), observed in 2005. This observation included at least three breeding pairs along a slough within a designated preserve area. The potential for this species to occur in the Study Area is high.

Construction could directly impact this species if it is nesting within or near the limits of disturbance for the pump stations or pipeline alignment and construction activity results in the loss of nesting habitat or nest disturbance and subsequent nest abandonment.

5.10 Mammals

Though the CNDDDB does not identify any special-status mammals within five miles of the Study Area, the Study Area provides suitable habitat for four special-status bats, all of which are California species of special concern. These include pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillii*), hoary bat (*Lasiurus cinereus*), and Yuma myotis (*Myotis yumanensis*).

Pallid bat, western red bat, and hoary bat could use large *Eucalyptus* trees in the northern portion of the Study Area or Valley oak woodlands in the southern part of the Study Area for roosting. The potential for these species to occur in the Study Area is high.

Yuma myotis prefers roosting in buildings or crevices proximate to water; this species could use developed areas adjacent to the alignment. The potential for Yuma myotis to occur in the Study Area is low.

The Project could directly impact special-status bat species if they are using trees in the Study Area. Impacts could result from removal of occupied roosting habitat or disturbance near occupied roosting habitat.

5.11 Wheatland WWTP Decommissioning

As noted in **Section 1.1, Project Description**, Wheatland WWTP decommissioning is part of the Overall Project. Because detailed information about activity associated with decommissioning activity is unknown

at this time, additional surveys and analysis would be required to determine the type and amount/level of impacts associated with this portion of the Overall Project.

The City's goal is to decommission the Wheatland WWTP in a manner that would disturb the WWTP basins and levee as minimally as possible. This would include removing an approximately 175-foot-long section of secondary effluent discharge pipe in the levee that currently connects the WWTP to the basins and then backfilling the trench. Next, the existing constructed dirt berm around southern end of infiltration basins would be breached to allow water to flow through the basin during storm events that may cause the Bear River to rise to the point of inundating the basin area(s). Impacts associated with this activity would result in temporary disturbance to the levee and a permanent impact to the constructed berm. The infiltration basins are within the Bear River floodplain.

The Wheatland WWTP on-site habitats have not been mapped, so it is unknown if the site supports suitable habitat for special-status plants or special-status wildlife species or their habitat. Detailed site surveys are required to identify potential impacts to special-status species, sensitive natural communities, or aquatic resources.

Work proximate to the Wheatland WWTP footprint may affect resources associated with the Bear River. Such work may be subject to regulation under Section 1600 of the Fish and Game Code.

6.0 RECOMMENDED MITIGATION FOR IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

We recommend the following mitigation measures for impacts to sensitive biological resources within the Study Area.

6.1 Vegetation Communities

Construction of the pump stations will result in permanent impacts to 5.1 acres of urbanized/developed vegetation community types (dirt road, ruderal, and urban), 24.3 acres of agricultural vegetation types (hay field and irrigated pasture), 0.5 acre of annual brome grassland, and 0.2 acre of Valley oak woodland. Approximately 0.2 acre of Valley oak woodland is also present within the area of disturbance along the pipeline alignment and may be subject to impacts during construction. Valley oak woodland is considered a Sensitive Natural Community by CDFW.

No mitigation is proposed for permanent and/or temporary impacts to urbanized/developed areas (dirt roads, ruderal, rural residential, and urban vegetation community types). Because agricultural areas and annual brome grassland vegetation are common throughout the region, no mitigation for the loss of these vegetation community types is recommended. The permanent loss of these types of communities is not expected to adversely affect special status species that may use them.

The City does not currently have an ordinance that would require mitigation for the loss of individual oak trees or areas of Valley oak woodland. Because it is designated as a Sensitive Natural Community, Valley

oak woodland may be regulated by CDFW. It is likely that the Project will require a Streambed Alteration Agreement, and CDFW may choose to address potential impacts to and mitigation for Valley oak woodland areas during that process. No mitigation for Valley oak woodland impacts is proposed.

Construction activity will temporarily disturb vegetation communities along the pipeline alignment. Sensitive natural vegetation communities that may be impacted, such as Valley oak woodland, may be subject to regulation by CDFW. With the exception of potential tree removals, disturbed areas will be restored to pre-construction conditions. CDFW may choose to address potential temporary impacts to Sensitive Natural Communities through the Streambed Alteration Agreement process. No additional mitigation is proposed.

6.2 Aquatic Resources

Construction of the pump stations will impact 0.332 acre of aquatic resources, including 0.014 acre of wetlands. Installation of the pipeline between the pump stations will result in impacts to 0.124 acre of aquatic resources, including 0.081 acre of wetlands. To compensate for the expected impacts, the following measures shall be applied.

- Portions of the defined area of disturbance adjacent to the Union Pacific Railroad right-of-way are within areas that were inaccessible at the time of the aquatic resources delineation. As proposed, the pipeline will be installed under the railroad right-of-way using jack-and-bore and may avoid direct impacts to the unsurveyed areas. However, if the final pipeline design requires disturbance of any of the unsurveyed areas during construction, the City will obtain permission to access the areas and map aquatic resources that could be affected during project construction. The City will submit a supplemental aquatic resources delineation report and request for verification to the USACE for these areas.
- The City shall apply for a Section 404 permit from the U.S. Army Corps of Engineers. Waters of the U.S. that will be impacted shall be replaced or rehabilitated on a “no-net-loss” basis. Compensatory mitigation in the form of habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods acceptable to the USACE.
- The City shall apply for a Section 401 water quality certification from the RWQCB and adhere to the certification conditions.
- Because the Project requires a jack-and-bore crossing of Dry Creek and HDD crossing of Best Slough, it may require a LSAA under Section 1600 of the Fish and Game Code. As such, the City shall notify the CDFW consistent with the requirements Section 1600 and abide by the conditions of any LSAA issued by CDFW.

6.3 Special-Status Plants

Special-status plant surveys of accessible portions of the Study Area in May and June of 2021 and May 2022 were negative. However, inaccessible portions of the Study Area within the Union Pacific Railroad right-of-

way were not surveyed, and the unsurveyed areas could support special-status plants. As proposed, the pipeline will be installed under the railroad right-of-way using jack-and-bore and may avoid direct impacts to the unsurveyed areas. However, in the event construction would directly affect any of the unsurveyed areas, the following measure shall be applied.

- If construction will directly impact portions of the Study Area that were inaccessible during the May 2022 special-status plant survey, the City will obtain permission to access and survey the areas that could be affected. If any special-status plants are located during these surveys, the City will work with the appropriate agency (CDFW and/or USFWS depending on the species) to develop appropriate mitigation for expected impacts.

Additionally, given enough time, special-status plants may become established in the previously-surveyed areas where suitable habitat exists. The following measure is recommended in the event project construction does not commence within three years of the May 2022 surveys.

- If Project construction does not commence prior to the spring of 2024, another round of special-status plant surveys shall be conducted in areas proposed for impact prior to commencement of construction. If no special-status plant species are found, no further mitigation would be required. If special status perennial species are found within the proposed impact area, then mitigation could consist of digging up the plants and transplanting them into a suitable avoided area on-site prior to construction. If the plant found is an annual, then mitigation could consist of collecting seed-bearing soil and spreading it into a suitable constructed wetland at a mitigation site. If special-status plants will be impacted, a mitigation plan shall be developed. Mitigation for the transplantation and/or establishment of rare plants will result in no net loss of individual plants after a five (5) year monitoring period.

6.4 Invertebrates

6.4.1 Vernal Pool Branchiopods

Because the Project would directly affect suitable habitat for federally-listed vernal pool invertebrates, the following measure is recommended.

- Surveys of all potential vernal pool branchiopod habitat shall be performed in accordance with current USFWS protocol. For those areas of potential habitat that are determined not to be occupied by federally listed vernal pool branchiopods as a result of the surveys, no further mitigation would be required. If federally listed vernal pool branchiopods are found during surveys, removal of that habitat shall be mitigated through the preservation of vernal pool branchiopod habitat at USFWS-approved ratios at a USFWS-approved mitigation bank. Alternatively, the City may assume that all potential vernal pool branchiopod habitat is occupied and mitigate as described above.

6.4.2 Valley Elderberry Longhorn Beetle

One elderberry shrub was located during a comprehensive survey of the Study Area, and this shrub will not be impacted by the Project. Because the shrub will not be impacted, VELB will not be impacted, and no mitigation is recommended.

6.4.3 Monarch

Suitable habitat in the form of woolly milkweed is present in the Study Area. However, because the milkweed patches are outside of the limits of disturbance and will not be impacted by the Project construction, no mitigation is recommended.

6.5 Fish

Because the pipeline crossings of perennial streams along the pipeline alignment would be conducted by jack-and-bore or HDD, construction would not directly affect the waterways or any fish using them. Application of water quality best management practices (BMPs) for all work proximate to the stream crossings will minimize the potential for accidental discharges to the streams. However, because work will occur proximate to waterways that could support Chinook salmon, steelhead, and/or sturgeon, the following mitigation is recommended.

- Project work adjacent to Best Slough and Dry Creek could result in water quality impacts if appropriate runoff, erosion, and sediment control BMPs are not implemented. Therefore, the City's Stormwater Pollution Prevention Plan (SWPPP) shall include BMPs that address water quality protection for the creeks during construction. Examples of BMPs that may be specified by the Certified Professional in Erosion and Sediment Control (CPESC) that prepares the SWPPP include silt fencing between any areas of ground disturbance and the creeks, straw wattles or straw bales around drop inlets, compaction and hydroseeding of bare soil following construction, and locating concrete washouts, refueling areas, and materials storage, etc., a minimum of 300 feet from Best Slough and/or Dry Creek.
- The proposed jack-and-bore or HDD installations under Best Slough and Dry Creek have a very small potential to result in a "frac-out". Frac-out, or inadvertent return of drilling lubricant, is a potential concern when the HDD is used underneath sensitive habitats and waterways. Prior to construction, the contractor will be required to develop a Frac-Out Contingency Plan (Contingency Plan). This plan will be prepared to ensure that preventive and responsive measures can be implemented by the contractor. To minimize the potential for a frac-out, the Contingency Plan will include design protocols to be implemented for the protection of sensitive biological resources and design protocols to require a geotechnical engineer or qualified geologist to make recommendations regarding the suitability of the formations to be bored to minimize the potential for frac-out conditions.
- The Project shall comply with any additional avoidance and minimization measures assigned through the CDFW 1600 Streambed Alteration Agreement process for potential stream impacts.

6.6 Western Spadefoot

To mitigate for the Project-related loss of approximately 0.045 acre of potential western spadefoot aquatic habitat (vernal pool), the following measures are recommended. Note that if any subsequent aquatic resource delineation and verification identify additional suitable habitat that may be permanently impacted, the impact acreage could increase.

- Prior to initiation of construction activity, the applicant shall retain a qualified biologist to survey all suitable aquatic habitat within the disturbance area by sampling the features thoroughly with dipnets during March or early April, when spadefoot tadpoles would be present. In addition, one nocturnal acoustic survey of all areas within 300 feet of suitable aquatic habitat within the disturbance area shall be conducted. Acoustic surveys consist of walking through the area and listening for the distinctive snore-like call of this species. Timing and methodology for the aquatic and acoustic surveys shall be based on those described in *Distribution of the Western Spadefoot (Spea hammondi) in the Northern Sacramento Valley of California, with Comments on Status and Survey Methodology* (Shedd 2017). If both the aquatic survey and the nocturnal acoustic survey are negative, further mitigation is not necessary.
- If western spadefoot is observed within aquatic habitat proposed for impact, the tadpoles shall be captured by a qualified biologist and relocated either to aquatic habitat to be avoided on-site (and implement the fencing requirement outlined below), or to an off-site open space preserve with suitable habitat in the vicinity of the Study Area. If western spadefoot are observed within aquatic habitats proposed for avoidance, then the applicant shall install a keyed in silt fence along the edge of the proposed impact area within 300 feet of the occupied aquatic habitat to prevent metamorphosed individuals from dispersing into the construction area.

6.7 Western Pond Turtle

Project construction includes activity proximate to drainage and irrigation ditches, Best Slough, and Dry Creek, which could provide habitat for western pond turtle. To ensure that construction does not adversely affect this species, the following measures are recommended. Note that if any subsequent aquatic resource delineation identifies additional suitable habitat that may be permanently or temporarily impacted, the impact acreage could increase.

- A western pond turtle survey shall be conducted no more than 48 hours prior to construction where construction activities overlap with Best Slough, Dry Creek, and/or ditches that provide suitable habitat and upland areas within 150 feet of these aquatic resources. If no western pond turtles or nests are found, no further mitigation is necessary. If a western pond turtle is observed within the proposed impact area, a qualified biologist shall relocate the individual to habitat of equivalent or greater value (e.g., riparian woodlands adjacent to a perennial creek or intermittent drainage) outside of the proposed impact area prior to construction. If a western pond turtle nest is observed within the proposed impact area, the nest shall be fenced off and avoided until the eggs hatch. The exclusion fencing shall be placed no less than 25 feet from the nest. A qualified biologist shall monitor the nest

daily during construction to ensure that hatchlings do not disperse into the construction area. Relocation of hatchlings will occur as stipulated above, if necessary.

