Report:	Biological Resources Letter Report
Date:	March 8, 2021
Project Name:	Rainbow Water Quality Improvement Project
Project Number(s):	County No. 1023742 (Contract # 556459); ESA No. D201600465.31
Project Proponent:	Gail Getz County of San Diego Department of Public Works
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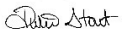
Signature of Preparer:	

1. Summary

ESA, on behalf of the County of San Diego (County) Department of Public Works (DPW), has prepared this Biological Resources Letter Report for the proposed Rainbow Water Quality Improvement Project (project) located in the unincorporated community of Rainbow in northern San Diego County (**Figure 1**). The project involves the installation of structural best management practices (BMPs) in the form of subsurface wetland channels to reduce nutrient loads from adjacent land uses within the project limits that discharge into Rainbow Creek which converges with the Santa Margarita River.

ESA conducted a biological reconnaissance and formal aquatic resources delineation on July 15, 2020 and determined that the project may affect non-wetland waters of the U.S. and state and California Department of Fish and Wildlife (CDFW) jurisdictional streambed and bank within the paved Arizona crossing of Rainbow Creek at Huffstatler Street. With the exception of the area along Rainbow Creek, which includes sensitive riparian forest, wetlands, and non-vegetated channel habitats, the project area and vicinity is entirely developed or disturbed. No special-status plant species are expected to occur in the project area or be impacted by the project. The only special-status wildlife with the potential to be impacted by the project included Arroyo Chub and nesting birds such as California horned lark, Cooper's hawk, yellow-breasted chat, and yellow warbler. With the implementation of standard mitigation measures for water quality and nesting birds, no significant impacts to biological resources are anticipated.

2. Introduction, Project Description, Location, Setting

The purpose of this report is to document sensitive biological resources subject to project impacts; describe potential biological resource impacts resulting from the proposed project; and recommend measures to avoid, minimize, and/or mitigate significant impacts consistent with federal, state and local rules and regulations including the California Environmental Quality Act (CEQA), and draft North County Multiple Species Conservation Program (MSCP) Subarea Plan (County 2009), and Biological Mitigation Ordinance (BMO). This report includes biological resource information based on a desktop data review and reconnaissance-level field

survey and jurisdictional delineation conducted by ESA biologist Julie Stout on July 15, 2020. This analysis was conducted within a survey area that included the project area and 100-foot buffer.

The 41.18-acre survey area is located in the Rainbow area of San Diego County, California (**Figure 1**). The survey area includes lands within Sections 1 and 12 of Township 9 South, Range 3 West of the Temecula U.S. Geological Survey (USGS) 7.5-minute quadrangle topographic map (**Figure 2**). Lands within and around the survey area are mainly developed or disturbed with residential, commercial, and agricultural land uses (**Figure 3a-b**). The survey area ranges from approximately 1,040 to 1,070 feet above mean sea level.

The project is located along portions Fifth Street, Huffstatler Street, and Rainbow Valley Boulevard between the road shoulder and adjacent residential or commercial developments, and consists of Sites 2, 3, 4, and 5, as shown in **Figure 3a-b** and described below. The project would install structural BMPs in the form of subsurface wetland channels and pre-treatment channels to help attain Total Maximum Daily Load (TMDL) compliance for nutrients in the Rainbow Creek watershed, which is located in the unincorporated community of Rainbow in northern San Diego County. Multiple MS4 outfalls receive runoff with high nutrient loads from adjacent land uses and discharge directly into Rainbow Creek, which converges with the Santa Margarita River. The existing concrete-lined and earthen roadside ditches would be converted into subsurface wetland channels that would filter and treat stormwater runoff. Adjacent to the subsurface wetland channels would be pre-treatment channels that would remove sediment from the surface water prior to flowing into the subsurface wetland channels. Additional improvements include driveway reconstruction, new sidewalk, and curb and gutter in deficient areas.

Site 2

The two proposed subsurface wetland channels, which are currently functioning as maintained roadside ditches at Site 2, are identified as Sites 2A and 2B. Site 2A is located along the west side of Huffstatler Street, south of Fifth Street, and would include improvements for a lined subsurface wetland channel with a pre-treatment channel. Site 2B is located along the north side of Fifth Street between Rainbow Valley Boulevard and extends past Huffstatler Street and would include improvements for a lined subsurface wetland channel with a pre-treatment channel. Site 2C is located south of the intersection of Fifth Street and Huffstatler Street and would include sidewalk, curb, and gutter improvements. Site 2D is located within Rainbow County Park and would include swale improvements.

Site 3

Site 3 is located south of Chica Road along the west side of Rainbow Valley Boulevard and would include improvements for lined subsurface wetland channels with a pre-treatment channel.

Site 4

Site 4 is located along the west side of Rainbow Valley Boulevard between Rainbow Valley Boulevard West and Rainbow Creek Road and would include improvements for lined and unlined subsurface wetland channels.

Site 5

Site 5 is located along Huffstatler Street, approximately 335 feet south of Second Street to approximately 625 feet north of Second Street and would include improvements for lined subsurface wetland channels with a pre-treatment channel.

3. Regional Context

The project area is located in the unincorporated community of Rainbow in San Diego County. Rainbow is located in the rough, foothill portion of northern San Diego County, bordered on the north by Riverside County (**Figure 1**). Rainbow is within a valley approximately four square miles in size situated among the foothills between the Aqua Tibia Mountains and Santa Margarita Mountains. The foothill peaks adjacent to the valley are both rocky and steep, reaching a maximum elevation of 1,800 feet above mean sea level. Large live oaks and sycamores can be found on the valley floor while scrub oak and green chaparral cover the rocky hillsides (County of San Diego 2011). The foothills consist mainly of detached and exposed worn masses of granite covered with natural chaparral where soil conditions preclude other vegetative types. The runoff from winter rains is occasionally quite rapid and creates a sheet flow of water across the valley floor due to the steep slope and sparse soil cover. The valley is characterized by sandy loam which is underlain at a shallow depth in many places with hardpan. This geologic condition on the valley floor has caused extreme drainage problems for crops and residences alike (County of San Diego 2011).

The project is within the Rainbow planning boundary of the draft North County Multiple Species Conservation Program Plan (North County Plan), as shown in **Figure 1**. The draft North County Plan is currently in development and has not yet been adopted.

4. Vegetation Communities and Land Cover Types

Vegetation communities and land cover types in the survey area are summarized in **Table 1** and depicted in **Figure 4. S**ite photographs are included in **Attachment A** and photo locations are depicted on **Figure 2**. Vegetation communities and cover types were classified according to *Preliminary Descriptions of the Terrestrial Communities of California* by Holland (1986) as revised by Oberbauer (2008) with modifications to describe site-specific cover types.

TABLE 1
VEGETATION COMMUNITIES AND LAND COVER TYPES WITHIN THE SURVEY AREA

Vegetation Community/Land Cover Type	MSCP Tier	100-Foot Buffer	Temporary Project Impacts		
			Permanent Improvements	Temporary Work Areas	Total
Developed/Disturbed	IV	39.77	0.95	4.96	5.91
Developed (concrete ditch)	IV	0.39	0.08	0.05	0.13
Disturbed (earthen ditch)	IV	0.27	0.02	0.18	0.20
Disturbed Wetland	I	0.04	-	-	-
Emergent Wetland	I	0.07	-	-	-
Eucalyptus Woodland	IV	0.46	-	-	-
Non-Vegetated Channel	I	0.07	-	-	-
Riparian Forest	I	0.10	-	-	-
Total Acres[1]	-	41.18	1.05	5.18	6.24

[1] Totals may not sum exactly due to rounding.

Developed/Disturbed

The majority of the survey area is comprised of developed/disturbed land cover. This land cover type includes areas characterized by disturbance, development, ornamental plantings, and/or agriculture. Within the survey area, this cover type describes areas which have been physically disturbed or significantly modified by human activity and are no longer recognizable as native or naturalized vegetation associations. Disturbed habitat continues to retain a soil substrate whereas developed habitats include paved areas and structures. Vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance.

Disturbed (earthen ditch)

Disturbed earthen ditch describes earthen ditches and is a subtype of disturbed/developed habitat that was mapped separately to distinguish where ditches occur. Within the survey area, disturbed earthen ditches are subject to high levels of sediment and erosion from adjacent agricultural operations and irregular inundation. Vegetation in some ditches may be treated with herbicide or mechanically removed. Where present, vegetation is predominantly weedy or invasive species. Species observed included Bermudagrass (*Cynodon dactylon*), smilograss (*Stipa miliacea*), crabgrass (*Digitaria sanguinalis*), rabbitfoot grass, Mexican sprangletop (*Leptocholoa fusca*), Italian rye grass (*Festuca perennis*), castor bean (*Ricinus communis*), short-pod mustard (*Hirschfeldia incana*), and Hooker's evening primrose (*Oenothera elata*).

Disturbed Wetland

Disturbed wetlands include areas permanently or periodically inundated by water which have been significantly modified by human activity and are often unvegetated. Disturbed wetland within the survey area occurs at the channel crossing (unnamed tributary or Tributary 1) at Rainbow Valley Boulevard. East of Rainbow Valley Boulevard and within the active floodplain, vegetation was absent, potentially as a result of herbicide treatment or physical removal. It was assumed that under normal conditions, the active flood plain would support emergent wetland vegetation, similar to vegetation on the west side of the road.

Emergent Wetland

Emergent wetlands are generally persistent wetlands dominated by low-growing, perennial wetland species. Within the survey area, emergent wetlands occur along Rainbow Creek and Tributary 1. Dominant species include watercress (*Nasturtium officianale*), common knotweed (*Persicaria lapathifolia*), tall flatsedge (*Cyperus eragrostis*), and Mexican sprangletop.

Developed (concrete ditch)

Developed concrete ditch shares the attributes of non-vegetated channel and urban/developed land as described in Oberbauer et al. 2008. In the survey area, this cover type consists of concrete-lined ditches.

Eucalyptus Woodland

Eucalyptus woodland within the survey area consists of a grove of naturalized river red gum (*Eucalyptus camaldulensis*) with an understory of St. Augustine grass (*Stenotaphrum secundatum*). This area occurs within the outer (100-year) floodplain of Rainbow Creek.

Non-Vegetated Channel

Non-vegetated channel or floodway (Oberbauer et al. 2008), refers to the sandy, gravelly, or rocky substrates of waterways or flood channels that remain unvegetated or with less than 10 percent total cover on a relatively permanent basis as a result of natural flood processes. Non-vegetated channel occurs at Rainbow Creek and Tributary 1 within the survey area.

Southern Riparian Forest

Southern riparian forest occurs along streams and rivers. Within the survey area, southern riparian forest occurs along Rainbow Creek and is dominated by black willow (*Salix gooddingii*) with California sycamore (*Platanus racemosa*) also present. The understory consists of weedy, non-native forbs and grasses such as rabbitsfoot grass, Canada horseweed (*Erigeron Canadensis*), short pod mustard (*Hirschfeldia incana*), and castor bean (*Ricinus communis*). Additional species observed included seep monkeyflower (*Erythranthe guttata*), Peruvian pepper tree (*Schinus molle*), Mexican fan palm (*Washingtonia robusta*), and watercress. This community is on the CDFW list of California Sensitive Natural Communities (CDFW 2019).

5. Special-Status Species

Prior to conducting field surveys, publicly-available data were reviewed to determine the potential for special-status species to occur. The review included data provided by U.S. Fish and Wildlife Service (USFWS) (USFWS 2020a and 2020b), California Natural Diversity Database (CNDDB) (CDFW 2020), California Native Plant Society (CNPS 2020), and local databases (SanBIOS 2020). During the field survey, habitats were assessed for their potential to support special-status species and all incidentally observed species were recorded. No focused special-status species surveys were conducted. Plant species observed are listed in **Attachment B** and wildlife species are listed in **Attachment C**. **Attachment D** includes a table describing the potential to occur for all special-status species with CNDDB records within 5 miles of the survey area. The following potential indirect impact buffers were assumed for the biological resource review:

- 5-mile buffer for the special-status species occurrence records review;
- 500 feet for sensitive bird habitat to determine noise impacts (i.e. least Bell's vireo [*Vireo bellii pusillus*], coastal California gnatcatcher [*Polioptila californica californica*]);
- 300 feet for occupied burrowing owl habitat (*Athene cunicularia*) and Cooper's hawk (*Accipiter cooperii*) nesting sites;
- 1,500 feet for southwestern pond turtle occupied habitat (*Actinemys marmorata*);
- 4,000 feet for known golden eagle (*Aquila chrysaetos*) nest sites; and
- Up to 100 feet for rare plants.

Plants

All plant species observed are listed in **Attachment C**. No special-status plant species were observed during the survey and potential habitat for special-status plant species within the survey area was either unsuitable or marginally suitable. Special-status plant species were either considered to have a low or unlikely potential to occur. Species with a low potential to occur were the southern tarplant (*Centromadia parryi ssp. australis*), smooth tarplant (*Centromadia pungens ssp. laevis*). These species are more typically associated with the edges of marshes and vernal pools, but ditches and stream edges within the survey area may provide marginally suitable habitat. Occurrence potential for these species was considered low due to the high levels of ongoing disturbance within the survey area in combination with the lack of occurrences within the immediate vicinity of the project site.

Wildlife

No special-status wildlife species were observed during the survey. All wildlife species detected during the survey are listed in **Attachment D**. The only CNDDB special-status species record overlapping the survey area is a record for Dulzura pocket mouse (*Chaetodipus californicus femoralis*; a CDFW Species of Special Concern [SSC]) from 1971 with a 1-mile accuracy. Due to the lack of suitable habitat for this species in the survey area, this species is not expected to occur, and the record is presumed to either be applicable to habitat areas within the 1-mile point radius that are outside of the survey area, or conditions within the survey area may have changed since the species was recorded.

Arroyo chub (*Gila orcuttii*; SSC) was considered to have a low potential to occur. This species is known to occur in downstream reaches of Rainbow Creek from the Santa Margarita River confluence to approximately 2.75 miles downstream of the survey area; however, there are no records within the reach of Rainbow Creek in the survey area or upstream of the I-15 crossing. The survey area contained soft, sandy substrates within the creek, however, current water depths in survey area were less than the preferred 16 inches; with typical depths ranging from 6 inches to less than 1 inch.

The western burrowing owl (*Athene cunicularia*; SSC) was considered to have a low potential to occur due to the high levels of disturbance and development within the survey area and lack of occurrences within the project vicinity. The nearest occurrence is approximately 5 miles away in Temecula. Marginally suitable foraging habitat is present in open disturbed areas in the survey area; however, these areas are near residences and human disturbance. No burrows were noted in the survey area; however, culverts, which are present in the survey area, may be used in lieu of burrows as shelter by burrowing owls.

The least Bell's vireo (*Vireo bellii pusillus*) was determined to have a low potential to occur in the survey area. The riparian habitat present along Rainbow Creek within the survey area was considered to be of marginal suitability for this species due to the sparse shrub layer and high level of baseline noise and disturbance from vehicle traffic and immediately adjacent land uses such as agricultural activities along Huffstatler Street.

Species with a moderate potential to occur included the California horned lark (*Eremophila alpestris actia*), yellow-breasted chat (*Icteria virens*), and yellow warbler (*Setophaga petechial*). The riparian forest and eucalyptus woodland along Rainbow Creek may provide moderately suitable foraging and nesting habitat for

yellow-breasted chat and yellow warbler, and open disturbed areas may provide foraging habitat for horned lark, however nesting is unlikely due to the high levels of active disturbance in the survey area. There are no previous records of these species occurring in the survey area.

Cooper's hawk (SSC) was considered to have a high potential to occur in the survey area. This species is common in developed residential areas with ornamental vegetation. Potential nesting habitat occurs in mature trees within the survey area.

All other special-status wildlife species reviewed for potential to occur within the survey area were determined to be unlikely to occur in the survey area based on a lack of suitable habitat.

6. Jurisdictional Wetlands and Waterways

ESA completed an aquatic resources delineation in the survey area on June 13, 2019 and July 15, 2020. A full description of the delineation results is included in the *Rainbow Water Quality Improvement Project Aquatic Resources Delineation Report* (ESA 2021). The results are summarized below.

The survey area and project impact area contain aquatic resources under the potential jurisdiction of the U.S. Army Corps of Engineers (USACE) under Clean Water Act (CWA) Section 404; the San Diego Regional Water Quality Control Board (RWQCB) under CWA Section 401 and Porter-Cologne Water Quality Control Act, and subject to CDFW regulation under FGC Section 1602 (**Table 2**). Aquatic resources within the survey area include Rainbow Creek, an unnamed tributary to Rainbow Creek (Tributary 1), roadside ditches, and wetlands associated with Rainbow Creek and Tributary 1.

TABLE 2
SUMMARY OF POTENTIAL AQUATIC RESOURCES IN THE SURVEY AREA

Feature	Average OHWM (ft)	Cowardin Types[2]	USACE/RWQCB/CDFW			CDFW/RWQCB (non-federal)[3] (acres/lf)	CDFW Only (non-federal)[3] (acres/lf)
			Wetland[1] (acres/lf)	Non-Wetland (acres/lf)	Total (acres/lf)		
Rainbow Creek	21	PEM, PFO, R4SB, R4SBr	0.06/-	0.05/289	0.11/242	0.09/-	0.43/-
Tributary 1	20.9	PEM, PUB, R4SBx	0.09/112	0.02/115	0.11/227	0.07/-	-
Totals[3]:			0.15/112	0.07/357	0.22/469	0.17/-	0.43/-

1 Ditches and culverts are not included in acreage totals.
2 Based on the USACE definition
3 Totals may not sum exactly due to rounding.

Rainbow Creek

Rainbow Creek is an intermittent tributary to the Santa Margarita River, that includes potential wetlands and non-wetland waters of the U.S., waters of the state and state wetlands, and CDFW riparian habitat. At the time of the survey Rainbow Creek was flowing southwest across Huffstatler Street via an Arizona crossing; however, based on information provided by the County, it is assumed that Rainbow Creek normally flows below Huffstatler

Street due to the presence of culverts. The culverts were buried by sand at the time of the field survey; however, due to regular maintenance, it is assumed that under normal circumstances these culverts are functional. Rainbow Creek includes a non-vegetated low-flow channel and vegetated wetlands within the floodplain and on sandbars within the channel. The average ordinary high water mark width was 24 feet with typical depths of 6 inches or less. Substrate within the survey area was sandy and ordinary high water mark indicators included sediment deposits, drift and debris, change in vegetation, and bank cutting. Wetlands associated with Rainbow Creek included vegetated sandbars with emergent vegetation characterized by herbaceous hydrophytic vegetation such as watercress growing within the channel. On the west side of Huffstatler, wetlands along the creek included mature riparian forest vegetation dominated by black willow.

Tributary 1

Tributary 1 is an intermittent unnamed tributary to Rainbow Creek that includes potential wetlands and non-wetland waters of the U.S., waters of the state and state wetlands, and CDFW riparian habitat. Rainbow Valley Boulevard crosses over Tributary 1 via bridge crossing with concrete sidewalls. Based on review of historic imagery, Tributary 1 appears to be a naturally-occurring stream that has been artificially excavated and channelized. East of Rainbow Valley Boulevard, the entire channel is vegetated with hydrophytic species such as common knotweed, watercress, and Mexican sprangletop. Below and west of Rainbow Valley Boulevard, the tributary includes non-wetland waters (non-vegetated channel) as a result of shading from the bridge and continuous flow and erosion within the low-flow channel. Within the active floodplain and outside of the apparent low-flow channel, vegetation was absent, potentially as a result of herbicide treatment or physical removal. It was assumed that under normal conditions, the active flood plain would support wetland vegetation, similar to vegetation on the west side of the road.

Roadside Ditches

Six roadside ditches were mapped within the survey area that consisted of excavated channels with identifiable bed and banks. Roadside ditches are non-jurisdictional under the Navigable Waters Protection Rule (NWPR) and not subject to regulation under CWA Section 404 or 401. The U.S. Army Corps of Engineers has provided preliminary feedback on December 18, 2020 (virtual meeting) that they would support a determination that the features are non-jurisdictional. Roadside ditches are potential Waters of the State, but based on feedback from the Regional Water Quality Control Board on December 3, 2020 and California Department of Fish and Wildlife on November 30, 2020 (via email) have indicated they do not intend to regulate these features. Ditches within the survey area did not appear to be relocated streams, carry flow diversions from streams, or contain sensitive fish or wildlife resources.

The roadside ditches were constructed in and draining uplands. As such, Ditches 1 through 6 are not relocated tributaries, excavated in a tributary, nor do they drain wetlands. Some ditches were earthen while others were asphalt or concrete lined. Substrate within earthen ditches appeared to primarily be recently deposited or recently excavated loose loams and sandy loams. Vegetation within ditches in the survey area was characteristic of frequently disturbed and agricultural areas and limited to first-year growth of weedy grasses and forbs. Vegetation within some ditches may be affected by frequent re-excavation or herbicide treatments.

Hydrology of ditches within the survey area was considered ephemeral or intermittent and subject to irregular or semi-persistent patterns of year-round flooding and drying as a result of watering activities at adjacent nurseries. Ditches within the survey area are entirely above the water table and flow only in direct response to adjacent nursery watering or precipitation events.

7. Other Unique Features/Resources

The survey area does not support other unique features or resources. The survey area, with the potential exception of the Rainbow Creek corridor, is not expected to function as an important wildlife corridor due to the level of development in the area, including fences and roadways.

8. Significance of Project Impacts and Proposed Mitigation

This section discusses direct and indirect impacts to biological resources that may occur from implementation of the project. Direct impacts include alteration, disturbance, or destruction of biological resources; and indirect impacts include impacts such as elevated noise and dust levels, soil compaction, a temporary decrease in water quality, and introduction of invasive species.

Overall, the project is expected to result in a long-term net benefit to biological resources due to the improvement to water quality that the project is expected to provide to Rainbow Creek and the downstream Santa Margarita River, which both contain sensitive biological resources and provide habitat to special-status species.

Riparian Habitat and Sensitive Natural Communities

Project impacts to riparian habitat, including ditches and channels, are summarized in **Table 3** and depicted in **Figure 5a-b** and would include soil disturbance and vegetation removal. No impacts to CDFW sensitive natural communities would occur. Permanent improvements would include the installation of water quality BMPs such as subsurface wetland channels and temporary impacts would include ground disturbance from access, loading, and staging. Within permanent improvement areas, the installation of BMPs would improve the function of riparian habitat by reducing nutrient transport along these features to Rainbow Creek, which is currently listed on the 303(d) list of impaired water bodies due elevated nutrient concentrations causing excessive algal growth.

Ditches and concrete channels within the project area are currently highly disturbed and project disturbance is not expected to significantly change the existing condition. No impacts to emergent wetlands would occur. Herbaceous vegetation currently present within the emergent wetland area is fast-growing (established in less than one year), and there is a high potential for this area to convert back to non-vegetated channel during flood events, as the emergent wetland vegetation is established on an in-channel sandbar. For these reasons no compensatory mitigation is currently proposed.

Due to the high level of disturbance of existing habitats and no proposed impacts to native vegetation, impacts to riparian habitat and sensitive natural communities were considered **less than significant**. To avoid and minimize impacts to wetlands and riparian habitat, the following measure is recommended:

MM-BIO-1: Riparian and Wetland Avoidance and Minimization. Prior to construction, impacts to wetland and riparian habitat shall be avoided and minimized to the maximum extent feasible, and the work area shall be clearly flagged or marked adjacent to Rainbow Creek to prevent accidental impacts to sensitive vegetation.

TABLE 3
VEGETATION COMMUNITIES AND LAND COVER TYPES, IMPACTS, & MITIGATION

Vegetation Community/Land Cover Type	MSCP Tier	Existing Acres Within the Survey Area	Permanent Improvements (Acres)	Temporary Work Areas (Acres)	Required Mitigation Ratio	Required Mitigation (Acres)
Riparian Habitats						
Developed (concrete ditch)	IV	0.39	0.08	0.05	None	-
Disturbed (earthen ditch)	IV	0.27	0.02	0.18	None	-
Disturbed Wetland	I	0.04	-	-	None	-
Emergent Wetland	I	0.07	-	-	None	-
Eucalyptus Woodland	IV	0.46	-	-	None	-
Non-Vegetated Channel	I	0.07	-	-	None	-
Riparian Forest	I	0.10	-	-	None	-
Other Cover Types						
Developed/Disturbed	IV	39.77	0.95	4.96	None	-
Total Acres[1]	-	41.18	1.05	5.18	-	-

[1] Totals may not sum due to rounding

[2] In accordance with County Guidelines, wetland mitigation shall include a minimum 1:1 creation component while restoration/enhancement of existing wetlands may be used to make up the remaining requirements for a total 3:1 ratio.

Special-Status Species

Plants

Due to the high level of ongoing disturbance within the project area, special-special status plants have a low potential to occur. Where marginally suitable habitat for special-status plants is present, it is not expected that a population of special-status plants could establish or persist due to the ongoing disturbance and competition from weedy species that are characteristic of disturbed areas. For these reasons, impacts to special-status plants would be **less than significant**.

Wildlife

Project impacts to special-status wildlife could occur during construction and as a result of habitat loss or degradation. The project is not expected to result in impacts to species noted in Chapter 5 and Attachment D as having a low or unlikely potential to occur, therefore these species are not discussed below, with the exception of Arroyo Chub, which may be vulnerable to downstream impacts to water quality. Special-status wildlife species with the potential to be impacted by the project are discussed below.

Arroyo Chub

Impacts to Arroyo Chub could result from construction materials or pollutants from vehicles washing into Rainbow Creek during construction. With implementation of standard water quality BMPs during construction, these impacts would be **less than significant**. The project is expected to provide long-term water quality benefits to Rainbow Creek, benefitting Arroyo Chub and other aquatic species that occur within downstream reach of Rainbow Creek and the Santa Margarita River. Water quality measures to minimize temporary impacts may include storing contaminants and staging equipment away from ditches and creeks to prevent the erosion or spillage of contaminants into the creek or ditches connected to the creek and the use of silt fencing, sand bags, and/or diversions to prevent sediment laden materials from washing downstream during activities within and adjacent to ditches and streams. It is expected that temporary water quality impacts during construction will be analyzed and addressed under the water quality analysis.