6.8 Giant Garter Snake

The Project would permanently impact 0.268 acre of drainage ditch associated with the pump stations and temporarily impact 0.002 acre of drainage and irrigation ditch along the pipeline alignment. Because these features provide low-quality aquatic habitat for giant garter snake, the following measures are recommended to mitigate for potential impacts to this species. Because it is expected that consultation under Section 7 of FESA may be required as part of the Clean Water Act Section 404 permit process and that a CDFW incidental take permit (ITP) may be required pursuant to CESA, mitigation assigned by USFWS and/or CDFW may supersede the measures presented below.

- The City shall retain a qualified biologist to conduct a field investigation to identify suitable giant garter snake aquatic habitat within the disturbance area and giant garter snake upland habitat in adjacent areas within 300 feet of aquatic habitat. Giant garter snake aquatic habitat may include drainage and irrigation ditches, Best Slough, and Dry Creek.
- During construction, a qualified biologist experienced with giant garter snake identification and behavior shall be onsite daily when construction activities take place within identified suitable giant garter snake aquatic habitat or in suitable upland areas within 300 feet. The biologist shall inspect the suitable habitat within disturbance areas daily for giant garter snake prior to construction activities. The biologist will also conduct environmental awareness training for all construction personnel working on the project site on required avoidance procedures and protocols if a giant garter snake enters an active construction zone.
- All construction activity within identified suitable giant garter snake aquatic and upland habitat in and around the site shall be conducted between May 1 and October 1, the active period for giant garter snakes. This would reduce direct impacts on the species because the snakes would be active and respond to construction activities by moving out of the way.
- If construction activities occur in identified suitable giant garter snake aquatic habitat (i.e., irrigation ditches or other habitat identified during the delineation of habitat), aquatic habitat shall be dewatered and then remain dry and absent of aquatic prey (e.g., fish and tadpoles) for 15 days prior to initiation of construction activities. After aquatic habitat has been dewatered 15 days prior to construction activities, exclusion fencing shall be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing shall be erected 36 inches above ground and buried at least 6 inches below the ground to prevent snakes from attempting to move under the fence into the construction area. In addition, high-visibility fencing shall be erected to identify the construction limits and to protect adjacent habitat from encroachment of personnel and equipment. Exclusionary fencing and high-visibility fencing will be made from material that will not cause entanglement (e.g., silt fencing and stakes with flagging and/or poly wire). Giant garter snake habitat outside construction fencing shall be avoided by all construction personnel. The fencing and the work area shall be inspected by the qualified biologist to ensure that

the fencing is intact and that no snakes have entered the work area before the start of each work day. The fencing shall be maintained by the contractor until completion of the project.

- If a giant garter snake is observed, the biologist shall notify CDFW and USFWS immediately. Construction activities will be suspended in a 100-foot radius of the garter snake until the snake leaves the site on its own volition.
- All excavated steep-walled holes and trenches more than 6 inches deep proximate to identified suitable giant garter snake habitat shall be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches shall be inspected by the biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within giant garter snake modeled habitat shall be inspected for giant garter snake by the qualified biologist prior to being moved.
- If erosion control is implemented proximate to identified suitable giant garter snake habitat, non-entangling erosion control material shall be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure snakes are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials.

6.9 Birds

6.9.1 Nesting Swainson's Hawks

The Project could affect nesting Swainson's hawks as a result of tree removal or nest disturbance. The following measure is recommended to avoid and minimize impacts to nesting Swainson's hawks.

- A targeted Swainson's hawk nest survey of the Project area and all accessible areas within a 0.25-miles of the proposed construction area no more than 15 days prior to construction activities. If active Swainson's hawk nests are found within 0.25-mile of a construction area, construction shall cease within 0.25-mile of the nest until a qualified biologist determines that the young have fledged or it is determined that the nesting attempt has failed. The 0.25-mile buffer may be reduced if a smaller, sufficiently protective buffer is proposed by the Project biologist after taking into consideration the natural history of the Swainson's hawk, the proposed activity level adjacent to the nest, the nest occupants' habituation to existing or ongoing activity, nest concealment (i.e., whether there are visual or acoustic barriers between the proposed activity and the nest), and what (if any) nest monitoring is proposed.

6.9.2 Nesting Raptors

The Project could affect tree- and ground-nesting raptors, including northern harrier and white-tailed kite. The following measures are recommended to reduce potential impacts to these species and other raptor species protected under the California Fish and Game Code or MBTA.

- If ground disturbance or other construction activities are proposed during the nesting season (February 1 – August 31), a focused survey for nesting raptors shall be conducted by a qualified biologist within 14 days prior to the beginning of construction activities in order to identify active nests. This survey shall be conducted within the proposed construction area and all accessible areas within 0.25-mile.
- If active raptor nests are found within 0.25-mile of a construction area, construction shall not commence within 0.25-mile of the nest until a qualified biologist determines that the young have fledged, or it is determined that the nesting attempt has failed. If the applicant desires to work within 0.25-mile of the nest, the City shall consult with the qualified biologist to determine if the nest buffer can be reduced. The City and qualified biologist shall jointly determine the nest avoidance buffer, and what (if any) nest monitoring is necessary.
- If an active raptor nest is found within the Project area prior to construction and is in a tree that is proposed for removal, then the City shall implement additional mitigation recommended by a qualified biologist based on CDFW guidelines and obtain any required permits from CDFW.
- If no active nests are found during the focused survey(s), no additional mitigation will be required.

6.9.3 Nesting Songbirds

The Project could affect nesting special-status songbirds including tricolored blackbird, loggerhead shrike, and Modesto song sparrow. The following measures are recommended to ensure that nesting special-status songbirds or birds protected under the MBTA are not adversely affected by construction.

- If ground disturbance or other construction activities are proposed during the nesting season (February 1 – August 31), a focused survey for nesting raptors and migratory birds shall be conducted by a qualified biologist within 14 days prior to the beginning of construction activities in order to identify active nests. This survey shall be conducted within the proposed construction area and all accessible areas within 500 feet.
- If active special-status species nests/nesting colonies are located during the survey, the City shall work with a qualified biologist to determine a suitable avoidance buffer and the extent and duration of nest monitoring needed. The perimeter of the protected area shall be indicated by bright orange temporary fencing and signage. No construction activities or personnel shall enter the protected area, except with approval of the biologist. If trees containing nests or burrows must be removed as a result of project implementation, removal shall be completed during the nonbreeding season (late September to March).

- If active songbird nests are found, a 100-foot no disturbance buffer will be established. These no-disturbance buffers may be reduced based on consultation and approval by the City. The perimeter of the protected area shall be indicated by bright orange temporary fencing. No construction activities or personnel shall enter the protected area, except with approval of the biologist. If trees containing nests must be removed as a result of project implementation, removal shall be completed during the nonbreeding season (late September to March) or after the adults and young are no longer dependent on the nest site, as determined by a qualified biologist.
- If no active nests are found during the focused survey(s), no additional mitigation will be required.

6.9.4 Burrowing Owl

Because the Study Area supports potential burrowing owl habitat, the following mitigation measure is recommended.

- A targeted burrowing owl nest survey shall be conducted of all accessible areas within 500 feet of the proposed construction area within 14 days prior to construction activities. The survey shall follow CDFW guidelines outlined in the Staff Report on Burrowing Owl Mitigation (CDFG 2012). If an active burrowing owl nest burrow (i.e., occupied by more than one adult owl, and/or juvenile owls are observed) is found within 250 feet of a construction area, construction shall not take place within 250 feet of the nest burrow until a qualified biologist determines that the young have fledged or it is determined that the nesting attempt has failed. If the City desires to work within 250 feet of the nest burrow, it shall consult with the qualified biologist to determine if the nest buffer can be reduced. During the non-breeding season (late September through the end of January), the City may choose to conduct a survey for burrows or debris that represent suitable nesting habitat for burrowing owls within areas of proposed ground disturbance, exclude any burrowing owls observed, and collapse any burrows or remove the debris in accordance with the methodology outlined by the CDFW.

6.9.5 Survey Report

A report summarizing the nesting bird survey(s), including those for Swainson's hawk and burrowing owls, shall be compiled by the Project biologist and provided to the City and CDFW within 30 days of the completed survey. The survey report will be valid for one construction season.

6.9.6 Swainson's Hawk Foraging Habitat

The project would result in the permanent loss of about 15 acres of hay field, 9 acres of irrigated pasture, and approximately 0.5 acre of annual brome grassland that currently provide foraging habitat for Swainson's hawks. However, this type of foraging habitat is plentiful in the region and the current landscape provides sufficient opportunities for foraging in and near the Project alignment. Because impacts to this habitat are not expected to have an appreciable effect on Swainson's hawks in the area, no mitigation is recommended.

6.10 Roosting Bats

If the Project requires removal of any trees that provide bat roosting habitat, the following measures are recommended.

- A qualified biologist shall conduct a bat habitat assessment of all potential roosting habitat features, including trees and structures within the proposed impact footprint. This habitat assessment shall identify all potentially suitable roosting habitat and may be conducted up to 1 year prior to the start of construction.
- If potential roosting habitat is identified (cavities in trees or potential roosts within structures) within the areas proposed for impact, the biologist shall survey the potential roosting habitat during the active season (generally April through October or from January through March on days with temperatures in excess of 50 degrees F) to determine presence of roosting bats. These surveys are recommended to be conducted utilizing methods that are considered acceptable by CDFW and bat experts. Methods may include evening emergence surveys, acoustic surveys, inspecting potential roosting habitat with fiberoptic cameras or a combination thereof.
- If roosting bats are identified within any of the trees planned for removal, or if presence is assumed, the trees shall be removed outside of pup season only on days with temperatures in excess of 50 degrees Fahrenheit. Pup season is generally during the months of May through August. Two-step tree removal shall be utilized under the supervision of the qualified biologist. Two-step tree removal involves removal of all branches of the tree that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree.
- Additionally, it is recommended that all other tree removal be conducted from January through March on days with temperatures in excess of 50 degrees Fahrenheit to avoid potential impacts to foliage-roosting bat species.
- If roosting bats are identified within any structures planned for removal, a bat exclusion plan shall be prepared by a qualified bat biologist describing the methods to be used to humanely exclude bats prior to disturbance. Each exclusion is specific to the structure and no two are the same. All exclusions involve the installation of one-way doors or flaps during the non-breeding season that allow the bats to leave and not re-enter the structure. This plan shall be approved by CDFW and shall be implemented prior to the start of construction.

6.11 Worker Environmental Awareness Training

Prior to any ground-disturbing or vegetation-removal activities, a Worker Environmental Awareness Training (WEAT) shall be prepared and administered to the construction crews. The WEAT will include the following: discussion of the state and federal Endangered Species Act, the Clean Water Act, the Project's permits and CEQA documentation, and associated mitigation measures; consequences and penalties for

violation or noncompliance with these laws and regulations; identification of special-status wildlife, location of any avoided Waters of the U.S; hazardous substance spill prevention and containment measures; and the contact person in the event of the discovery of a special-status wildlife species. The WEAT will also discuss the different habitats used by the species' different life stages and the annual timing of these life stages. A handout summarizing the WEAT information shall be provided to workers to keep on-site for future reference. Upon completion of the WEAT training, workers will sign a form stating that they attended the training, understand the information presented and will comply with the regulations discussed. Workers will be shown designated "avoidance areas" during the WEAT training; worker access should be restricted to outside of those areas to minimize the potential for inadvertent environmental impacts. Fencing and signage around the boundary of avoidance areas may be helpful.

6.12 Wheatland WWTP Decommissioning

Given the WWTP decommissioning activity information that is available, it is expected that this portion of the Overall Project would result in temporary impacts to a levee and permanent impacts to upland areas that currently house WWTP facilities and a portion of existing infiltration basins that are within the Bear River floodplain and subject to flooding during large storm events. Madrone has not completed any surveys of the Wheatland WWTP or infiltration basin areas, so this discussion focuses programmatically on expected impacts associated with the type of work required by decommissioning.

Work in upland areas adjacent to the plant and buildings may affect upland plant and wildlife species that use the area, including nesting birds, roosting bats, and Valley elderberry longhorn beetle (if habitat is present). Work that affects the levee may need local or regional authorization depending on who manages this portion of the levee system.

Work below the levee and within the Bear River floodplain would include grading and site stabilization. Because the area that would be affected is adjacent to the Bear River, the City should submit a notification to CDFW consistent with Section 1602 of the Fish and Game Code. CDFW would review the notification and determine whether a LSAA is necessary.

Work at the Wheatland WWTP is not expected to affect aquatic resources. However, before any ground disturbing activity associated with the decommissioning work, the City should complete an aquatic resources delineation of the infiltration pond area that would be subject to permanent effects. If the results of the delineation indicate that decommissioning work would affect waters of the U.S. or waters of the State, then the City will need to obtain CWA Section 401 and 404 authorization (for impacts to waters of the U.S that are also waters of the State) or Waste Discharge Requirements (for impacts to waters of the State only).

Once the City identifies the areas to be disturbed, planning-level surveys to determine the potential for impacts to special-status plants, elderberry shrubs (host plant for Valley elderberry longhorn beetle), and bat roosting habitat should be completed to inform the design of and impact assessment for the proposed activity. Prior to the start of construction, the City should complete pre-construction surveys for nesting Swainson's hawks and other raptors, nesting songbirds, roosting bats (if suitable habitat would be disturbed,

as determined through the planning-level survey), If CDFW issues a LSAA, that agreement may include requirements for other wildlife surveys and/or avoidance and minimization methods for species known to use the Bear River corridor in that location, such as federally-listed salmonids, green sturgeon, and western pond turtle, and may require mitigation for the loss of riparian habitat. A subsequent CEQA review and the LSAA may also require mitigation for expected impacts to sensitive biological resources.