Nesting Birds

Due to the potential for nesting birds and raptors protected under CFGC and the Migratory Bird Treaty Act, including Cooper's hawk, California horned lark, yellow-breasted chat, and yellow warbler, **potentially significant** impacts could occur due to direct accidental destruction of nests or nest abandonment due to indirect disturbance from noise and construction activity. To reduce these impacts to a level of **less than significant**, the following measure is recommended:

> **MM-BIO-2: Nesting Season Avoidance or Pre-Construction Nesting Bird Survey.** Construction activities should be initiated outside of the bird breeding season (January 15 to September 1) to the extent feasible. If construction initiation occurs during the bird breeding season, a pre-construction nesting bird and raptor survey of the project area and an appropriate buffer of up to 500 feet shall be completed by a qualified biologist prior to vegetation removal or noise generating construction activities. If any active nests are detected, the area will be flagged and mapped on construction plans along with a buffer as recommended by the qualified biologist. The buffer area(s) established by the qualified biologist will be avoided until it is determined that the nest is no longer active. The qualified biologist shall be a person familiar with bird breeding behavior and capable of identifying the bird species of San Diego County by sight and sound and determining alterations of behavior as a result of human interaction. Buffers will be based on local topography and line of sight, species behavior and tolerance to disturbance, and existing disturbance levels.

State and Federal Wetlands

The project would not directly or indirectly impact state or federal wetlands as the project was designed to completely avoid direct wetland impacts. Additionally, after correspondence with the regulatory agencies indicating they would not regulate impacts within ditches in the survey area, no permits are anticipated for the project. Temporary and permanent impacts located adjacent to regulated aquatic resources are depicted in **Figures 6a-c** for waters of the U.S., **Figures 7a-c** for waters of the state, and **Figures 8a-b** for CDFW resources. Furthermore, no direct or indirect impacts are expected to occur with implementation of standard BMPs.

Wildlife Movement and Nursery Sites

The survey area, with the potential exception of the Rainbow Creek corridor, is not expected to function as an important wildlife corridor due to the level of development in the area, including fences and roadways. The project would not block the area along Rainbow Creek or substantially interfere with movement of wildlife. **No impact** would occur.

The segment of Rainbow Creek adjacent to the project is not known to function as a significant or ecologically important wildlife nursery site; however, downstream segments of Rainbow Creek do provide this function for Arroyo Chub and other aquatic species. As previously discussed, potential temporary water quality impacts would be **less than significant with mitigation** and would be offset by long-term water quality improvements that are the purpose of the project.

Local Policies, Ordinances, and Adopted Plans

The project is not within an adopted Habitat Conservation Plan or Natural Community Conservation Plan area. Project mitigation is consistent with the *County of San Diego Guidelines for Determining Significance* (County 2010). The project area is not within or adjacent to oak woodlands subject to the County's Resource Protection Ordinance. While the project area contains oaks along some segments of roadway, these oaks do not occur in naturalized stands or as a part of an oak woodland vegetation community. Therefore, the project is consistent with local policies, ordinances, and plans with regards to biological resources and **no impact** would occur.

Cumulative Impacts

Less than significant project impacts to riparian habitat, special-status species, state and federal wetlands, and wildlife nursery sites would contribute incrementally to cumulative impacts within the region. Impacts from ongoing activities within the region include widespread development and ongoing operations at nursery facilities. Relative to the levels of disturbance and ongoing impacts within the area, the project's contribution to cumulative impacts would be **less than significant.**

9. Conformance with MSCP Findings

The project is within the Rainbow planning boundary of the draft North County Plan. The draft North County Plan is currently in development and has not yet been adopted.

10. References

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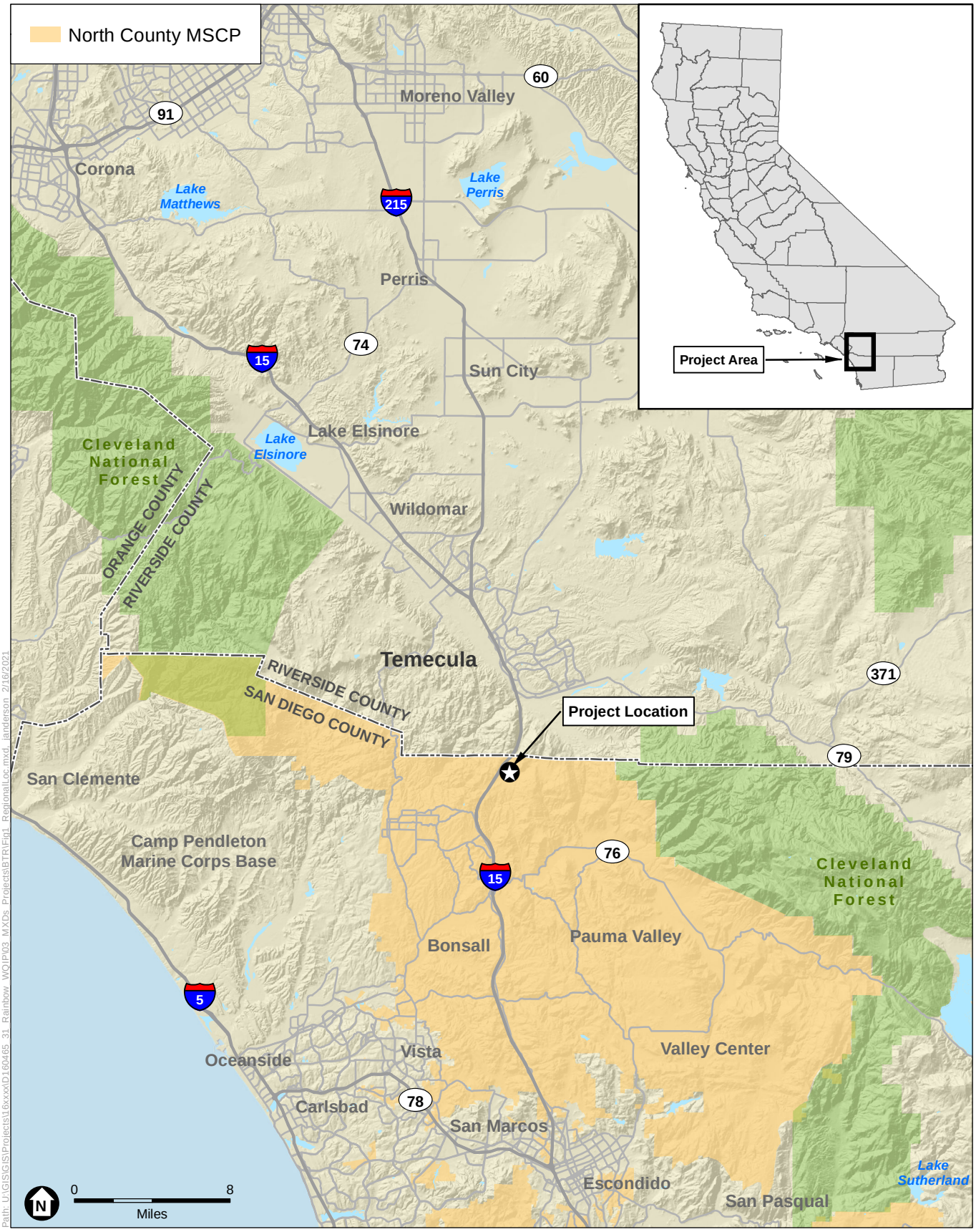
12. Attachments

Figures

Figure 1 – Project Vicinity
Figure 2 – Project Components
Figure 3a-b – Vegetation Communities & Land Cover Types
Figure 4 – Special-status Species Records
Figure 5a-b – Project Impacts
Figures 6a-c – Impacts to Waters of the U.S.
Figures 7a-c – Impacts to Waters of the State
Figures 8a-b – Impacts to CDFW Resources

Attachments

A – Site Photographs
B – Plant Compendium
C – Wildlife Compendium
D – Special-Status Species Potential to Occur

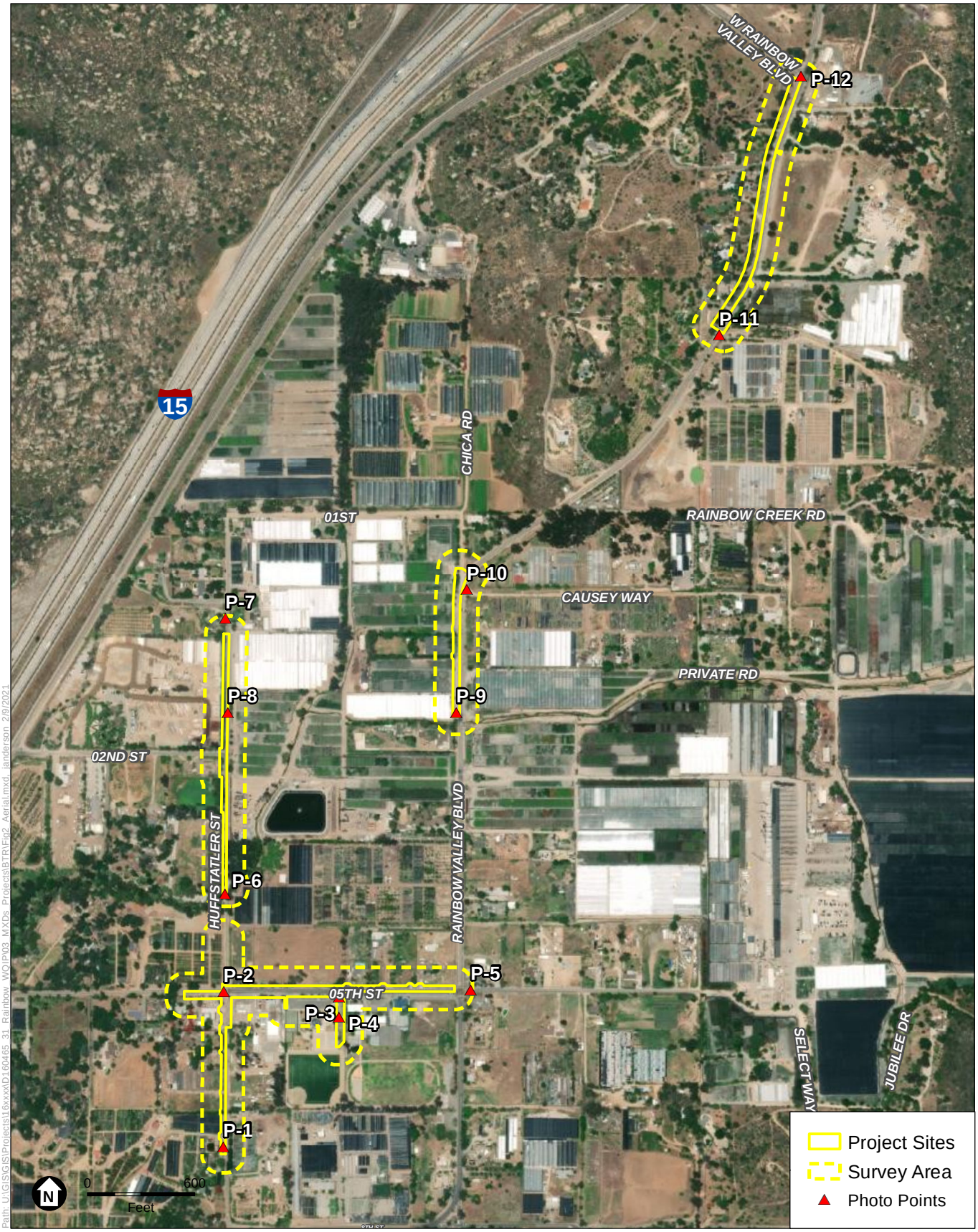


SOURCE: ESRI

Rainbow WQIP

Figure 1
Regional Location

ESA

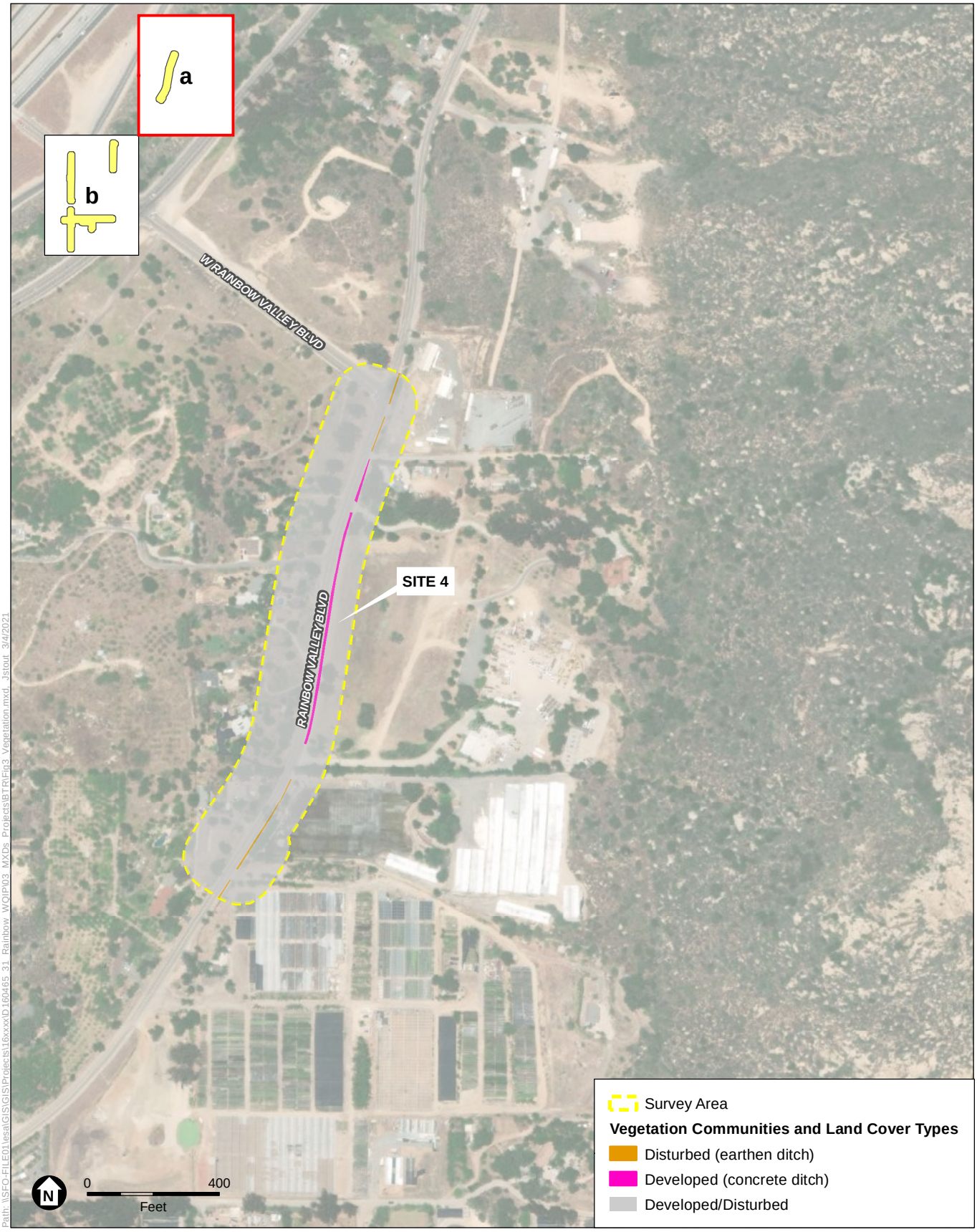


SOURCE: ESRI, 2019

Rainbow WQIP

Figure 2
Aerial

ESA



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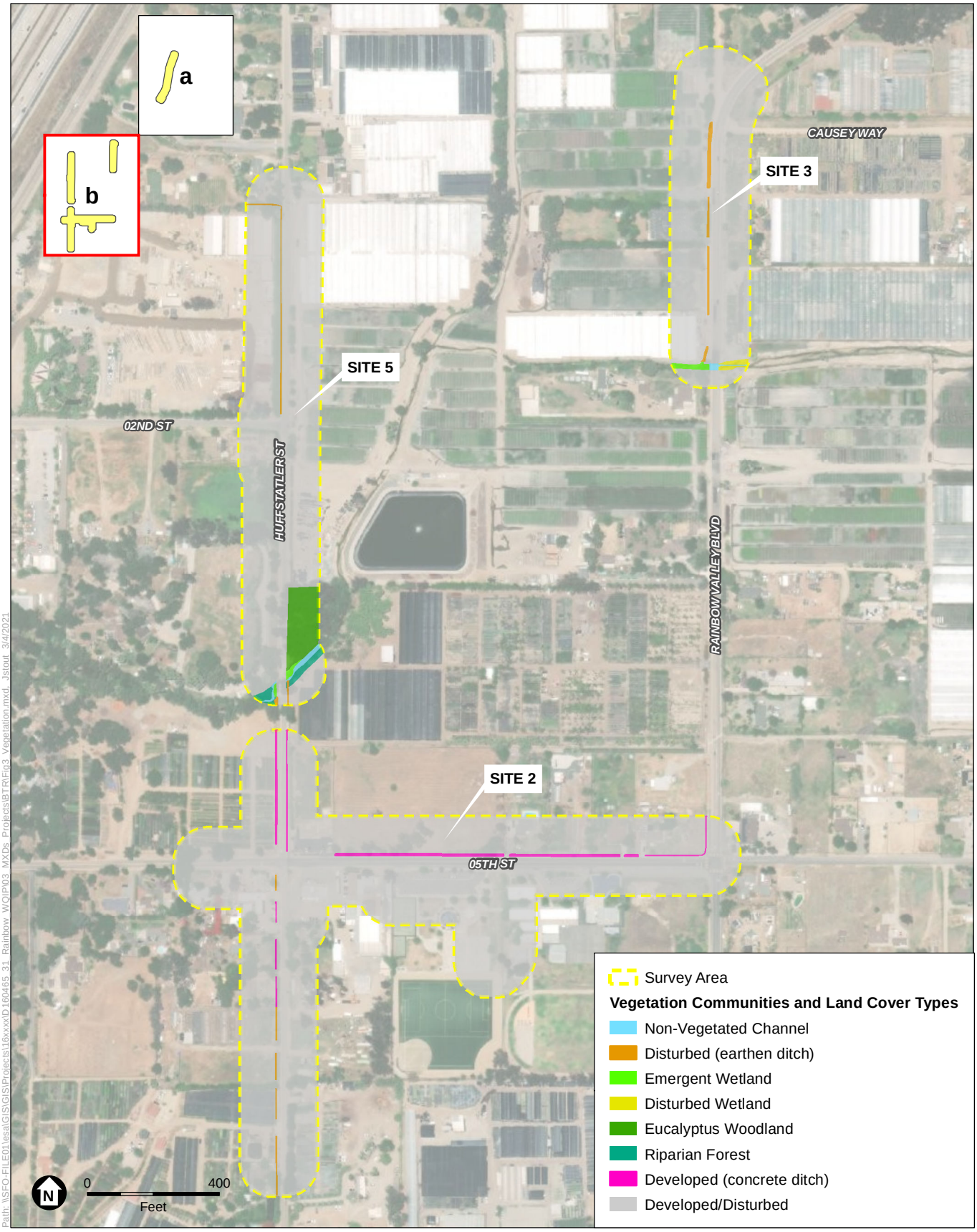
SOURCE: ESRI, 2019

Rainbow WQIP

Figure 3a
Vegetation Communities and Land Cover Types

ESA

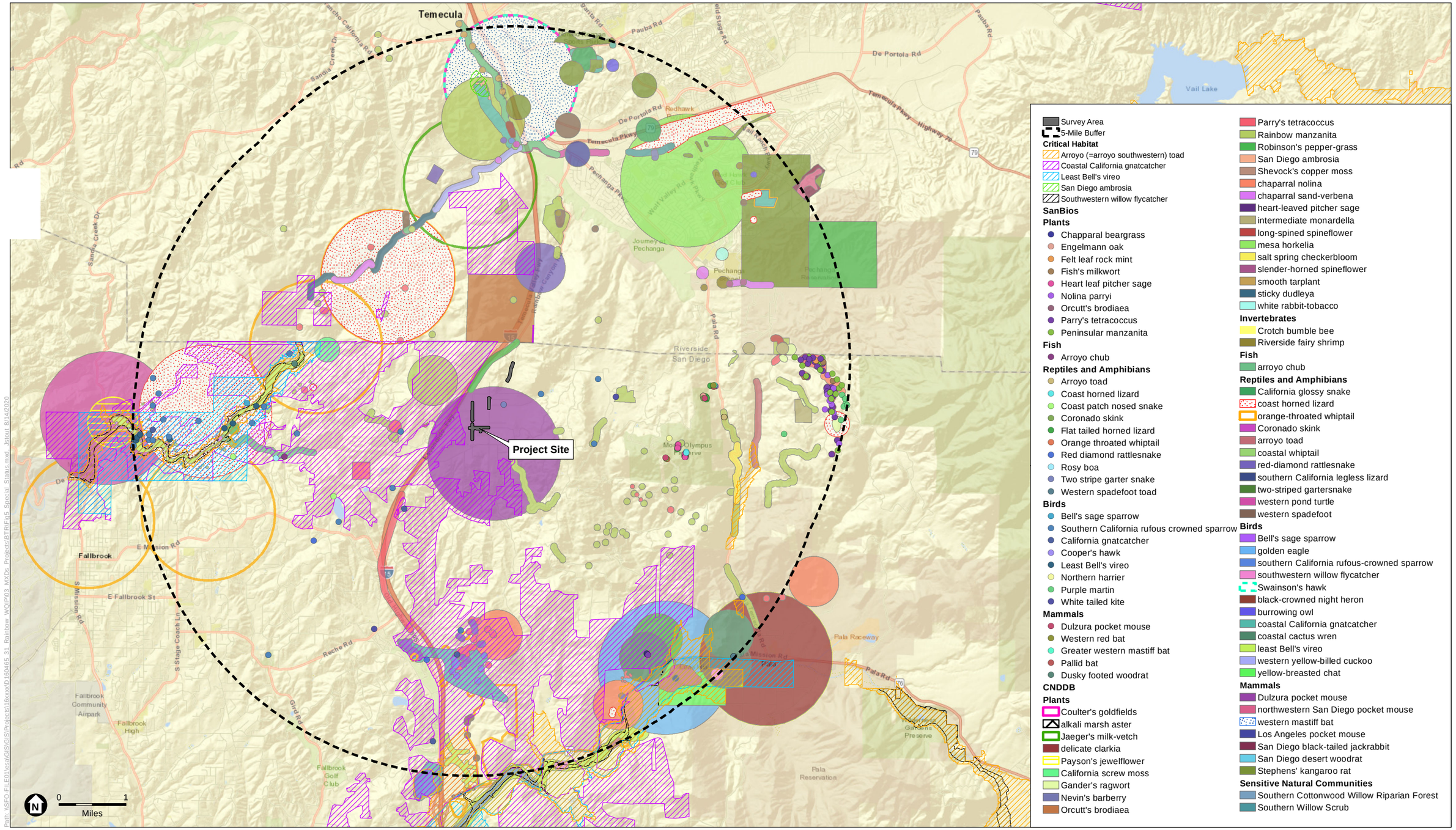


SOURCE: ESRI, 2019

Rainbow WQIP

Figure 3b
Vegetation Communities and Land Cover Types

ESA

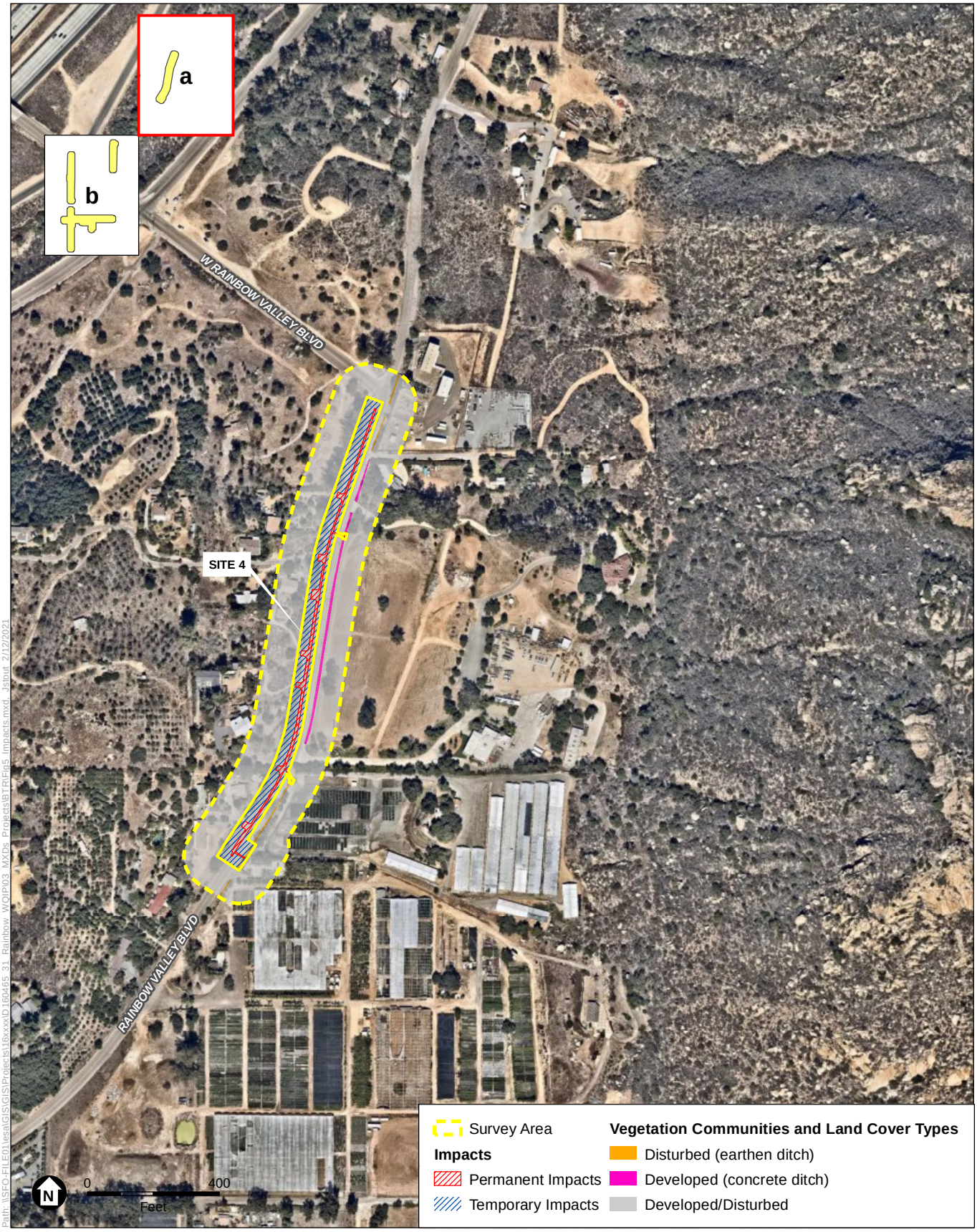


SOURCE: ESRI; CDFW; SanGIS.