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Figures

Figure 1. Vicinity Map

Figure 2. Aerial View of the Study Area

Figure 3. Vegetation Communities and Special-Status Species Locations

Figure 4. NRCS Soils

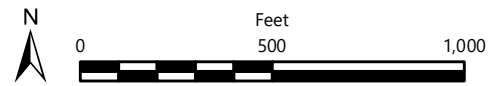
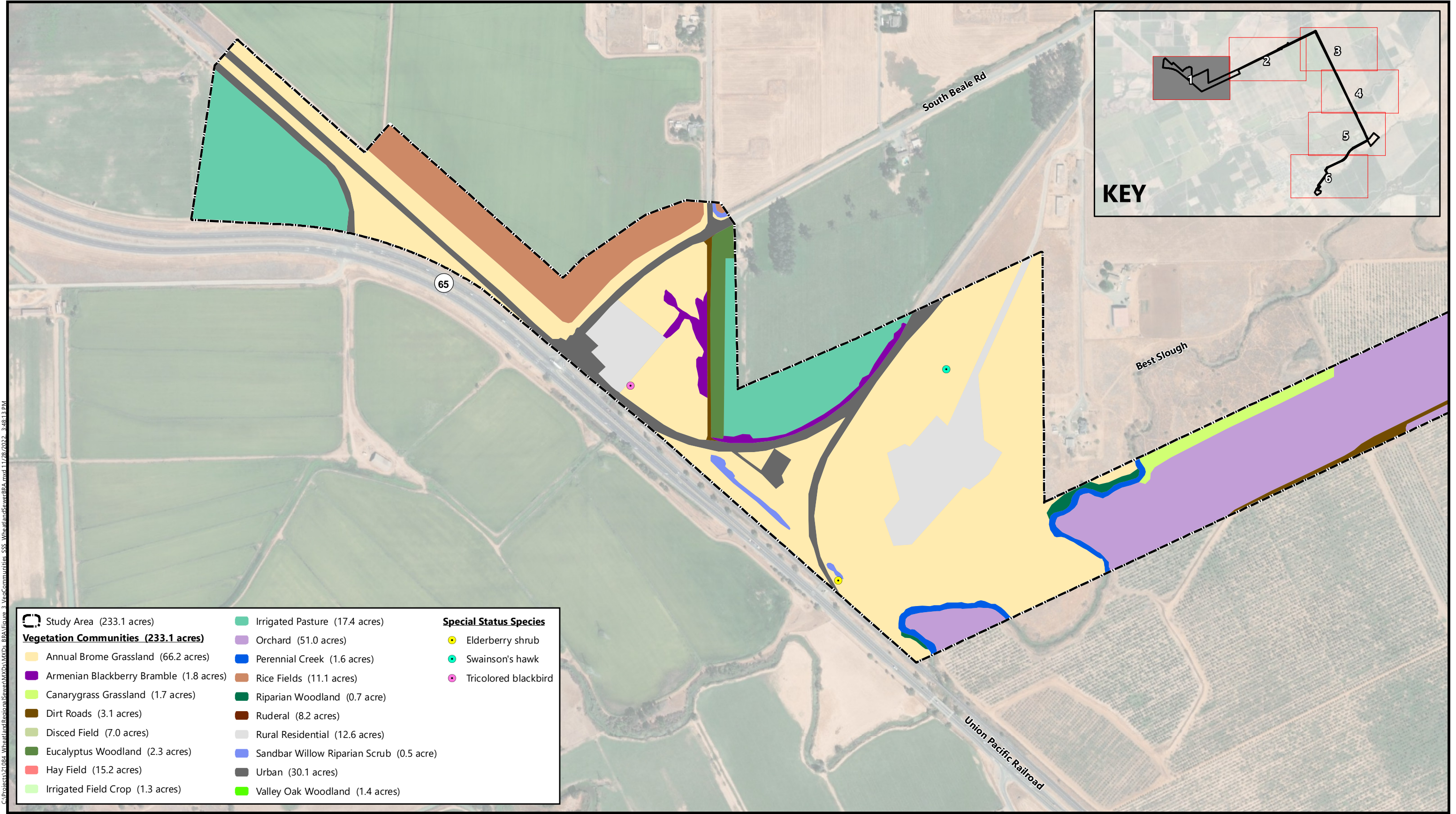
Figure 5. Aquatic Resources

Figure 6. California Natural Diversity Database Occurrences of Special-Status Species

Figure 7. Vegetation Community and Aquatic Resource Impacts



Figure 2
Aerial View of the Study Area

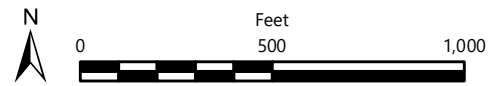
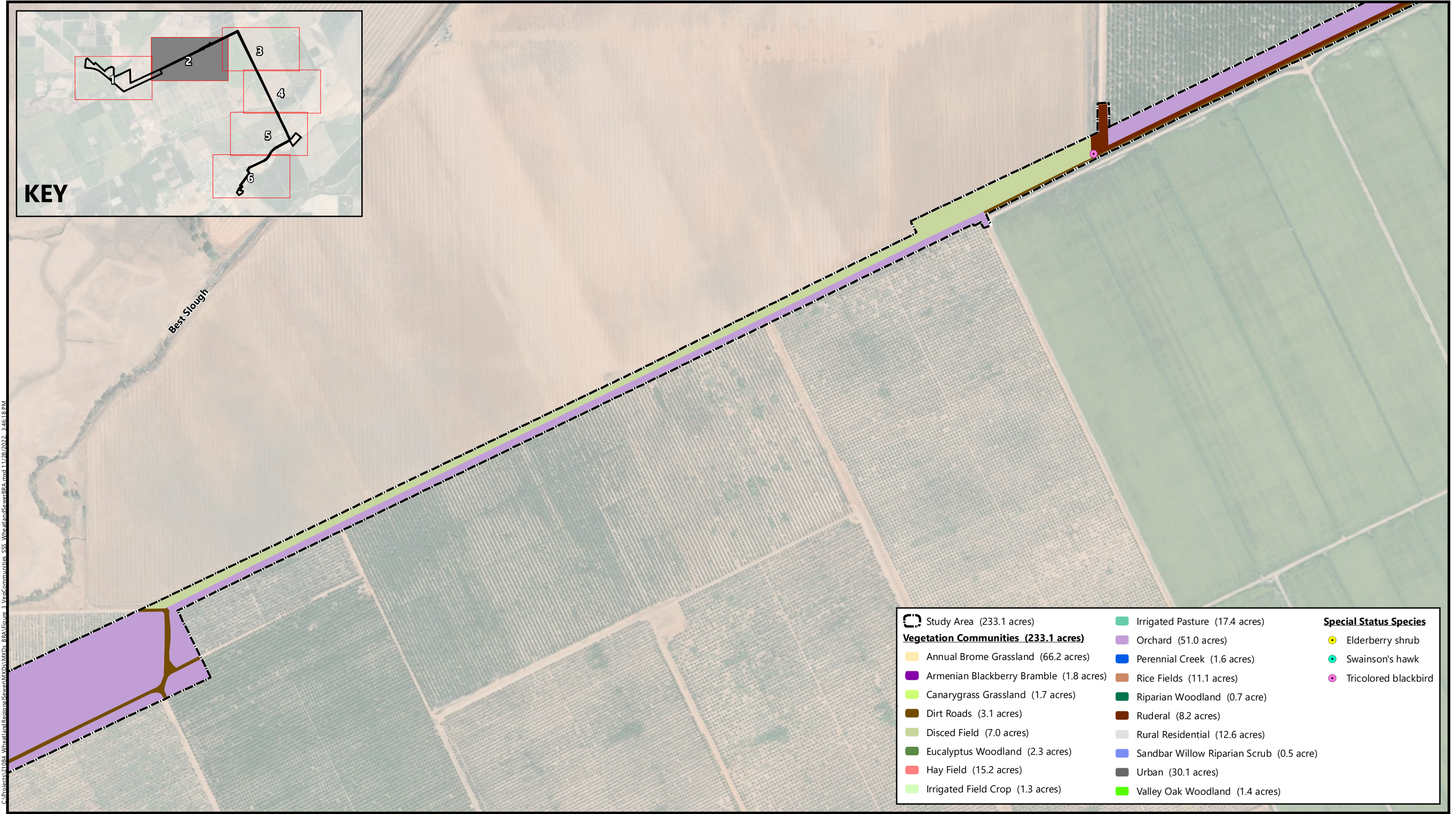


Aerial Source: Maxar, WV02, 7 September 2021

Figure 3
Vegetation Communities and Special-Status Species Locations

Wheatland Regional Sewer
Yuba County, California



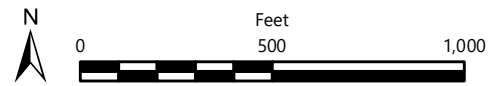


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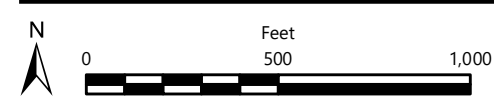
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Yuba County, California





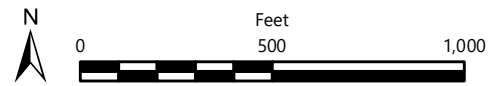
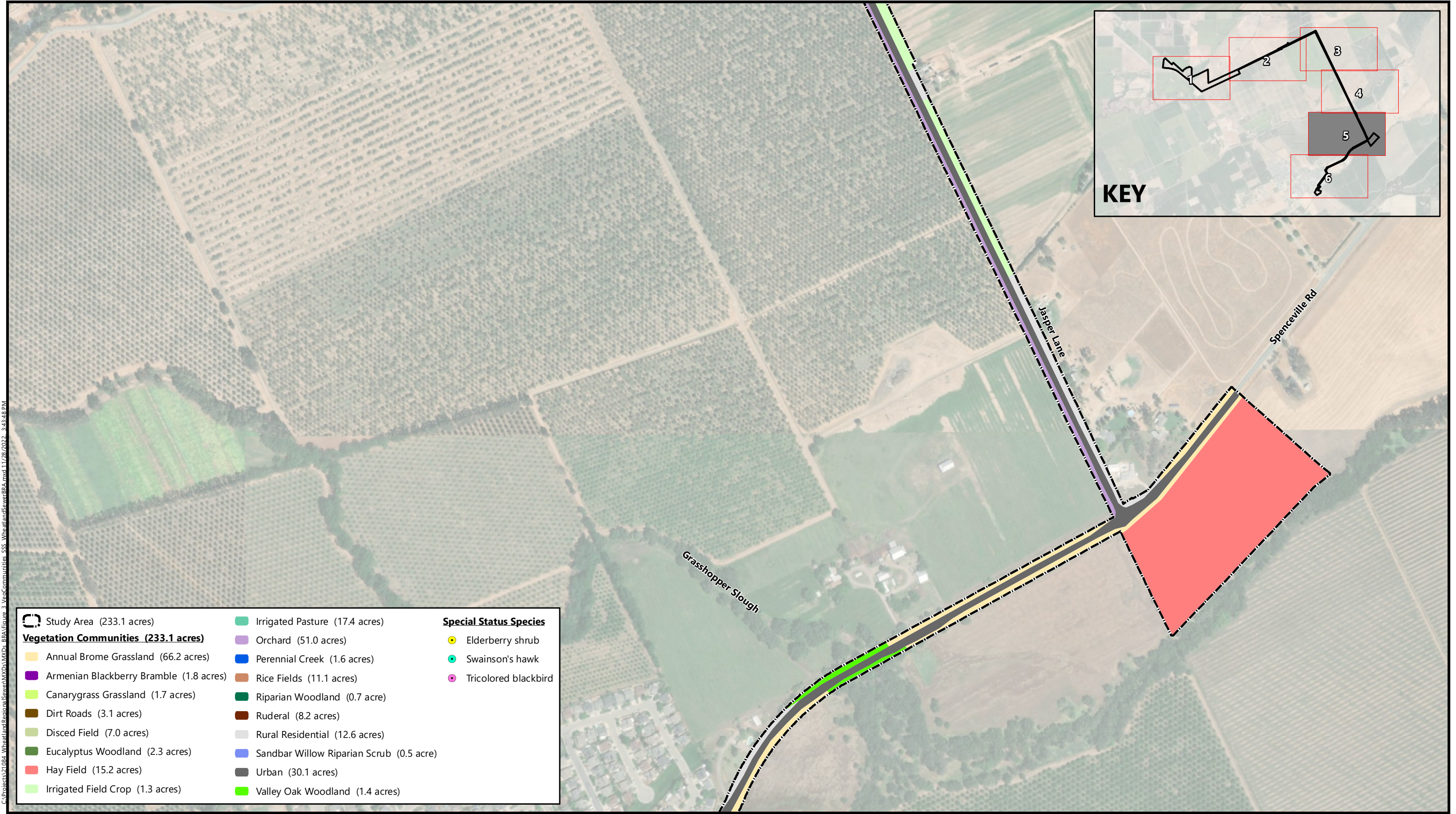
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Aerial Source: Maxar, WV02, 7 September 2021

Wheatland Regional Sewer
Yuba County, California



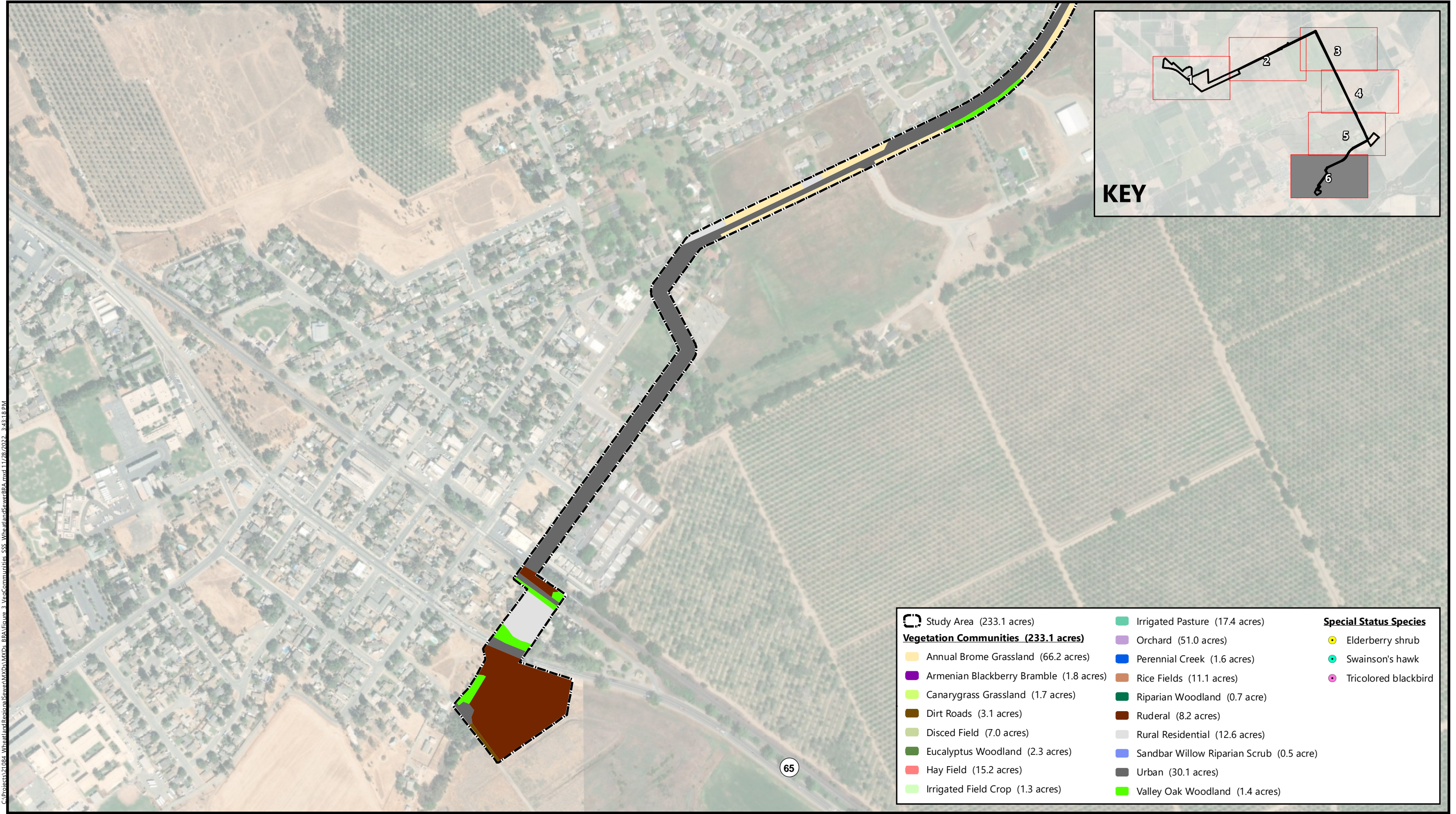


Aerial Source: Maxar, WV02, 7 September 2021

Figure 3
Vegetation Communities and Special-Status Species Locations

Wheatland Regional Sewer
Yuba County, California

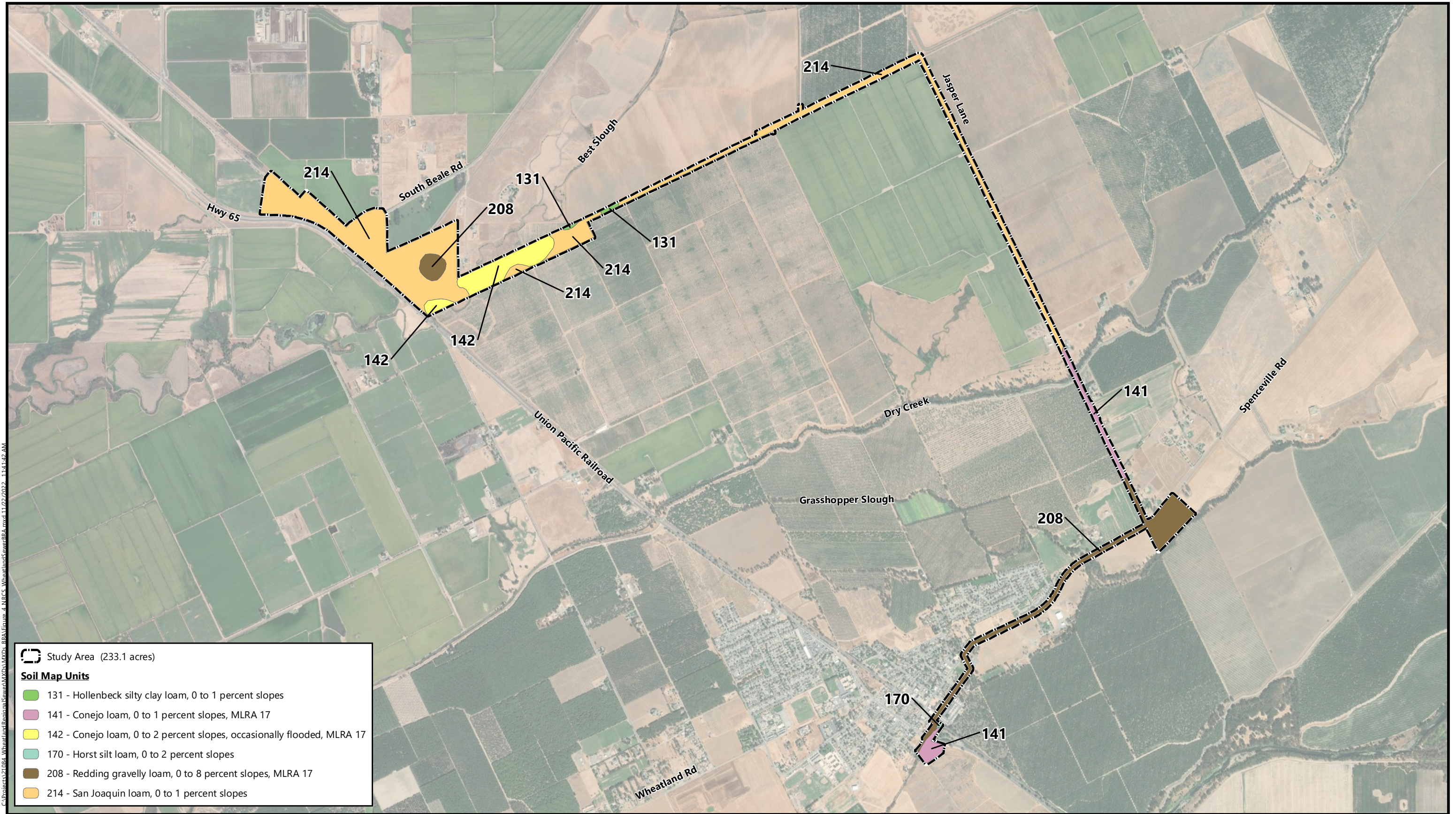




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Figure 3
Vegetation Communities and Special-Status Species Locations

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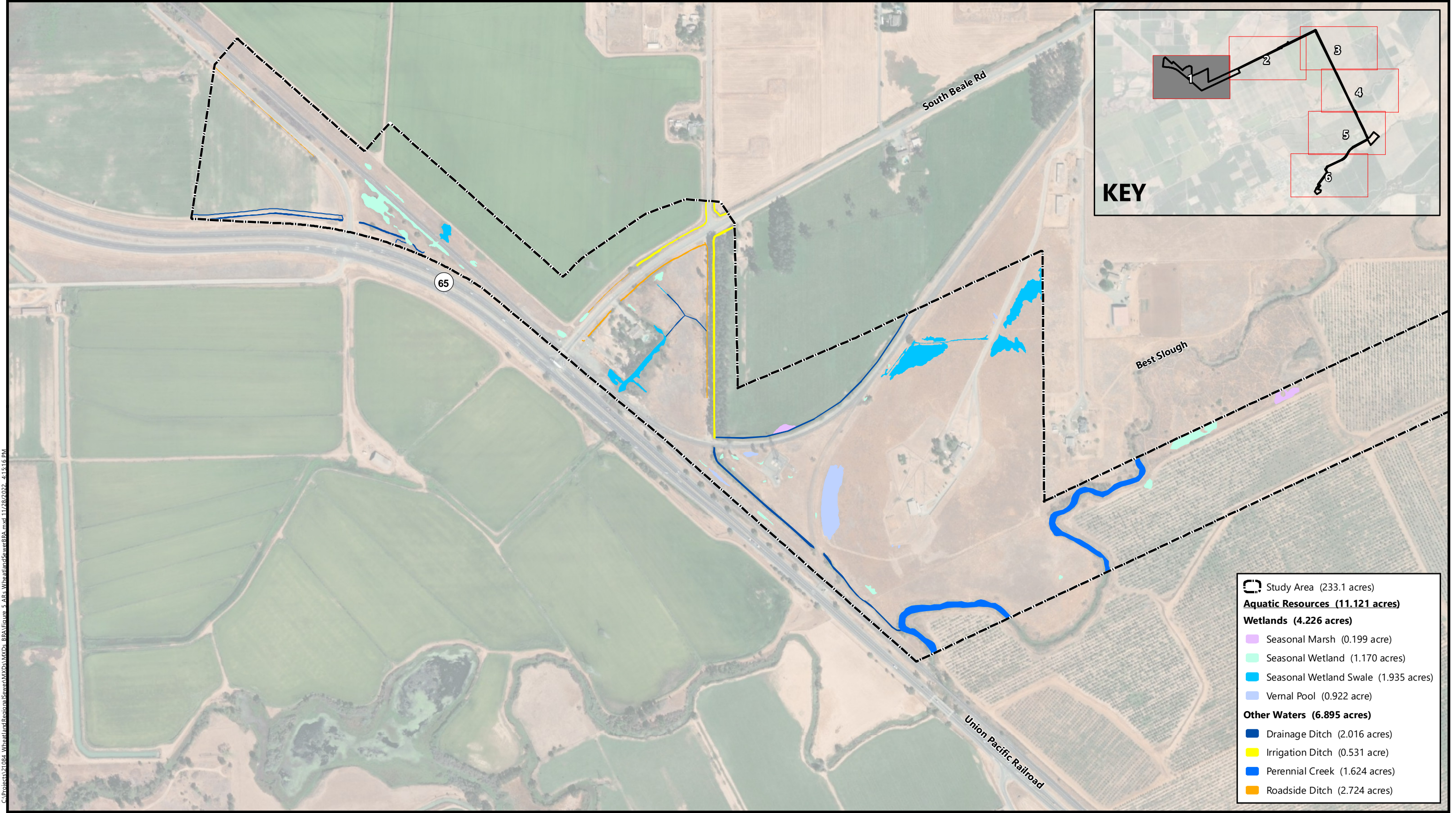


Soil Survey Source: *USDA, Soil Conservation Service.*
Soil Survey Geographic (SSURGO) database for
Yuba County, California
Aerial Source: Maxar, WV02, 7 September 2021