Rainbow WQIP

Figure 4
Special-Status Species Records

ESA

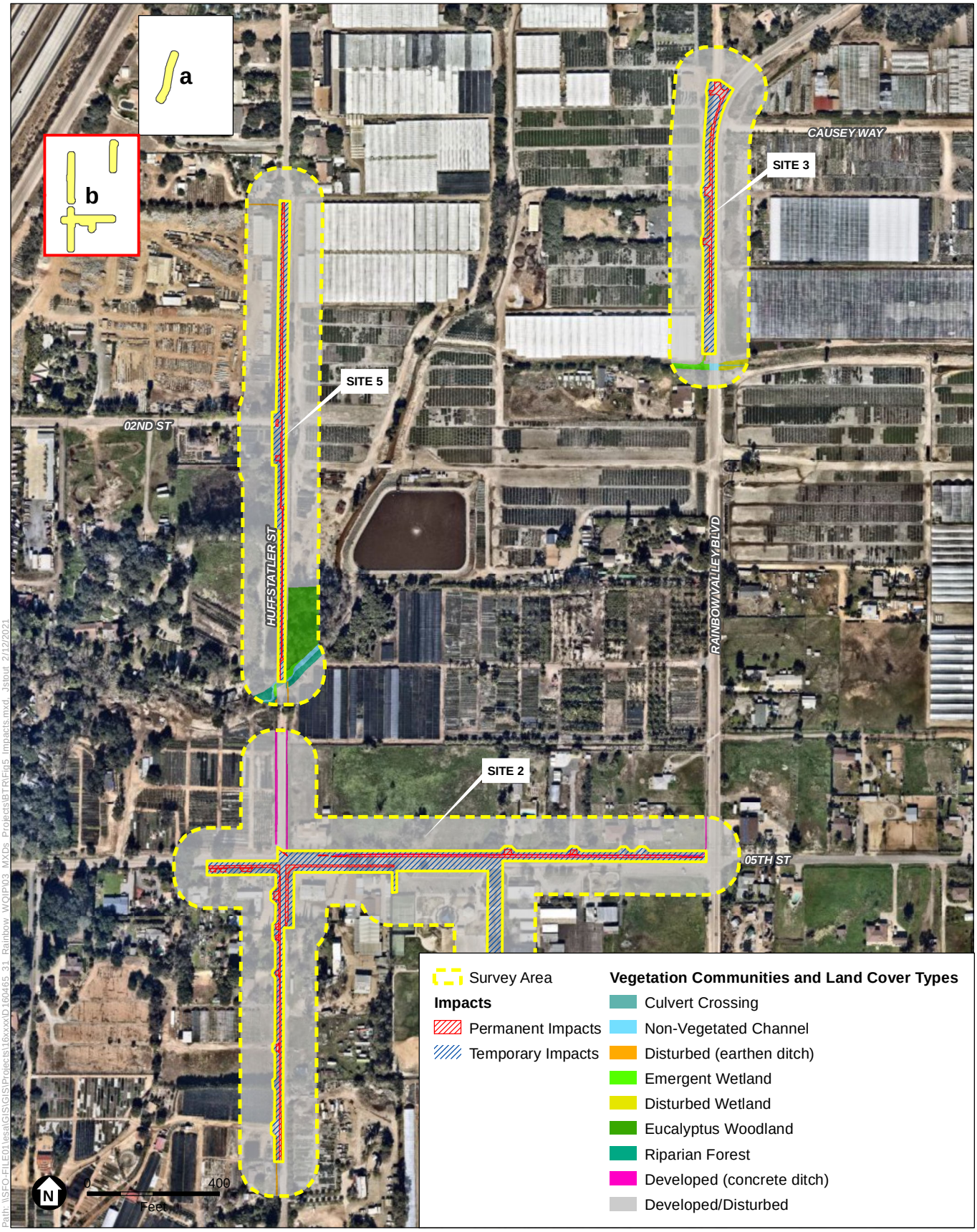


SOURCE: ESRI, 2019

Rainbow WQIP

Figure 5a
Project Impacts

ESA

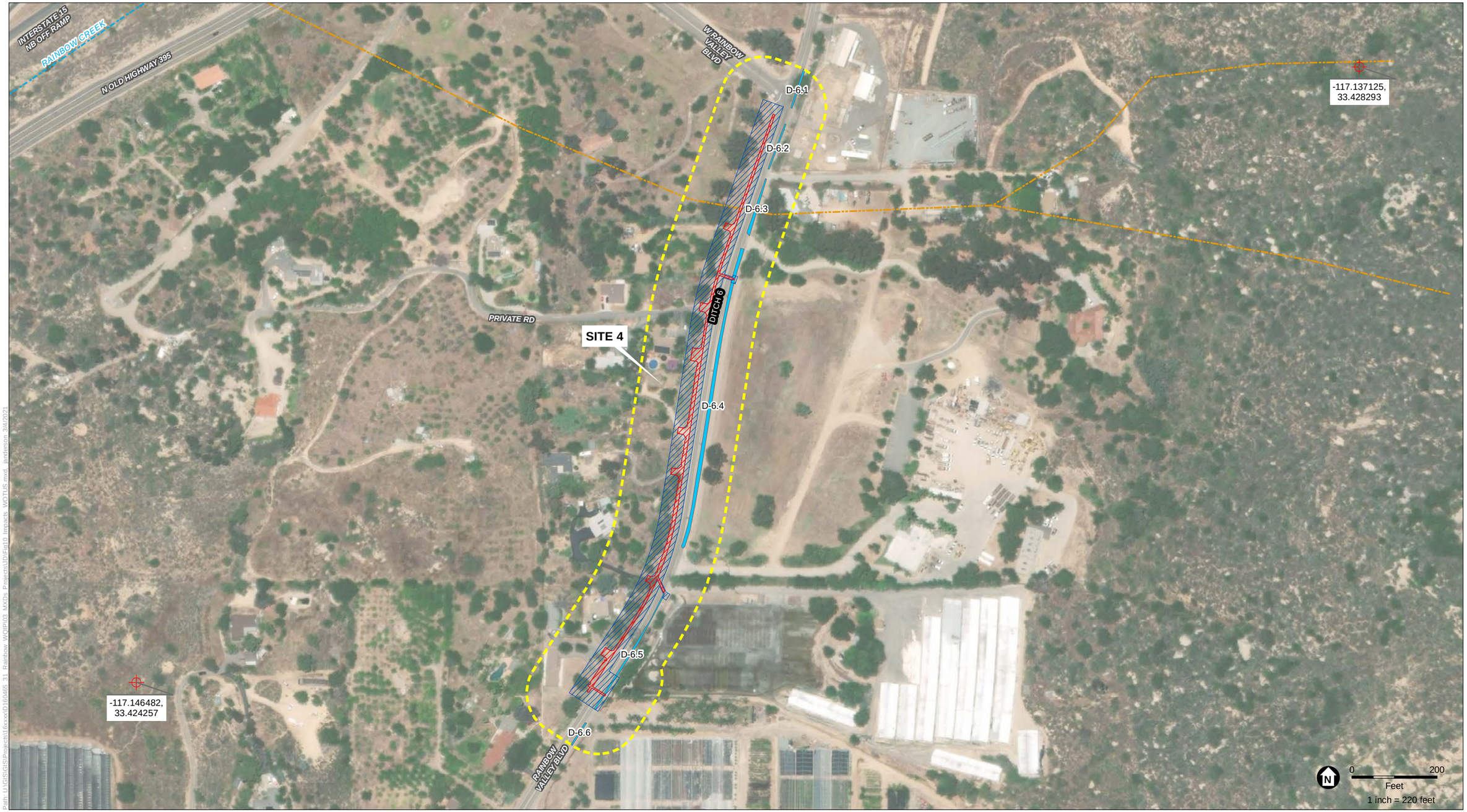


SOURCE: ESRI, 2019

Rainbow WQIP

Figure 5b
Project Impacts

ESA



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SOURCE: ESRI Imagery, 7/5/2019; ESA, 2020

Coordinate System: US State Plane California Zone VI
Projection: Lambert Conformal Conic
Datum: North American Datum 1983(2011)

National Hydrography Dataset (NHD)
- Ephemeral
- Intermittent

Survey Area (41.18 acres)
Map Reference Point

Non-Jurisdictional Waters
- Ditch (0.64 acre)

Impacts
- Permanent Impacts
- Temporary Impacts

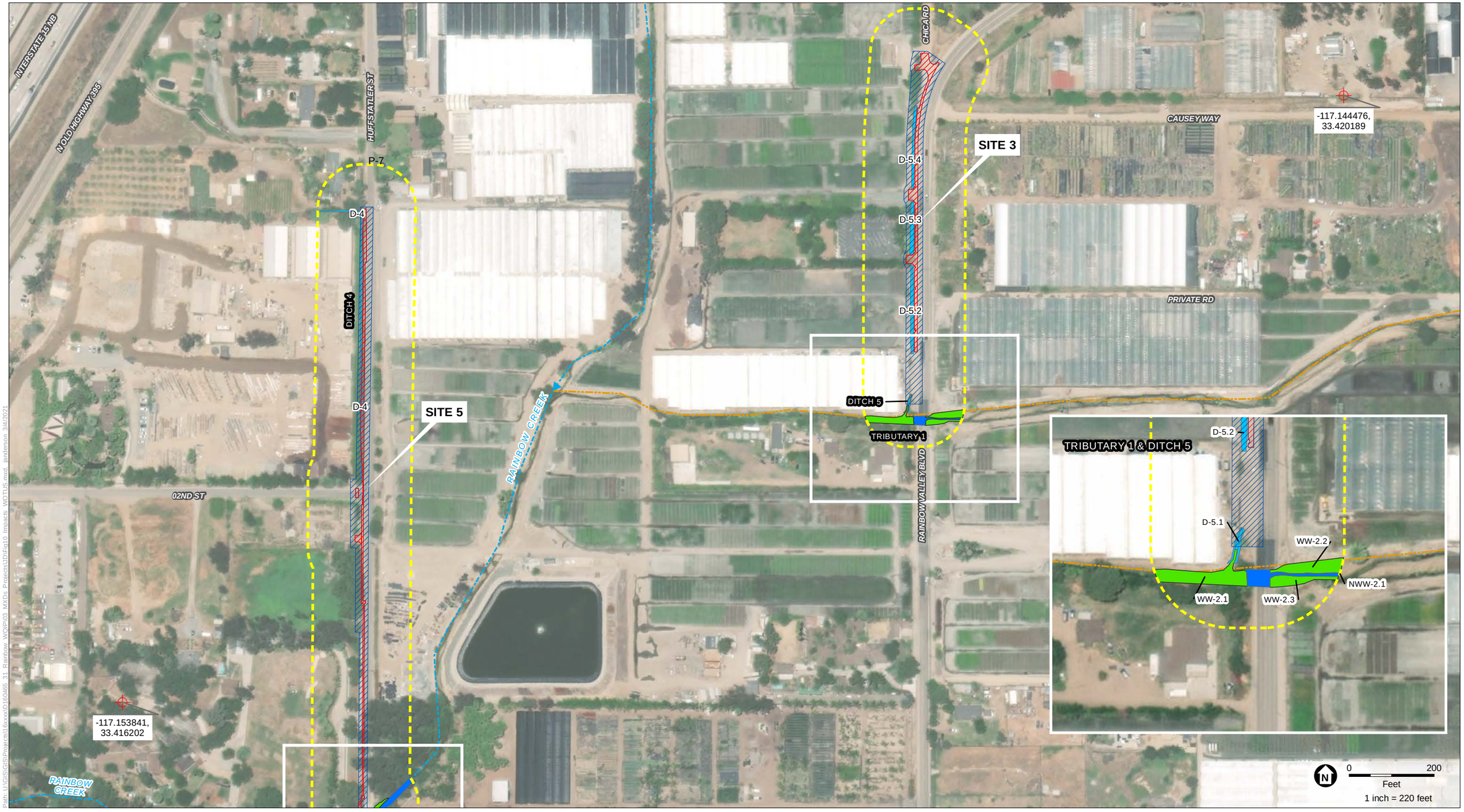
a
b
c

Rainbow WQIP

Figure 6a
Impacts to Potential Waters of the U.S.
(1 of 3)

Delineated by: Julie Stout
Mapping by: Jaclyn Anderson
Created on: 8/5/2020

ESA



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SOURCE: ESRI Imagery, 7/5/2019; ESA, 2020

Coordinate System: US State Plane California Zone VI
Projection: Lambert Conformal Conic
Datum: North American Datum 1983(2011)

National Hydrography Dataset (NHD)
- Ephemeral
- Intermittent

Survey Area (41.18 acres)
Map Reference Point

Non-Wetland Waters
- Intermittent Stream (0.07 acre)

Wetlands
- Wetlands (0.15 acre)

Non-Jurisdictional Waters
- Ditch (0.64 acre)