Figure 4
Natural Resources Conservation Service Soils

Wheatland Regional Sewer
Yuba County, California



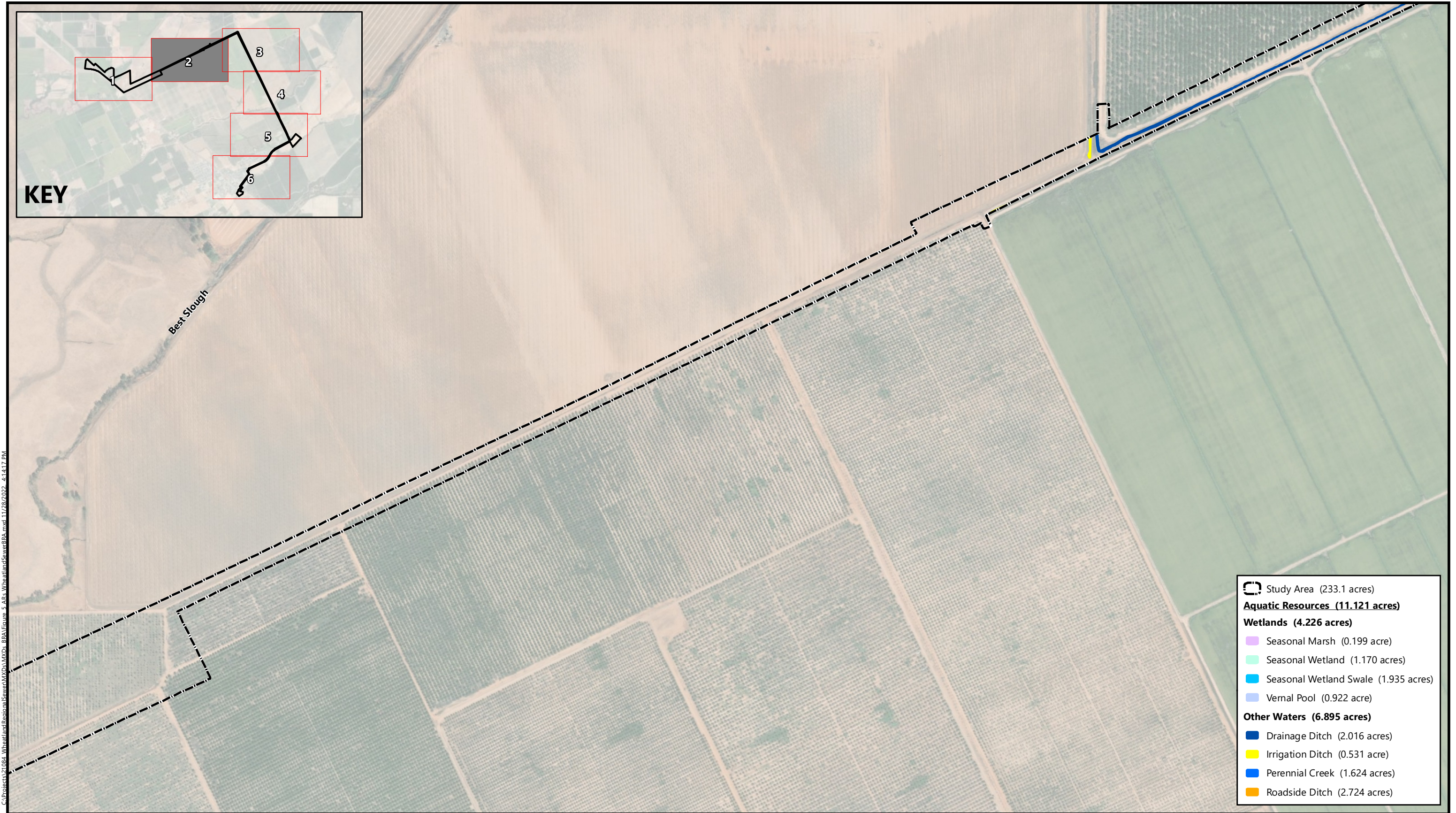


Aerial Source: Maxar, WV02, 7 September 2021

Figure 5
Aquatic Resources

Wheatland Regional Sewer
Yuba County, California





Aerial Source: Maxar, WV02, 7 September 2021

Figure 5
Aquatic Resources

Wheatland Regional Sewer
Yuba County, California





Aerial Source: Maxar, WV02, 7 September 2021



Aerial Source: Maxar, WV02, 7 September 2021

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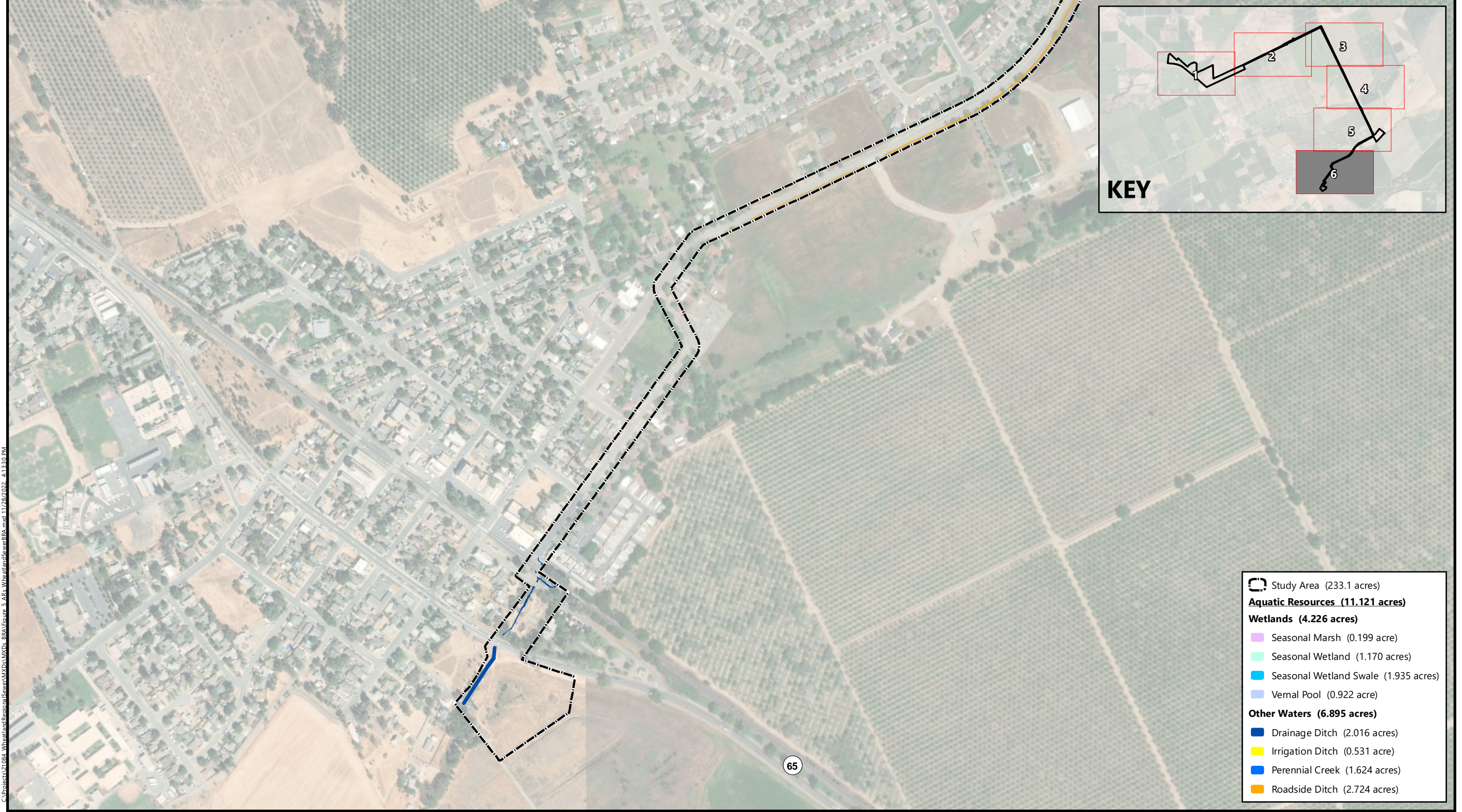


Aerial Source: Maxar, WV02, 7 September 2021

Figure 5
Aquatic Resources

Wheatland Regional Sewer
Yuba County, California





Aerial Source: Maxar, WV02, 7 September 2021

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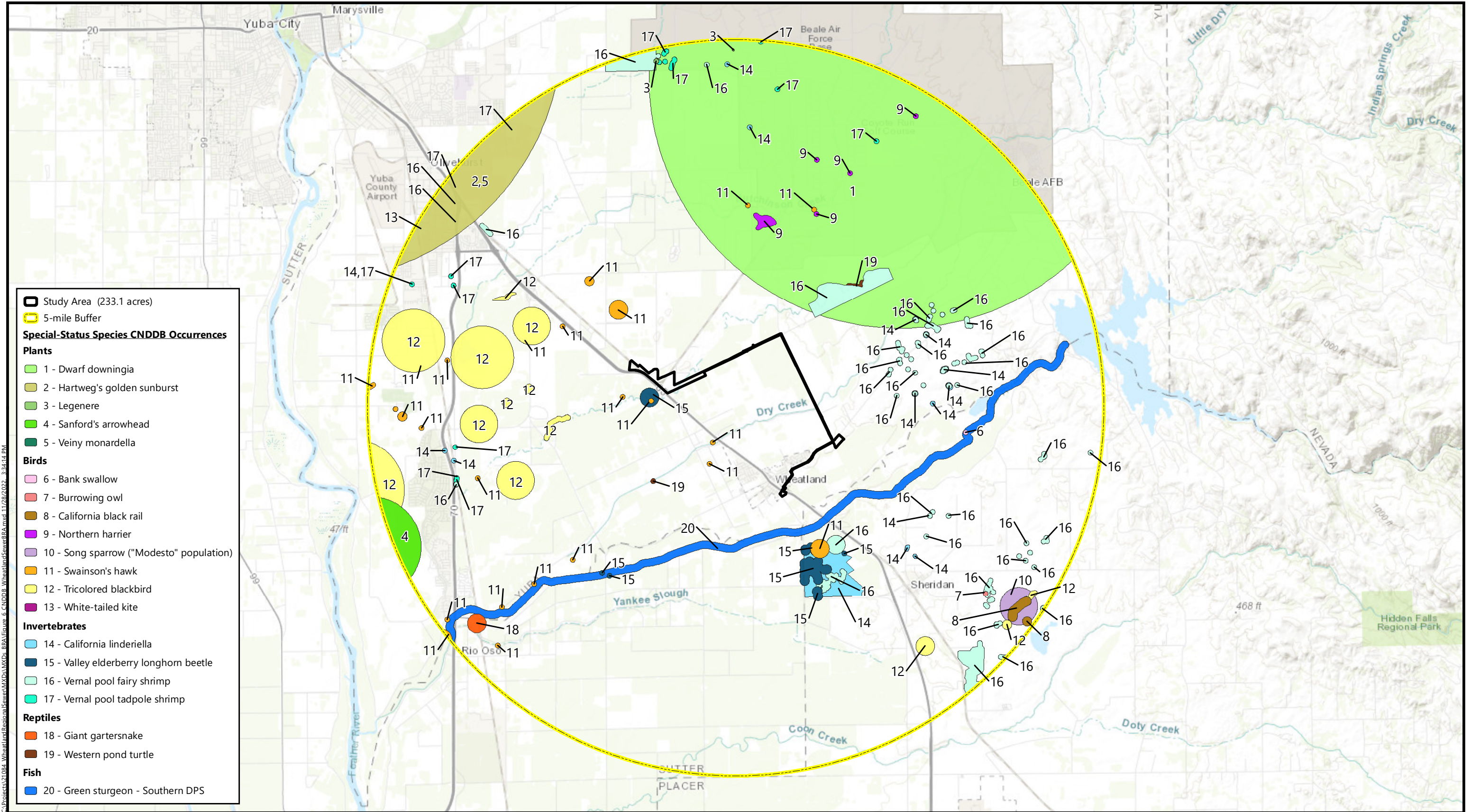
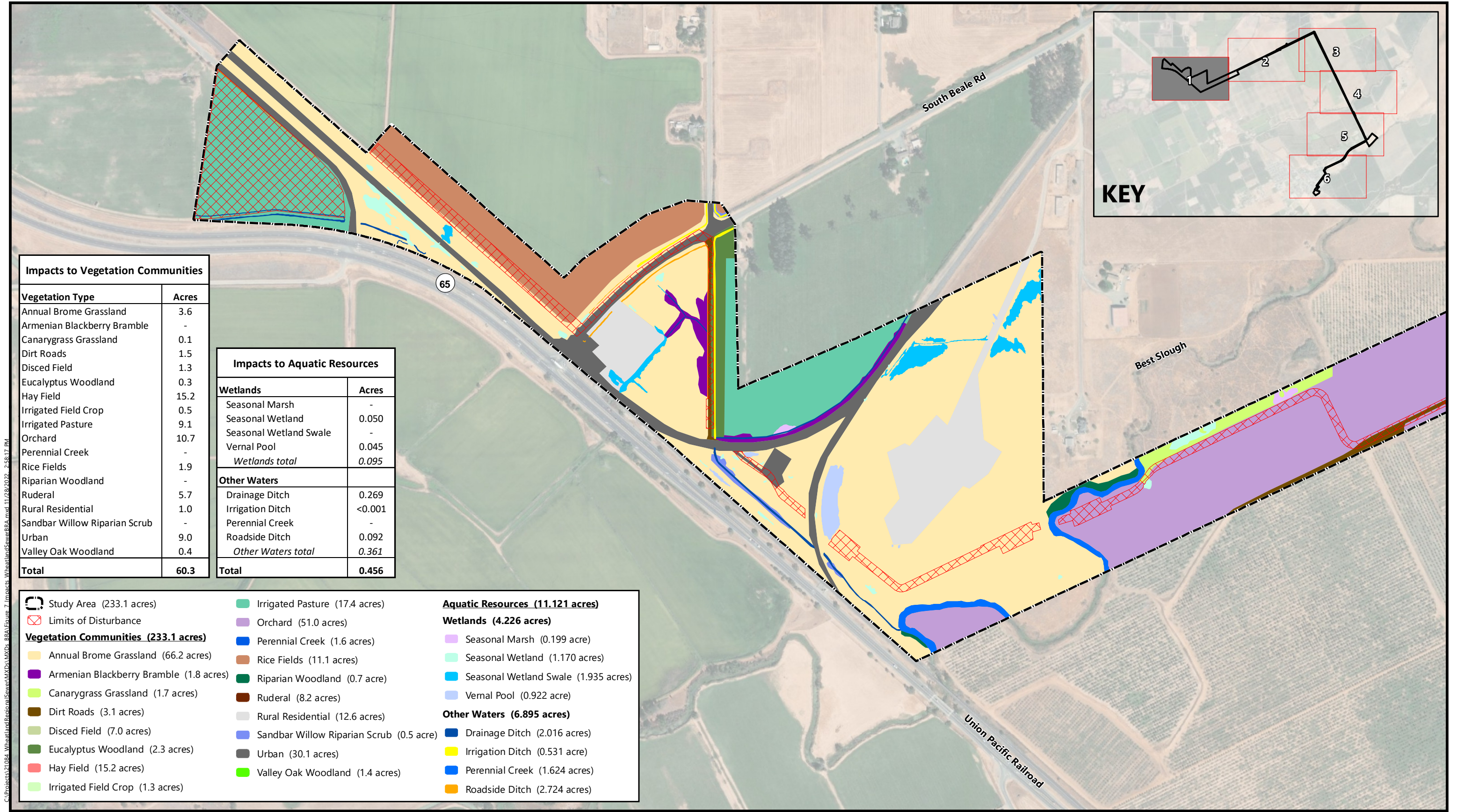


Figure 6
California Natural Diversity Database Occurrences
of Special-Status Species

Source: California Department of Fish and Wildlife; U.S. Fish and Wildlife Service, November 2022.
 Basemap Source: World Topographic Map, ESRI

Wheatland Regional Sewer
 Yuba County, California





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Figure 7
Impacts to Vegetation Communities and Aquatic Resources



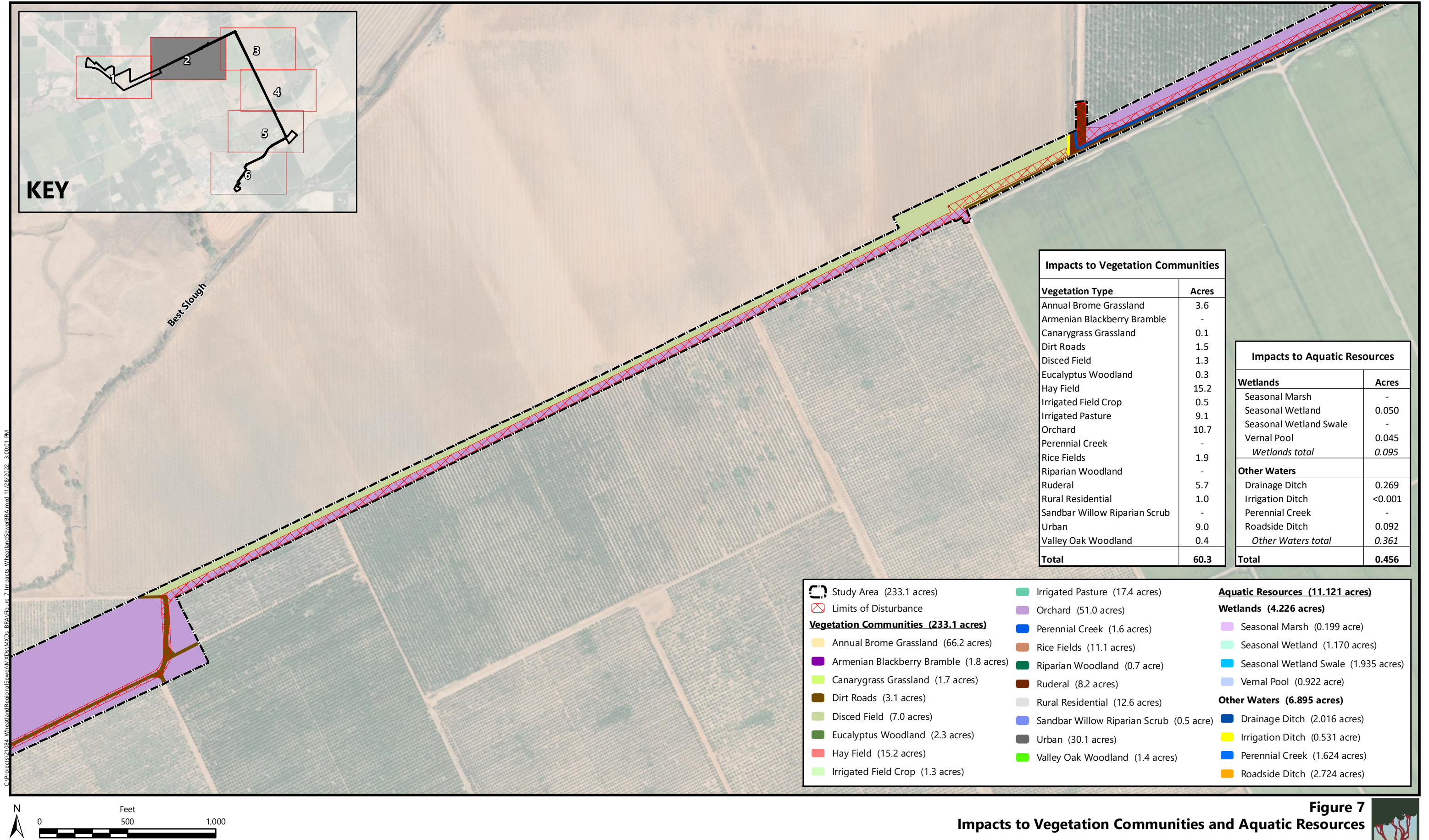
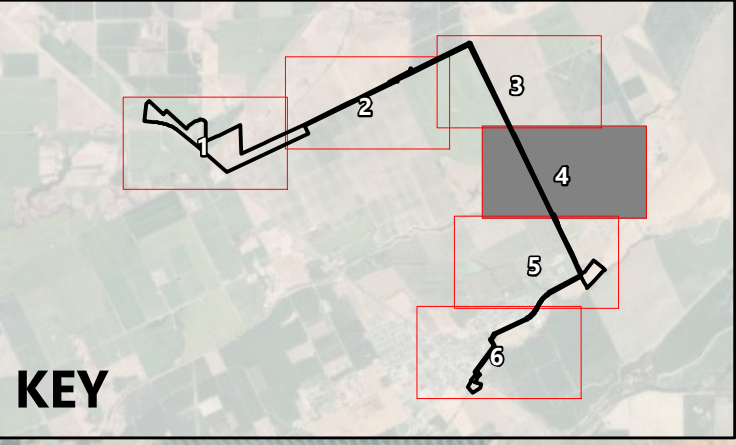
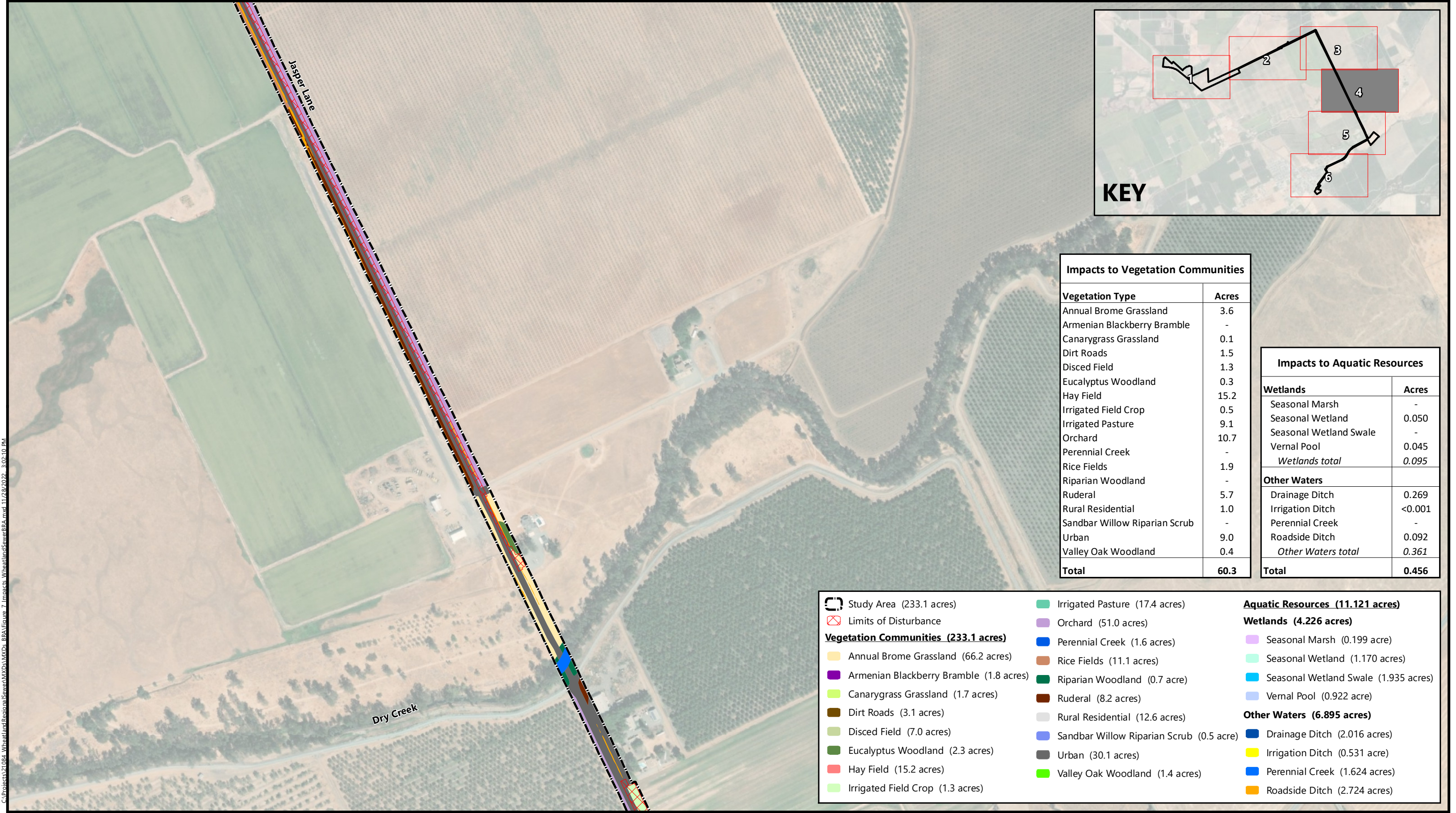


Figure 7
Impacts to Vegetation Communities and Aquatic Resources



Aerial Source: Maxar, WV02, 7 September 2021

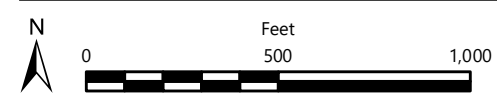
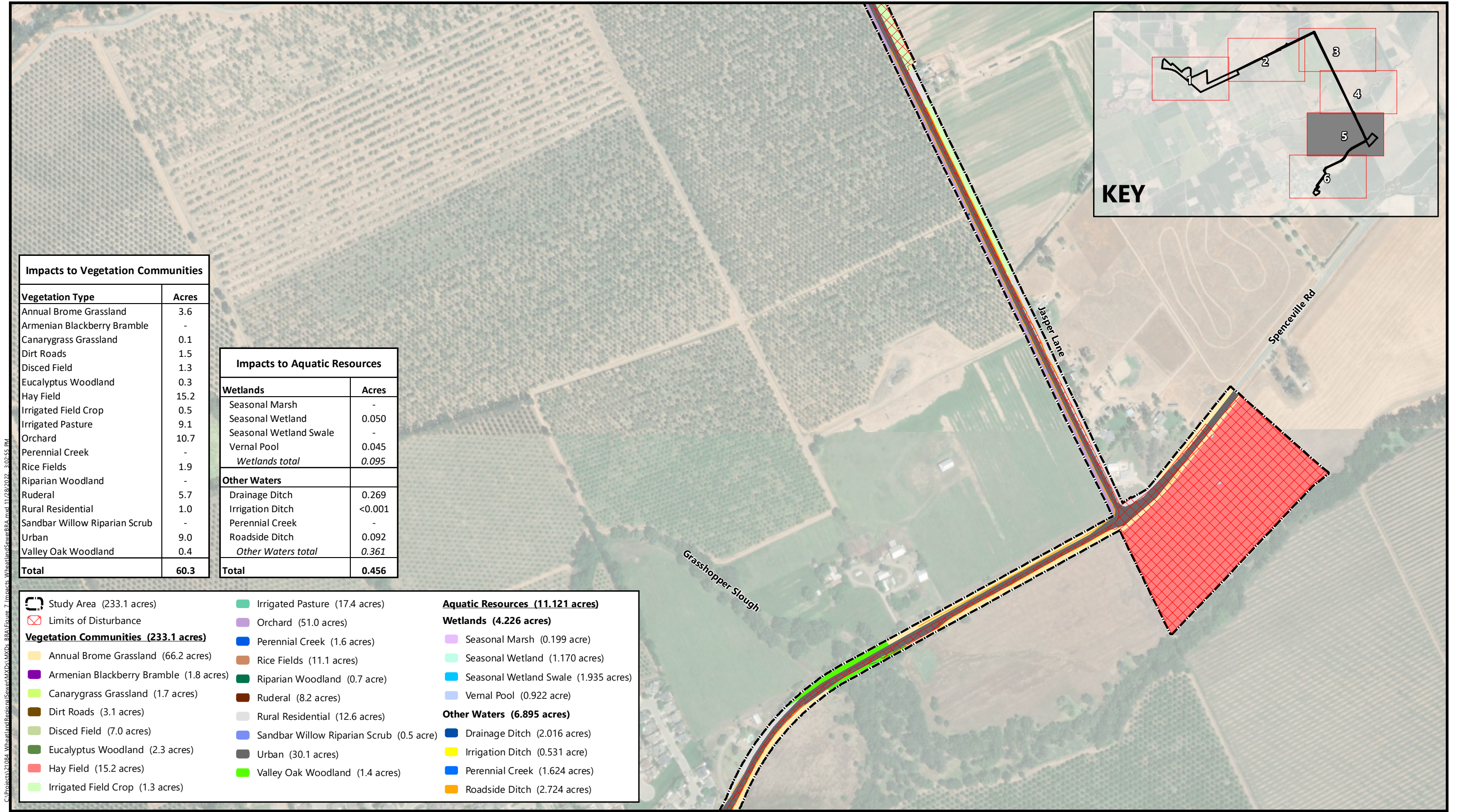