Impacts
- Permanent Impacts
- Temporary Impacts

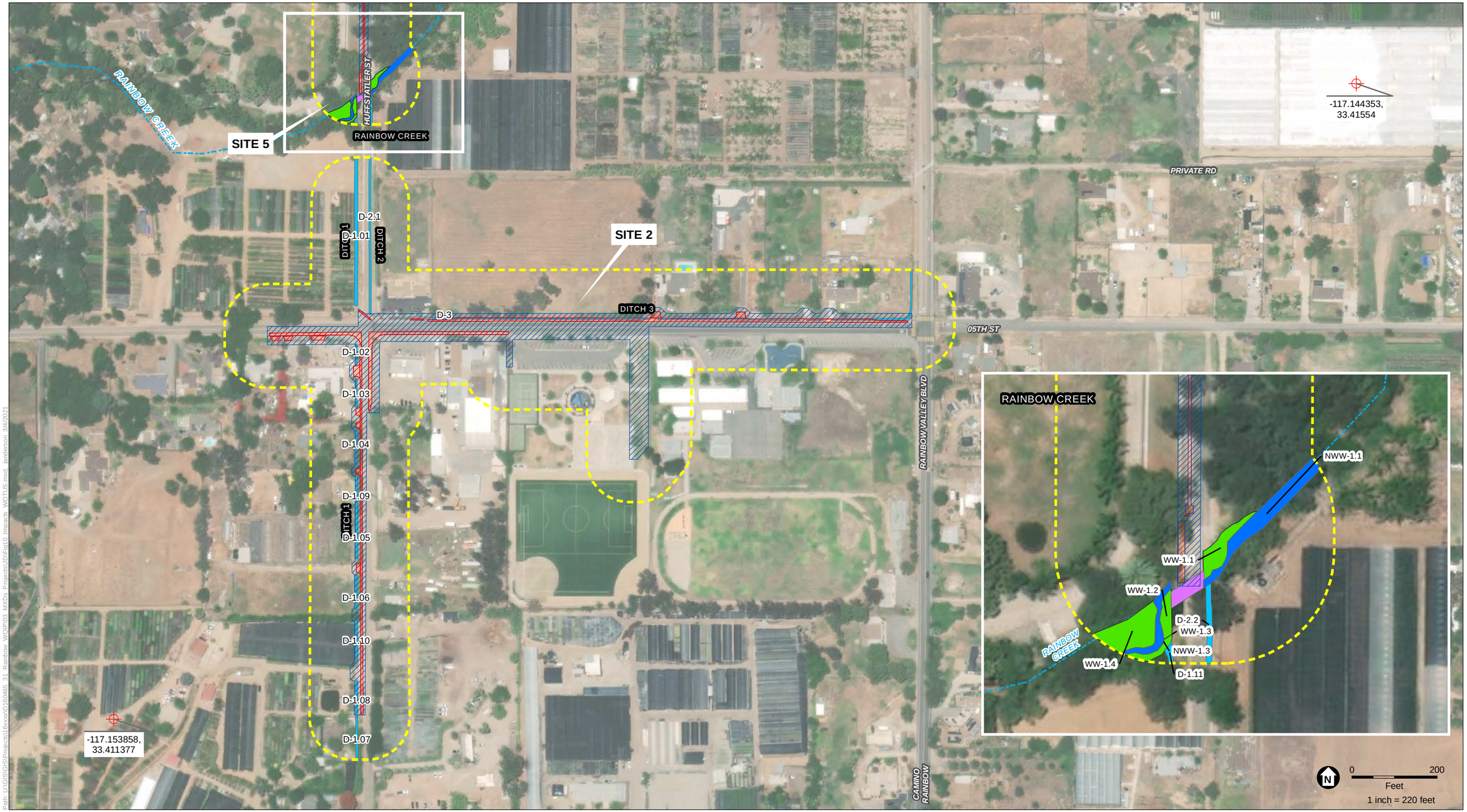
a
b
c

Rainbow WQIP

Figure 6b
Impacts to Potential Waters of the U.S.
(2 of 3)

Delineated by: Julie Stout
Mapping by: Jaclyn Anderson
Created on: 8/5/2020

ESA



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SOURCE: ESRI Imagery, 7/5/2019; ESA, 2020

Coordinate System: US State Plane California Zone VI
Projection: Lambert Conformal Conic
Datum: North American Datum 1983(2011)

National Hydrography Dataset (NHD)
- Intermittent

Survey Area (41.18 acres)
Map Reference Point

Non-Wetland Waters
- Intermittent Stream (0.07 acre)

Wetlands
- Wetlands (0.15 acre)

Non-Jurisdictional Waters
- Ditch (0.64 acre)

Waters Not Included
- Culvert (no impact)

Impacts
- Permanent Impacts
- Temporary Impacts

a
b
c

Rainbow WQIP

Figure 6c
Impacts to Potential Waters of the U.S.
(3 of 3)

Delineated by: Julie Stout
Mapping by: Jaclyn Anderson
Created on: 8/5/2020



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SOURCE: ESRI Imagery, 7/5/2019; ESA, 2020

Coordinate System: US State Plane California Zone VI
Projection: Lambert Conformal Conic
Datum: North American Datum 1983(2011)

National Hydrography Dataset (NHD)
- Ephemeral
- Intermittent

Survey Area (41.18 acres)
Map Reference Point

Impacts
- Permanent Impacts
- Temporary Impacts

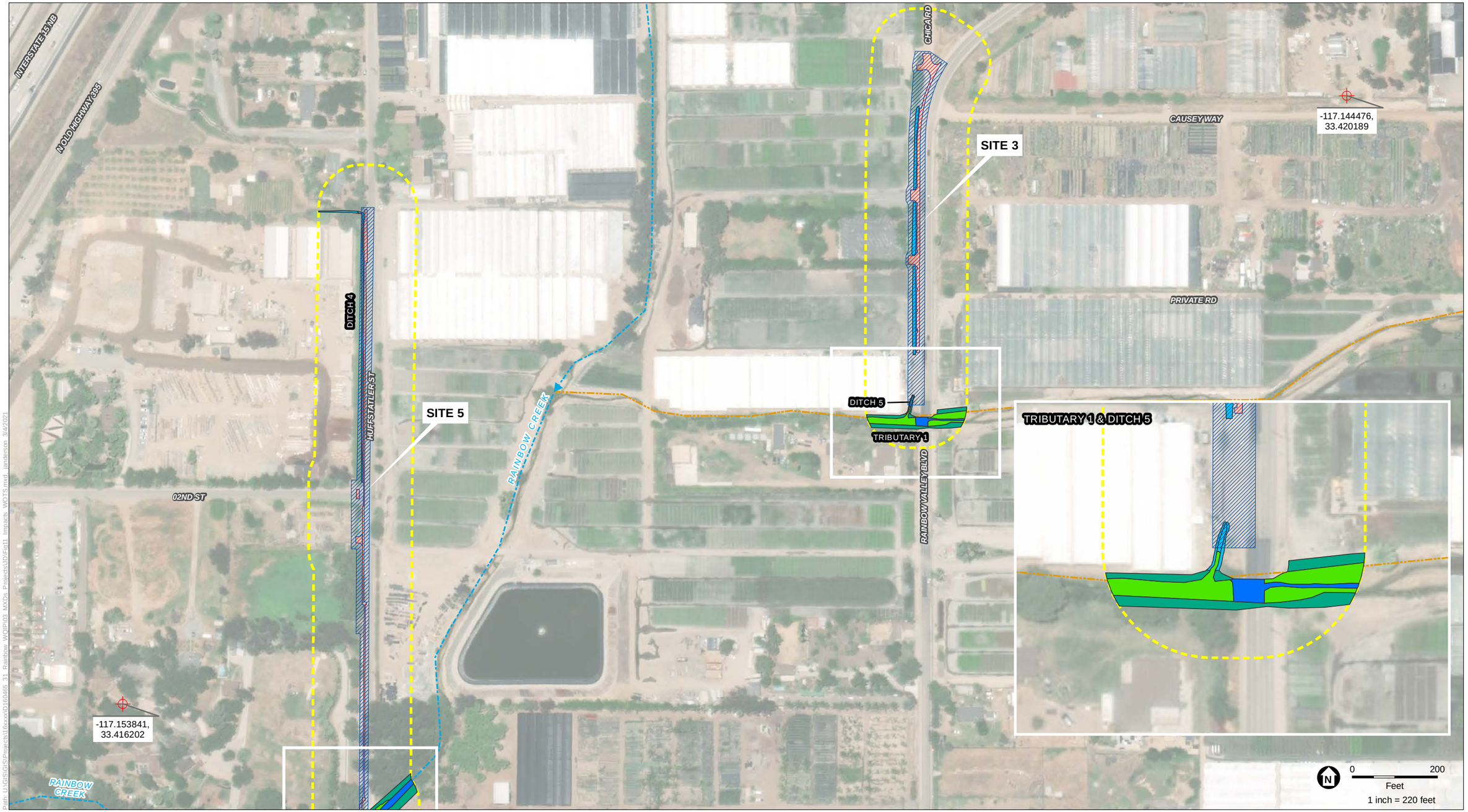
Waters Not Included
- Ditch

a
b
c

Rainbow WQIP

Figure 7a
Impacts to Potential Waters of the State
(1 of 3)

Delineated by: Julie Stout
Mapping by: Jaclyn Anderson
Created on: 8/5/2020



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SOURCE: ESRI Imagery, 7/5/2019; ESA, 2020

Coordinate System: US State Plane California Zone VI
Projection: Lambert Conformal Conic
Datum: North American Datum 1983(2011)

National Hydrography Dataset (NHD)
- Ephemeral
- Intermittent

- Survey Area (41.18 acres)
- Map Reference Point

Impacts
- Permanent Impacts
- Temporary Impacts

Waters of the State and State Wetlands
- Riparian Zone
- Streambed - Intermittent Stream
- Wetlands

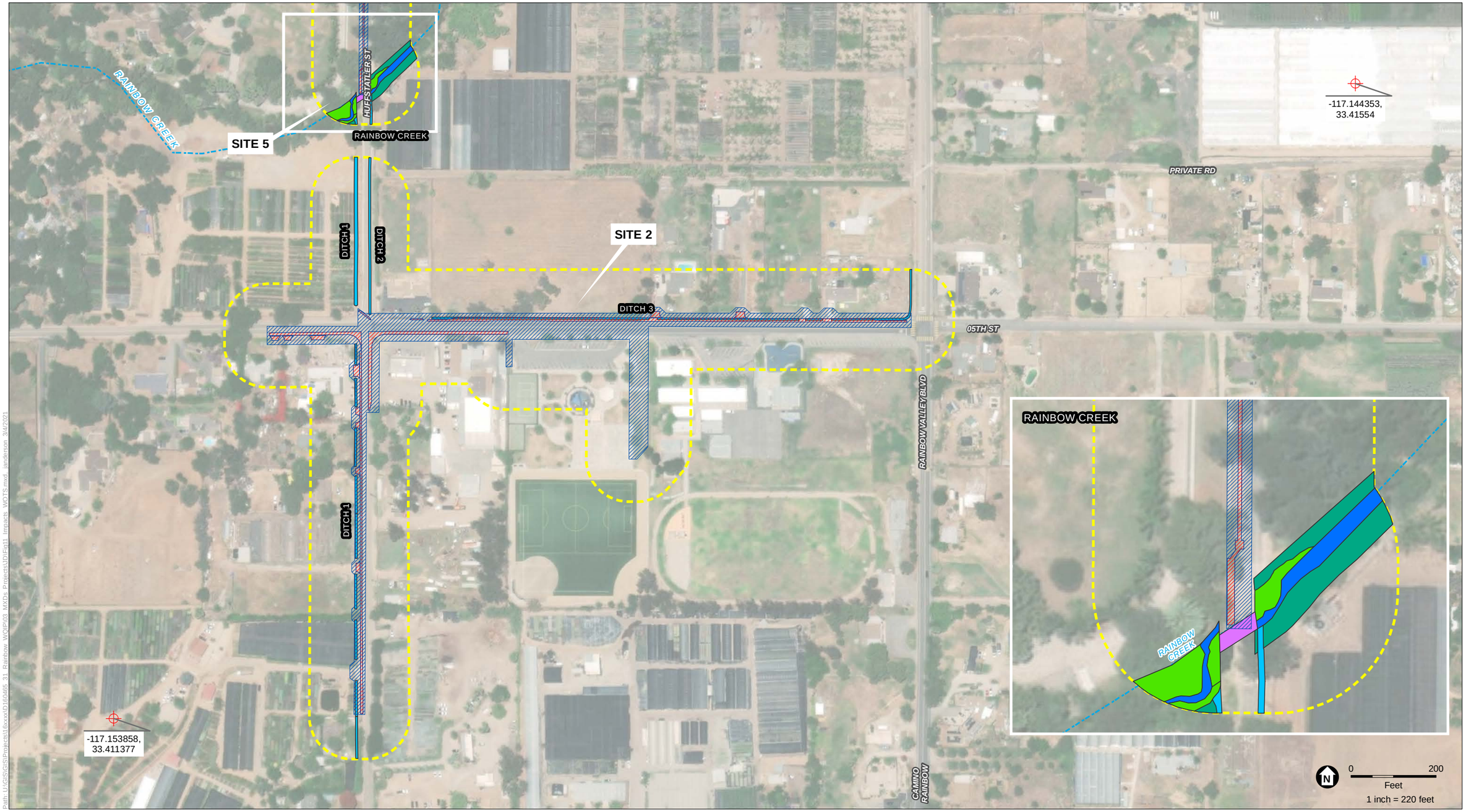
Waters Not Included
- Ditch

a
b
c

Rainbow WQIP

Figure 7b
Impacts to Potential Waters of the State
(2 of 3)

Delineated by: Julie Stout
Mapping by: Jaclyn Anderson
Created on: 8/5/2020



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SOURCE: ESRI Imagery, 7/5/2019; ESA, 2020

Coordinate System: US State Plane California Zone VI
Projection: Lambert Conformal Conic
Datum: North American Datum 1983(2011)

ESA

National Hydrography Dataset (NHD)
- Intermittent

- Survey Area (41.18 acres)
- Map Reference Point

Impacts
- Permanent Impacts
- Temporary Impacts

Waters of the State and State Wetlands
- Riparian Zone
- Streambed - Intermittent Stream
- Wetlands

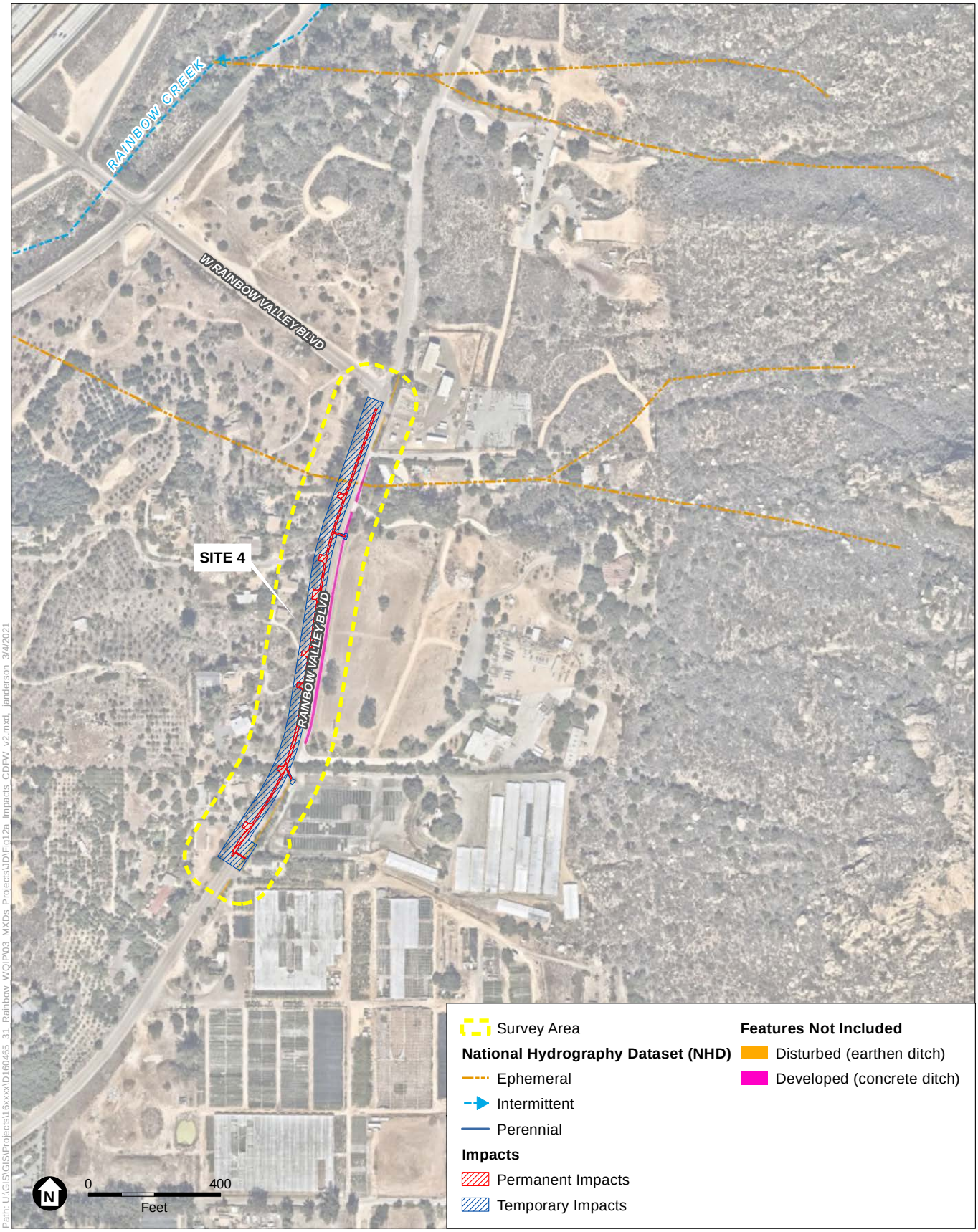
Waters Not Included
- Culvert (no impact)
- Ditch

a
b
c

Rainbow WQIP

Figure 7c
Impacts to Potential Waters of the State
(3 of 3)

Delineated by: Julie Stout
Mapping by: Jaclyn Anderson
Created on: 8/5/2020

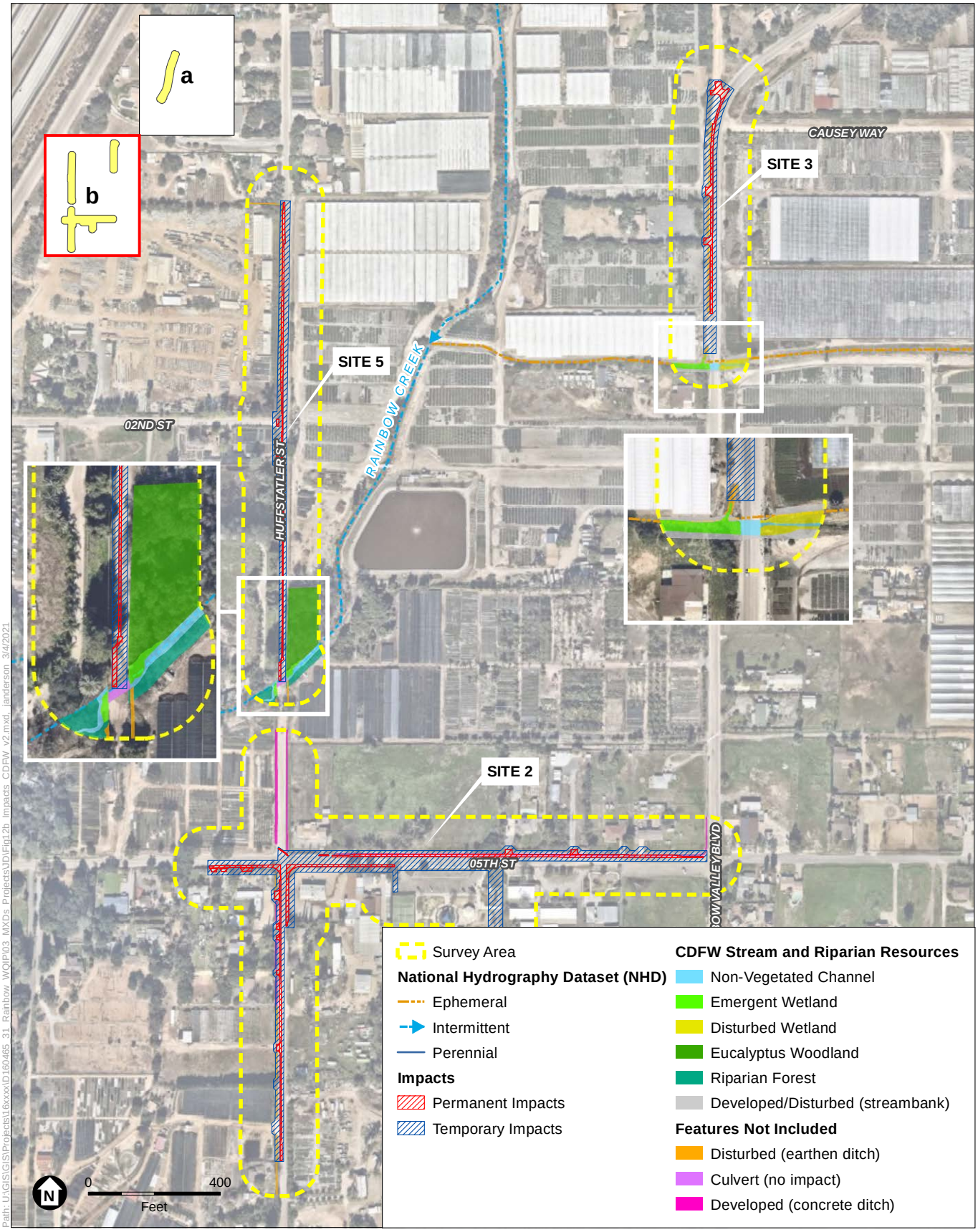


SOURCE: ESRI, 2019

Rainbow WQIP

Figure 8a
Impacts to CDFW Resources

ESA



SOURCE: ESRI, 2019

Rainbow WQIP

Figure 8b
Impacts to CDFW Resources

ESA

Attachment A
Site Photographs

Attachment A: Representative Site Photographs



P-1a – Facing north/upslope (Ditch 1)



P-1b – Facing south/downslope (Ditch 1)



P-2a – Facing north/upslope (Ditch 1)



P-2b – Facing north/upslope (Ditch 2)



P-2c – Facing east/downslope (Ditch 3)



P-2d – Facing east/downslope (southeast corner culvert)



P-2e – Facing south/upslope (Ditch 1)



P-2f – Facing west



P-3a – Facing south/upslope (swale)



P-3b – Facing east/upslope (Ditch 3)



P-3c – Facing west/downslope (Ditch 3)



P-4 – Facing north/downslope (swale)



P-4b – Facing south/upslope (swale)



P-5a – Facing north/upslope (left side, Ditch 3)



P-5b – Facing north/upslope (right side, culvert inlet)



P-5c – Facing east



P-5d – Facing south



P-5e – facing west/downslope (right side, Ditch 3)



P-6a – Facing north



P-6b – Facing east/downstream (Rainbow Creek)



P-6c – Facing south/upslope (left side, Ditch 2)



P-6d – Facing south/upslope (right side, Ditch 1)



P-6e – Facing west/downstream (Rainbow Creek)



P-7 – Facing south/downslope (Ditch 4)



P-8a – Facing north/upslope (Ditch 4)



P-8a – Facing south/downslope (Ditch 4)



P-9a – Facing north/across (left side, Tributary 1)



P-9b – Facing north/across (right side, Tributary 1)



P-9c – Facing east/upstream (Tributary 1)



P-9d – Facing west/downstream (Tributary 1)



P-10a – Facing north/upslope



P-10b – Facing northwest



P-10c – Facing south (left side)



P-10d – Facing south/downslope (right side, Ditch 5)



P-11a – Facing northeast (left side)



P-11b – Facing northeast (right side, Ditch 6)



P-11c – Facing west (Ditch 6)



P-11d – Facing southwest/downslope (left side, Ditch 6)



P-12a – Facing southwest (north/left side)



P-12b – Facing southeast



P-12c – Facing southwest (south/left side)



P-12d – Facing southwest (right side)

Attachment B
Plant Species Compendium

Attachment B: Plant Species Compendium

Scientific Name	Common Name
EUDICOTS	
Amaranthaceae - Amaranth family	
**Amaranthus deflexus*	Largefruit amaranth
Anacardiaceae - Sumac or Cashew family	
**Schinus molle*	Pepper tree
**Schinus terebinthifolia*	Peruvian peppertree
Araliaceae - Ginseng family	
**Hedera helix*	English ivy
Asteraceae - Sunflower family	
Ambrosia psilostachya	Western ragweed
Artemisia douglasiana	Mugwort
Erigeron canadensis	Horseweed
**Hedypnois cretica*	Crete weed
Heterotheca grandiflora	Telegraph weed
**Sonchus oleraceus*	Common sow thistle
**Xanthium strumarium*	Cockleburr
Brassicaceae - Mustard family	
**Brassica nigra*	Black mustard
**Hirschfeldia incana*	Shortpod mustard
Nasturtium officinale	Watercress
Euphorbiaceae - Spurge family	
**Euphorbia maculata*	Spotted spurge
**Ricinus communis*	Castorbean
Fabaceae - Legume family	
**Melilotus albus*	White sweetclover
Fagaceae - Oak family	
Quercus agrifolia var. *agrifolia*	California live oak
Myrtaceae - Myrtle family	
**Eucalyptus globulus*	Blue gum
**Eucalyptus sideroxylon*	Red iron bark
Oleaceae - Olive family	
**Olea europaea*	Olive

Scientific Name	Common Name
Onagraceae - Evening Primrose family	
Epilobium ciliatum	Slender willowherb
Oenothera elata	Evening primrose
Plantaginaceae – Plantain family	
**Plantago lanceolate*	English plantain
Platanaceae – Plane tree family	
Platanus racemosa	California sycamore
Phrymaceae – Lopseed family	
Mimulus guttatus	Common monkeyflower
Polygonaceae - Buckwheat family	
Persicaria lapathifolia	Common knotweed
**Rumex crispus*	Curly dock
Salicaceae - Willow family	
Populus trichocarpa	Black cottonwood
Salix gooddingii	Black Willow
Salix laevigata	Red willow
Solanaceae - Nightshade family	
Datura wrightii	Sacred thorn-apple
**Nicotiana glauca*	Tree tobacco
MONOCOTS	
Arecaceae - Palm family	
**Phoenix canariensis*	Canary Island palm
**Syagrus romanzoffiana*	Queen palm
**Washingtonia robusta*	Mexican fan palm
Cyperaceae – Sedge Family	
Cyperus eragrostis	Tall flatsedge
**Cyperus involucratus*	Umbrella plant
Pinaceae – Pine family	
**Pinus pinea*	Italian stone pine
Poaceae - Grass family	
**Bromus diandrus*	Ripgut brome
**Cynodon dactylon*	Bermuda grass
**Digitaria sanguinalis*	Hairy crabgrass
**Ehrharta erecta*	Panic veldt grass
**Leptochloa fusca*	Sprangletop
**Phragmites australis*	Common reed
**Polypogon monspeliensis*	Rabbitsfoot grass

Scientific Name	Common Name
**Stipa miliacea var. miliacea*	Smilo grass
**Stenotaphrum secundatum*	Saint Augustine Grass