Impacts to Vegetation Communities	
Vegetation Type	Acres
Annual Brome Grassland	3.6
Armenian Blackberry Bramble	-
Canarygrass Grassland	0.1
Dirt Roads	1.5
Disced Field	1.3
Eucalyptus Woodland	0.3
Hay Field	15.2
Irrigated Field Crop	0.5
Irrigated Pasture	9.1
Orchard	10.7
Perennial Creek	-
Rice Fields	1.9
Riparian Woodland	-
Ruderal	5.7
Rural Residential	1.0
Sandbar Willow Riparian Scrub	-
Urban	9.0
Valley Oak Woodland	0.4
Total	60.3

Impacts to Aquatic Resources	
Wetlands	Acres
Seasonal Marsh	-
Seasonal Wetland	0.050
Seasonal Wetland Swale	-
Vernal Pool	0.045
<i>Wetlands total</i>	<i>0.095</i>
Other Waters	
Drainage Ditch	0.269
Irrigation Ditch	<0.001
Perennial Creek	-
Roadside Ditch	0.092
<i>Other Waters total</i>	<i>0.361</i>
Total	0.456



Aerial Source: Maxar, WV02, 7 September 2021

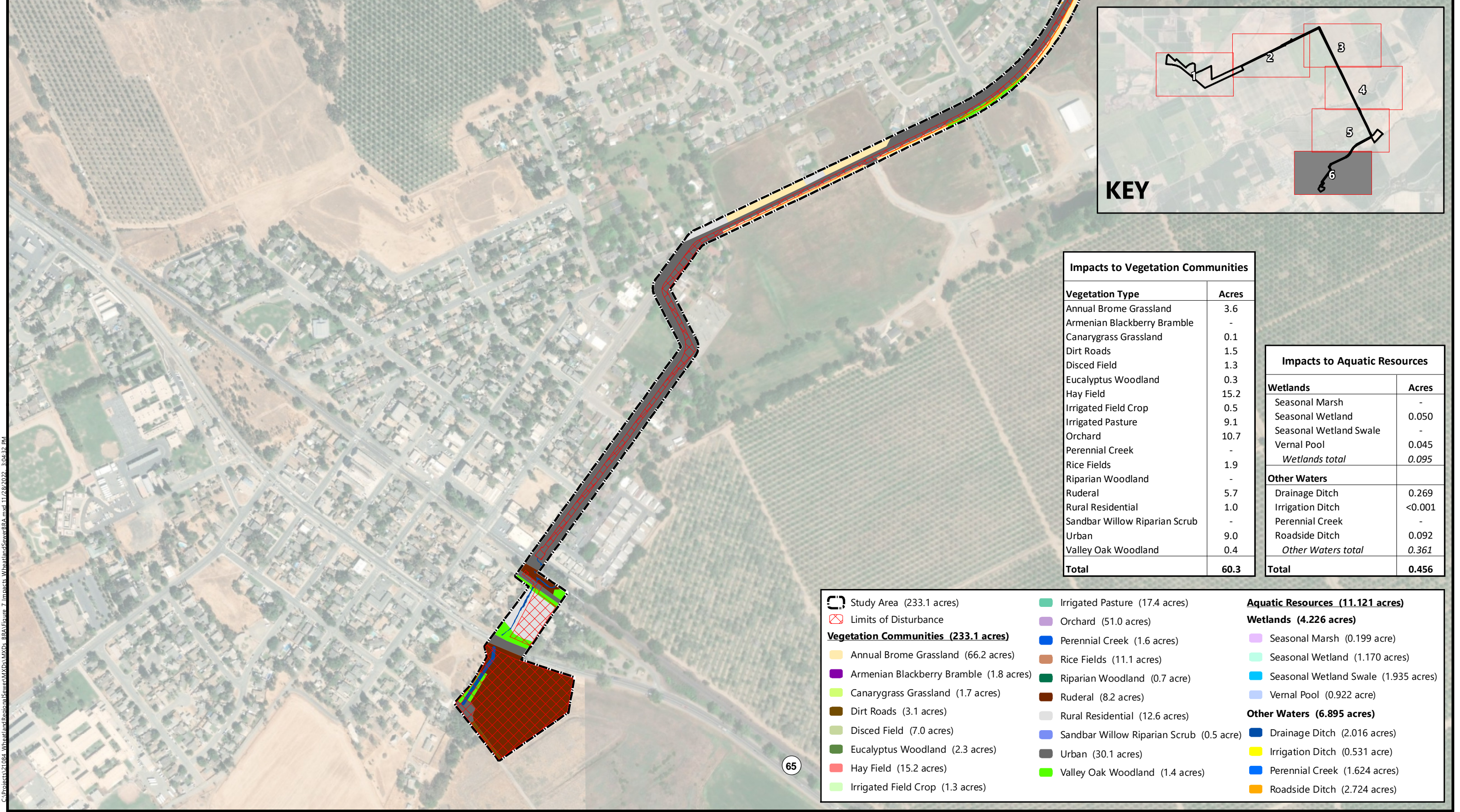


Aerial Source: Maxar, WV02, 7 September 2021

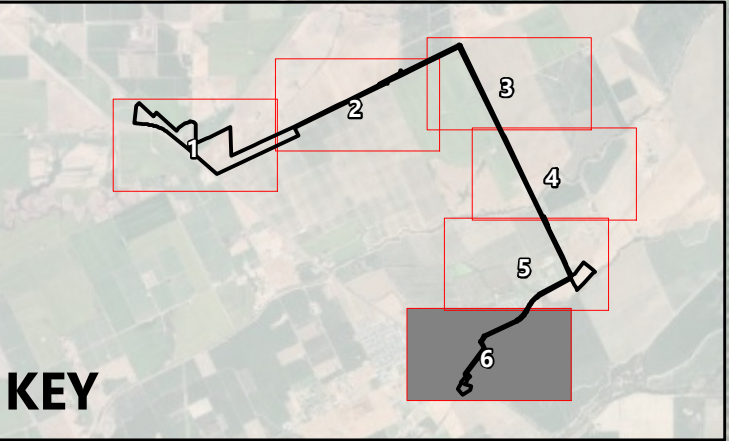
Figure 7
Impacts to Vegetation Communities and Aquatic Resources

Wheatland Regional Sewer
Yuba County, California





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Impacts to Vegetation Communities	
Vegetation Type	Acres
Annual Brome Grassland	3.6
Armenian Blackberry Bramble	-
Canarygrass Grassland	0.1
Dirt Roads	1.5
Disced Field	1.3
Eucalyptus Woodland	0.3
Hay Field	15.2
Irrigated Field Crop	0.5
Irrigated Pasture	9.1
Orchard	10.7
Perennial Creek	-
Rice Fields	1.9
Riparian Woodland	-
Ruderal	5.7
Rural Residential	1.0
Sandbar Willow Riparian Scrub	-
Urban	9.0
Valley Oak Woodland	0.4
Total	60.3

Impacts to Aquatic Resources	
Wetlands	Acres
Seasonal Marsh	-
Seasonal Wetland	0.050
Seasonal Wetland Swale	-
Vernal Pool	0.045
Wetlands total	0.095
Other Waters	
Drainage Ditch	0.269
Irrigation Ditch	<0.001
Perennial Creek	-
Roadside Ditch	0.092
Other Waters total	0.361
Total	0.456

Study Area (233.1 acres)	Irrigated Pasture (17.4 acres)	Aquatic Resources (11.121 acres)
Limits of Disturbance	Orchard (51.0 acres)	Wetlands (4.226 acres)
Vegetation Communities (233.1 acres)	Perennial Creek (1.6 acres)	Seasonal Marsh (0.199 acre)
Annual Brome Grassland (66.2 acres)	Rice Fields (11.1 acres)	Seasonal Wetland (1.170 acres)
Armenian Blackberry Bramble (1.8 acres)	Riparian Woodland (0.7 acre)	Seasonal Wetland Swale (1.935 acres)
Canarygrass Grassland (1.7 acres)	Ruderal (8.2 acres)	Vernal Pool (0.922 acre)
Dirt Roads (3.1 acres)	Rural Residential (12.6 acres)	Other Waters (6.895 acres)
Disced Field (7.0 acres)	Sandbar Willow Riparian Scrub (0.5 acre)	Drainage Ditch (2.016 acres)
Eucalyptus Woodland (2.3 acres)	Urban (30.1 acres)	Irrigation Ditch (0.531 acre)
Hay Field (15.2 acres)	Valley Oak Woodland (1.4 acres)	Perennial Creek (1.624 acres)
Irrigated Field Crop (1.3 acres)		Roadside Ditch (2.724 acres)



Aerial Source: Maxar, WV02, 7 September 2021

Figure 7
Impacts to Vegetation Communities and Aquatic Resources

Wheatland Regional Sewer
Yuba County, California



Attachments

Attachment A: IPaC Trust Resource Report for the Study Area

Attachment B: CNPS Inventory of Rare and Endangered Plants Query for the
"Wheatland, California" Quadrangle and Eight Surrounding
Quadrangles

Attachment C: Wildlife Species Observed within the Study Area

Attachment A

IPaC Trust Resource Report for the Study Area

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

Yuba County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📠 (916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

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 species¹ 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 Fisheries²).

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](#).

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:

Reptiles

NAME	STATUS
Giant Garter Snake <i>Thamnophis gigas</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
------	--------

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

Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* Threatened
 Wherever found
 There is **final** critical habitat for this species. The location of the critical habitat is not available.
<https://ecos.fws.gov/ecp/species/7850>

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2246	Endangered

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.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

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:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

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, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle <i>Haliaeetus leucocephalus</i> 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 Jan 1 to Aug 31
Black Tern <i>Chlidonias niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20
Common Yellowthroat <i>Geothlypis trichas sinuosa</i> 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/2084	Breeds May 20 to Jul 31
Golden Eagle <i>Aquila chrysaetos</i> 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/1680	Breeds Jan 1 to Aug 31
Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Nuttall's Woodpecker <i>Picoides nuttallii</i> 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/9410	Breeds Apr 1 to Jul 20
Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Tricolored Blackbird <i>Agelaius tricolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Yellow-billed Magpie <i>Pica nuttalli</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726	Breeds Apr 1 to Jul 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 and understand the FAQ "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

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

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

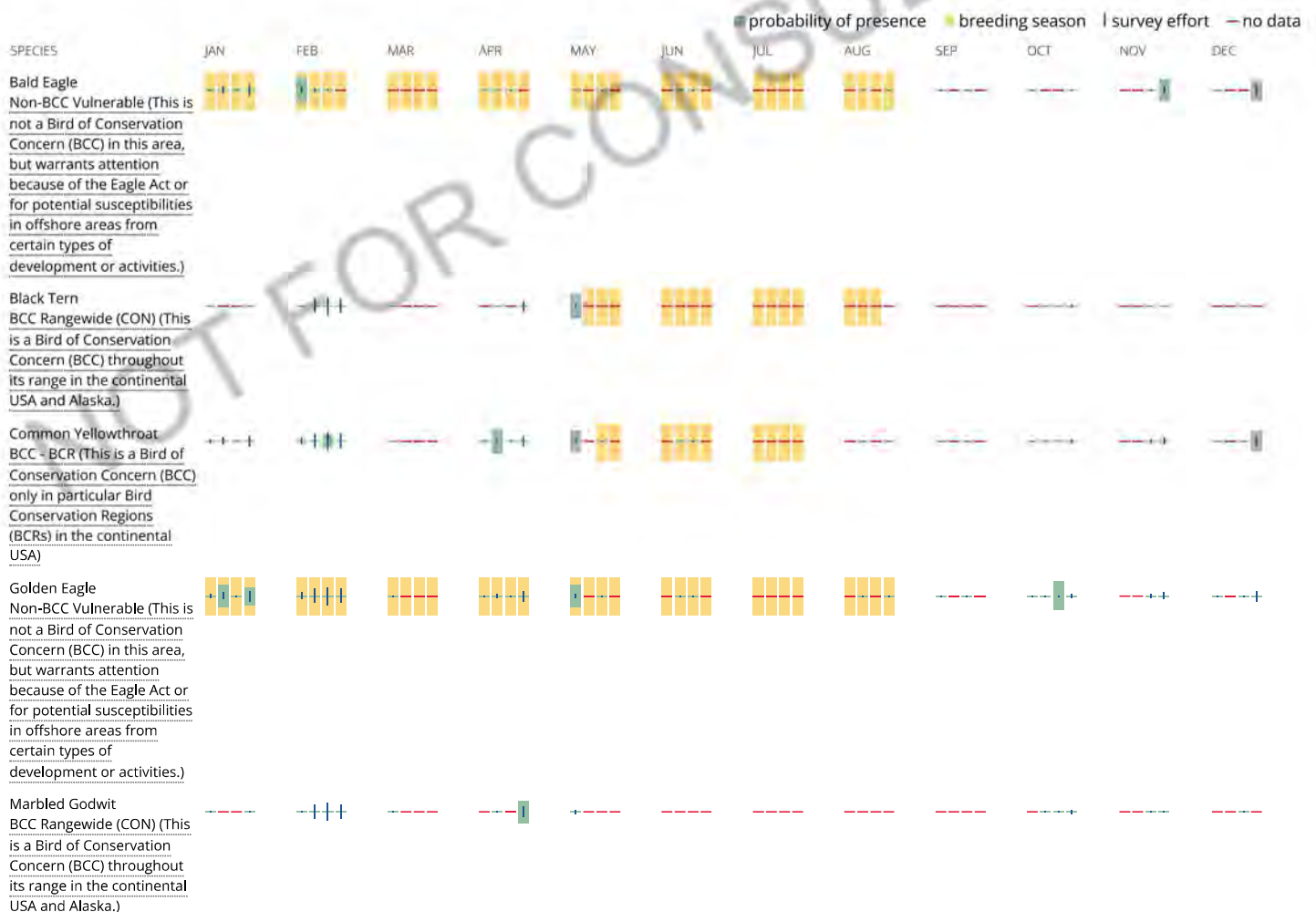
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

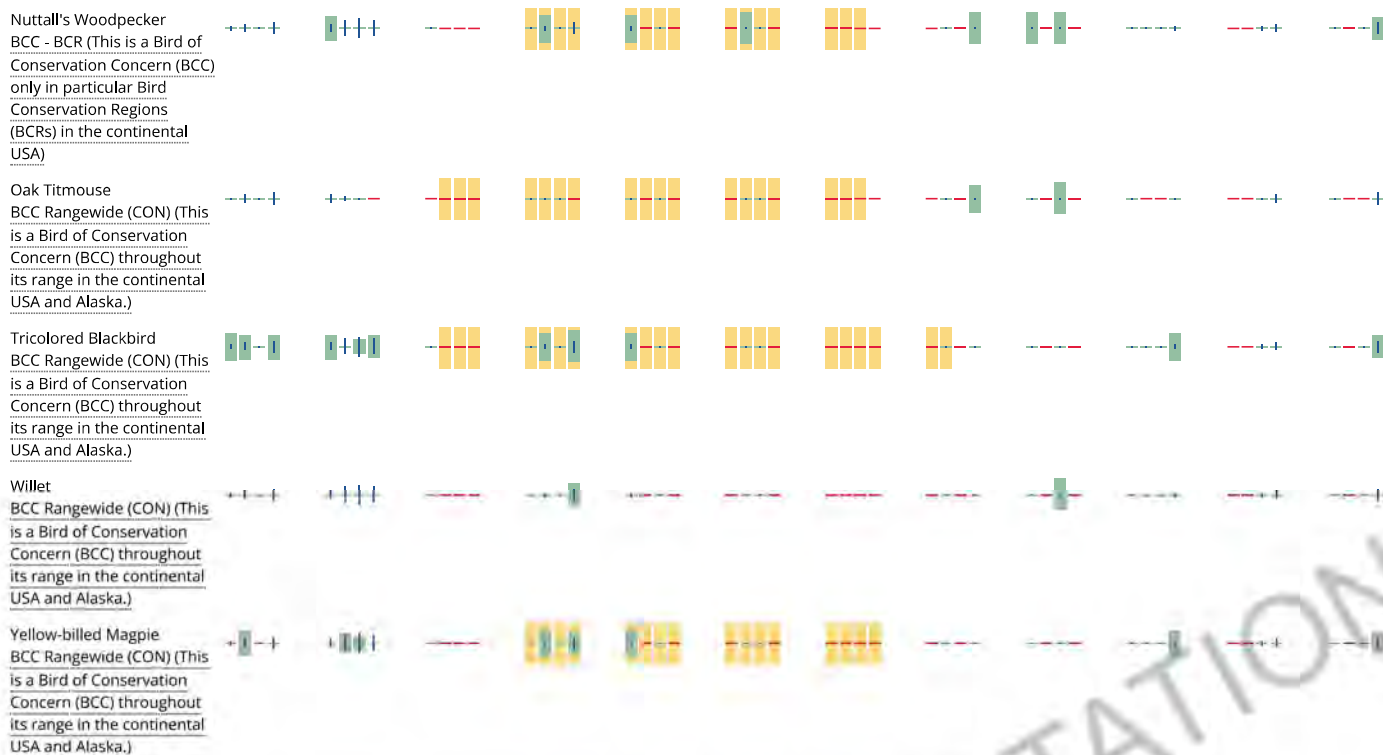
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

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

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 migratory birds potentially occurring 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 [AKN Phenology 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, migrating or present year-round in my project 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 refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). 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.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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 tubercid 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.

NOT FOR CONSULTATION

Attachment B

CNPS Inventory of Rare and Endangered Plants Query for the “Wheatland, California” Quadrangle and Eight Surrounding Quadrangles

ScientificName	CommonName	Family	Lifeform	CRPR	GRank	SRank	CESA	FESA	BloomingPeriod	Habitat	MicroHabitat	Elevation Low (ft)	Elevation High (ft)	Notes
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	1B.2	G2?	S2?	None	None	Mar-Jun	Chenopod scrub, Cismontane	Alkaline	10	2590	Many occurrences historical; need current information on status.
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	2B.2	GU	S2	None	None	Mar-May	Valley and foothill grassland, Vernal pools		5	1460	Threatened by urbanization, development, agriculture, grazing, non-native plants, vehicles, and industrial forestry.
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	1B.2	G3	S3	None	None	May-Oct(Nov)	Marshes and swamps		0	2135	Extirpated from southern California, and mostly extirpated from the Central Valley. Several SAC Co. occurrences not relocated during fieldwork in 2005. Threatened by grazing, development, recreational activities, non-native plants, road widening, and channel alteration and maintenance. See Pittonia 2:158 (1890) for original description.
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	4.2	G3	S3	None	None	Mar-Jun	Chaparral, Cismontane woodland, Pinyon and juniper woodland, Valley and foothill grassland	Clay, Serpentinite (sometimes)	35	5100	Most populations small. Threatened by development, grazing, and vehicles. Possibly threatened by non-native plants.
Juncus leiospermus var. ahartii	Ahart's dwarf rush	Juncaceae	annual herb	1B.2	G2T1	S1	None	None	Mar-May	Valley and foothill grassland		100	750	Known from approximately 10 occurrences. Threatened by development. See Memoirs of the New York Botanical Garden 39:49 (1986) for original description.
Legenere limosa	legenere	Campanulaceae	annual herb	1B.1	G2	S2	None	None	Apr-Jun	Vernal pools		5	2885	Many historical occurrences extirpated. Threatened by grazing, road widening, non-native plants, and development. See Pittonia 2:81 (1890) for original description, North American Flora 32(1):13-14 (1943) for revised nomenclature, and Wasmann Journal of Biology 33(1-2):91 (1975) for distributional information.
Astragalus tener var. ferrisiae	Ferris' milk-vetch	Fabaceae	annual herb	1B.1	G2T1	S1	None	None	Apr-May	Meadows and seeps, Valley and foothill grassland		5	245	Rediscovered in 1989 by V. Oswald in Butte Sink WA (DFG); known only from six extant occurrences. Most historical habitat destroyed by agriculture. See Brittonia 42(2):100-104 (1990) for original description, and Systematic Botany 17(3):367-379 (1992) for distributional information.
Monardella venosa	veiny monardella	Lamiaceae	annual herb	1B.1	G1	S1	None	None	May-Jul	Cismontane woodland, Valley and foothill grassland		195	1345	Rediscovered in 1992 by B. Castro. Threatened by development of wastewater treatment plant. See MadroÃ±o 40(4):270 (1993) for information on rediscovery.
Pseudobahia bahiifolia	Hartweg's golden sunburst	Asteraceae	annual herb	1B.1	G1	S1	CE	FE	Mar-Apr	Cismontane woodland, Valley and foothill grassland		50	490	Many occurrences are very small. Seriously threatened by development, agriculture, overgrazing, and trampling.
Clarkia biloba ssp. brandegeae	Brandegee's clarkia	Onagraceae	annual herb	4.2	G4G5T4	S4	None	None	May-Jul	Chaparral, Cismontane woodland, Lower montane coniferous forest	Roadsides (often)	245	3000	Previously CRPR 1B.2; more common than originally known. Threatened by weed control measures, non-native plants, road maintenance, fire suppression, and development. See University of California Publications in Botany 2:334 (1907) for original description and 20(4):323 (1955) for revised nomenclature.
Wolffia brasiliensis	Brazilian watermeal	Araceae	perennial herb (aquatic)	2B.3	G5	S2	None	None	Apr-Dec	Marshes and swamps		65	330	Potentially threatened by competition. See MadroÃ±o 36(4):283-286 (1989) for first CA occurrence.
Brodiaea sierrae	Sierra foothills brodiaea	Themidaceae	perennial bulbiferous herb	4.3	G3	S3	None	None	May-Aug	Chaparral, Cismontane woodland, Lower montane coniferous forest	Gabbroic, Serpentinite (usually)	165	3215	Potentially threatened by vehicles, road maintenance, road widening, development, illegal dumping, urbanization, horticultural collecting, and hydrological alterations. Similar to, and previously included in B. californica; actually more similar to B. leptandra. See Novon 16:254-259 (2006) for original description.
Brodiaea rosea ssp. vallicola	valley brodiaea	Themidaceae	perennial bulbiferous herb	4.2	G5T3	S3	None	None	Apr-May(Jun)	Valley and foothill grassland, Vernal pools	Alluvial Terraces, Gravelly, Sandy, Silt	35	1100	Threatened by urbanization. Previously assigned to B. coronaria; differentiated by staminodes strongly inrolled, tapering to an apex vs. staminodes flat to incurved, uniformly wide from base to obtuse apex in B. coronaria. Similar to B. rosea ssp. rosea, but with perianth always violet, most floral characters longer, and with a disjunct distribution in non-serpentine habitats along the eastern edge of the Great Valley. See Systematic Botany 38(4):1012-1028 (2013) for original description.

Attachment C

Wildlife Species Observed within the Study Area

Wildlife Species Observed within the
Wheatland Regional Sewer Study Area
29 June and 2 July 2021

Species Name	Common name
Reptiles	
<i>Lampropeltis californiae</i>	California kingsnake
<i>Sceloporus occidentalis</i>	Western fence lizard
Amphibians	
<i>Lithobates catesbeianus</i>	American bullfrog
Birds	
<i>Agelaius phoeniceus</i>	Red-winged blackbird
<i>Agelaius tricolor</i>	Tricolored blackbird
<i>Anas platyrhynchos</i>	Mallard
<i>Aphelocoma californica</i>	California scrub-jay
<i>Ardea alba</i>	Great egret
<i>Ardea herodias</i>	Great blue heron
<i>Baeolophus inornatus</i>	Oak titmouse
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Buteo swainsoni</i>	Swainson's hawk
<i>Callipepla californica</i>	California quail
<i>Calypte anna</i>	Anna's hummingbird
<i>Carduelis psaltria</i>	Lesser goldfinch
<i>Carduelis tristis</i>	American goldfinch
<i>Cathartes aura</i>	Turkey vulture
<i>Charadrius vociferus</i>	Killdeer
<i>Cistothorus palustris</i>	Marsh wren
<i>Corvus corax</i>	Common raven
<i>Dryobates nuttallii</i>	Nuttall's woodpecker
<i>Elanus leucurus</i>	White-tailed kite
<i>Euphagus cyanocephalus</i>	Brewer's blackbird

Wildlife Species Observed within the
Wheatland Regional Sewer Study Area
29 June and 2 July 2021

Species Name	Common name
<i>Haemorhous mexicanus</i>	House finch
<i>Melanerpes formicivorus</i>	Acorn woodpecker
<i>Melospiza melodia</i>	Song sparrow
<i>Melospiza crissalis</i>	California towhee
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Molothrus ater</i>	Brown-headed cowbird
<i>Passer domesticus</i>	House sparrow
<i>Petrochelidon pyrrhonota</i>	Cliff swallow
<i>Pica nuttalli</i>	Yellow-billed magpie
<i>Plegadis chihi</i>	White-faced ibis
<i>Sayornis nigricans</i>	Black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Sialia mexicana</i>	Western bluebird
<i>Sturnella neglecta</i>	Western meadowlark
<i>Sturnus vulgaris</i>	European starling
<i>Turdus migratorius</i>	American robin
<i>Tyrannus verticalis</i>	Western kingbird
<i>Tyto alba</i>	Barn owl
<i>Zenaidura macroura</i>	Mourning dove
Mammals	
<i>Lepus californicus</i>	Black-tailed jackrabbit
<i>Sylvilagus audubonii</i>	Desert cottontail
<i>Mephitis mephitis</i>	Striped skunk
<i>Odocoileus hemionus</i>	Mule deer
<i>Sciurus griseus</i>	Gray squirrel