*= Non-native or invasive species

Attachment C
Wildlife Species Compendium

Attachment C: Wildlife Species Compendium

Scientific Name	Common Name
Birds	
Calypte anna	Anna's Hummingbird
Carduelis psaltria	Lesser Goldfinch
Carpodacus mexicanus	House Finch
Corvus brachyrhynchos	American Crow
Melozone crissalis	California Towhee
Mimus polyglottos	Northern Mockingbird
Zenaida macroura	Mourning Dove
**Passer domesticus*	House Sparrow

*= Non-native or invasive species

Attachment D

Special-Status Species Potential to Occur

Attachment D: Special-Status Species Potential to Occur Table

Scientific Name	Common Name	Special Status	Habitat	Potential to Occur
Plants				
Abronia villosa var. aurita	chaparral sand-verbena	CRPR 1B.1	Chaparral, coastal scrub, desert dunes. Sandy areas. -60-1570 m.	Unlikely - Habitat not present
Allium munzii	Munz's onion	FE, ST, CRPR 1B.1	Chaparral, coastal scrub, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Heavy clay soils; grows in grasslands & openings within shrublands or woodlands. 375-1040 m.	Unlikely - Habitat not present
Almutaster pauciflorus	alkali marsh aster	CRPR 2B.2	Meadow and seeps. Alkaline. 60-765 m.	Unlikely - Habitat not present
Ambrosia pumila	San Diego ambrosia	FE, CRPR 1B.1	Chaparral, coastal scrub, valley and foothill grassland. Sandy loam or clay soil; sometimes alkaline. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 3-580 m.	Unlikely - Habitat not present
Arctostaphylos rainbowensis	Rainbow manzanita	CRPR 1B.1	Chaparral. Usually found in gabbro chaparral. 100-870 m.	Unlikely - Habitat not present
Astragalus pachypus var. jaegeri	Jaeger's milk-vetch	CRPR 1B.1	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland. Dry ridges and valleys and open sandy slopes; often in grassland and oak-chaparral. 365-1040 m.	Unlikely - Habitat not present
Atriplex pacifica	south coast saltscale	CRPR 1B.2	Coastal scrub, coastal bluff scrub, playas, coastal dunes. Alkali soils. 1-400 m.	Unlikely - Habitat not present
Ayenia compacta	California ayenia	CRPR 2B.3	Mojavean desert scrub, Sonoran desert scrub. Sandy and gravelly washes in the desert; dry desert canyons. 60-1830 m.	Unlikely - Habitat not present
Berberis nevinii	Nevin's barberry	FE, SE, CRPR 1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub. On steep, N-facing slopes or in low grade sandy washes. 90-1590 m.	Unlikely - Habitat not present; Single occurrence is possibly extirpated.
Brodiaea filifolia	thread-leaved brodiaea	FT, SE, CRPR 1B.1	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 15-1030 m.	Unlikely - Habitat not present
Brodiaea orcuttii	Orcutt's brodiaea	CRPR 1B.1	Vernal pools, valley and foothill grassland, closed-cone coniferous forest, cismontane woodland, chaparral, meadows and seeps. Mesic, clay habitats; usually in vernal pools and small drainages. 30-1615 m.	Unlikely - Habitat not present

Scientific Name	Common Name	Special Status	Habitat	Potential to Occur
Brodiaea santarosae	Santa Rosa Basalt brodiaea	CRPR 1B.2	Valley and foothill grassland. Santa Rosa Basalt. 585-1045 m.	Unlikely - Habitat not present
Calochortus plummerae	Plummer's mariposa-lily	CRPR 4.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.	Unlikely - Habitat not present
Calochortus weedii var. intermedius	intermediate mariposa-lily	CRPR 1B.2	Coastal scrub, chaparral, valley and foothill grassland. Dry, rocky calcareous slopes and rock outcrops. 60-1575 m.	Unlikely - Habitat not present
Caulanthus simulans	Payson's jewelflower	CRPR 4.2	Chaparral, coastal scrub. Frequently in burned areas, or in disturbed sites such as streambeds; also on rocky, steep slopes. Sandy, granitic soils. 90-2200 m.	Unlikely - Habitat not present
Ceanothus ophiochilus	Vail Lake ceanothus	FT, SE, CRPR 1B.1	Chaparral. Gabbro seams on north-facing ridges on the eastern sides of mountains. 620-915 m.	Unlikely - Habitat not present
Ceanothus pendletonensis	Pendleton ceanothus	CRPR 1B.2	Chaparral, cismontane woodland. Granitic. 110-870 m.	Unlikely - Habitat not present
Centromadia parryi ssp. australis	southern tarplant	CRPR 1B.1	Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. 0-975 m.	Low - Marginally suitable habitat may be present, but low potential to occur due high levels of disturbance in the survey area and lack of occurrences in the immediate vicinity.
Centromadia pungens ssp. laevis	smooth tarplant	CRPR 1B.1	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m.	Low - Marginally suitable habitat may be present, but low potential to occur due high levels of disturbance in the survey area and lack of occurrences in the immediate vicinity.
Chaenactis glabriuscula var. orcuttiana	Orcutt's pincushion	CRPR 1B.1	Coastal bluff scrub, coastal dunes. Sandy sites. 3-80 m.	Unlikely - Habitat not present
Chorizanthe parryi var. parryi	Parry's spineflower	CRPR 1B.1	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m.	Unlikely - Habitat not present
Chorizanthe polygonoides var. longispina	long-spined spineflower	CRPR 1B.2	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Gabbroic clay. 30-1630 m.	Unlikely - Habitat not present

Scientific Name	Common Name	Special Status	Habitat	Potential to Occur
Clarkia delicata	delicate clarkia	CRPR 1B.2	Cismontane woodland, chaparral. Often on gabbro soils. 95-1800 m.	Unlikely - Habitat not present
Clinopodium chandleri	San Miguel savory	CRPR 1B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Rocky, gabbroic or metavolcanic substrate. 120-975 m.	Unlikely - Habitat not present
Comarostaphylis diversifolia ssp. diversifolia	summer holly	CRPR 1B.2	Chaparral, cismontane woodland. Often in mixed chaparral in California, sometimes post-burn. 30-855 m.	Unlikely - Habitat not present
Cryptantha wigginsii	Wiggins' cryptantha	CRPR 1B.2	Coastal scrub. Often on clay soils. 45-110 m.	Unlikely - Habitat not present
Dodecahema leptoceras	slender-horned spineflower	FE, SE, CRPR 1B.1	Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes; associates include Encelia, Dalea, Lepidospartum, etc. Sandy soils. 200-765 m.	Unlikely - Habitat not present
Dudleya multicaulis	many-stemmed dudleya	CRPR 1B.2	Chaparral, coastal scrub, valley and foothill grassland. In heavy, often clayey soils or grassy slopes. 1-910 m.	Unlikely - Habitat not present
Dudleya viscida	sticky dudleya	CRPR 1B.2	Coastal scrub, coastal bluff scrub, chaparral, cismontane woodland. On north and south-facing cliffs and banks. 20-870 m.	Unlikely - Habitat not present
Eryngium aristulatum var. parishii	San Diego button-celery	FE, SE, CRPR 1B.1	Vernal pools, coastal scrub, valley and foothill grassland. San Diego mesa hardpan & claypan vernal pools & southern interior basalt flow vernal pools; usually surrounded by scrub. 15-880 m.	Unlikely - Habitat not present
Erysimum ammophilum	sand-loving wallflower	CRPR 1B.2	Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. 3-320 m.	Unlikely - Habitat not present
Geothallus tuberosus	Campbell's liverwort	CRPR 1B.1	Coastal scrub, vernal pools. Liverwort known from mesic soil. 60-610 m.	Unlikely - Habitat not present
Harpagonella palmeri	Palmer's grapplinghook	CRPR 4.2	Chaparral, coastal scrub, valley and foothill grassland. Clay soils; open grassy areas within shrubland. 20-955 m.	Unlikely - Habitat not present
Hesperocyparis forbesii	Tecate cypress	CRPR 1B.1	Closed-cone coniferous forest, chaparral. Primarily on north-facing slopes; groves often associated with chaparral. On clay or gabbro. 60-1650 m.	Unlikely - Habitat not present
Horkelia cuneata var. puberula	mesa horkelia	CRPR 1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m.	Unlikely - Habitat not present; Single occurrence is possibly extirpated.
Horkelia truncata	Ramona horkelia	CRPR 1B.3	Chaparral, cismontane woodland. Habitats in California include: mixed chaparral, vernal streams, and disturbed areas near roads. Clay soil; at least sometimes on gabbro. 380-1190 m.	Unlikely - Habitat not present

Scientific Name	Common Name	Special Status	Habitat	Potential to Occur
Juncus luciensis	Santa Lucia dwarf rush	CRPR 1B.2	Vernal pools, meadows and seeps, lower montane coniferous forest, chaparral, Great Basin scrub. Vernal pools, ephemeral drainages, wet meadow habitats and streamsides. 280-2035 m.	Unlikely - Habitat not present
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	CRPR 1B.1	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1375 m.	Unlikely - Habitat not present
Lepechinia cardiophylla	heart-leaved pitcher sage	CRPR 1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland. 115-1345 m.	Unlikely - Habitat not present
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	CRPR 4.3	Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m.	Unlikely - Habitat not present
Lilium parryi	lemon lily	CRPR 1B.2	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. Wet, mountainous terrain; generally, in forested areas; on shady edges of streams, in open boggy meadows & seeps. 625-2930 m.	Unlikely - Habitat not present
Limnanthes alba ssp. parishii	Parish's meadowfoam	Endangered CRPR 1B.2	Lower montane coniferous forest, meadows and seeps, vernal pools. Vernally moist areas and temporary seeps of highland meadows and plateaus; often bordering lakes and streams. 605-1805 m.	Unlikely - Habitat not present
Mielichhoferia shevockii	Shevock's copper moss	1B.2	Cismontane woodland. Moss on metamorphic rocks containing heavy metals; mesic sites. On rocks along roads, in same habitat as Mielichhoferia elongata. 365-1110 m.	Unlikely - Habitat not present
Monardella hypoleuca ssp. intermedia	intermediate monardella	CRPR 1B.3	Chaparral, cismontane woodland, lower montane coniferous forest (sometimes). Often in steep, brushy areas. 195-1675 m.	Unlikely - Habitat not present
Monardella macrantha ssp. hallii	Hall's monardella	CRPR 1B.3	Broadleafed upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley and foothill grassland. Dry slopes and ridges in openings. 700-1800 m.	Unlikely - Habitat not present
Navarretia fossalis	spreading navarretia	FT, CRPR 1B.1	Vernal pools, chenopod scrub, marshes and swamps, playas. San Diego hardpan and San Diego claypan vernal pools; in swales & vernal pools, often surrounded by other habitat types. 15-850 m.	Unlikely - Habitat not present
Navarretia prostrata	prostrate vernal pool navarretia	CRPR 1B.2	Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps. Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 3-1235 m.	Unlikely - Habitat not present
Nolina cismontana	chaparral nolina	CRPR 1B.2	Chaparral, coastal scrub. Primarily on sandstone and shale substrates; also known from gabbro. 140-1100 m.	Unlikely - Habitat not present

Scientific Name	Common Name	Special Status	Habitat	Potential to Occur
Orcuttia californica	California Orcutt grass	FE, SE, CRPR 1B.1	Vernal pools. 10-660 m.	Unlikely - Habitat not present
Packera ganderi	Gander's ragwort	CRPR 1B.2	Chaparral. Recently burned sites and gabbro outcrops. 485-1070 m.	Unlikely - Habitat not present
Pseudognaphalium leucocephalum	white rabbit-tobacco	CRPR 2B.2	Riparian woodland, cismontane woodland, coastal scrub, chaparral. Sandy, gravelly sites. 35-515 m.	Unlikely - Habitat not present
Saltugilia latimeri	Latimer's woodland-gilia	CRPR 1B.2	Chaparral, Mojavean desert scrub, pinyon and juniper woodland. Rocky or sandy substrate; sometimes in washes, sometimes limestone. 120-2200 m.	Unlikely - Habitat not present
Scutellaria bolanderi ssp. austromontana	southern mountains skullcap	CRPR 1B.2	Chaparral, cismontane woodland, lower montane coniferous forest. In gravelly soils on streambanks or in mesic sites in oak or pine woodland. 425-2000 m.	Unlikely - Habitat not present
Senecio aphanactis	chaparral ragwort	CRPR 2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-1020 m.	Unlikely - Habitat not present
Sibaropsis hammittii	Hammitt's clay-cress	CRPR 1B.2	Valley and foothill grassland, chaparral. Mesic microsites in open areas on clay soils in Stipa grassland. Often surrounded by Adenostoma chaparral. 715-1040 m.	Unlikely - Habitat not present
Sidalcea neomexicana	salt spring checkerbloom	CRPR 2B.2	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. Alkali springs and marshes. 3-2380 m.	Unlikely - Habitat not present
Sphaerocarpos drewiae	bottle liverwort	CRPR 1B.1	Chaparral, coastal scrub. Liverwort in openings; on soil. 60-585 m.	Unlikely - Habitat not present
Symphyotrichum defoliatum	San Bernardino aster	CRPR 1B.2	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m.	Unlikely - Habitat not present. Ditches in survey area are highly disturbed and irregularly mesic due to irrigation.
Tetracoccus dioicus	Parry's tetracoccus	CRPR 1B.2	Chaparral, coastal scrub. Stony, decomposed gabbro soil. 135-705 m.	Unlikely - Habitat not present
Tortula californica	California screw moss	1B.2	Chenopod scrub, valley and foothill grassland. Moss growing on sandy soil. 45-750 m.	Unlikely - Habitat not present
Invertebrates				
Bombus crotchii	Crotch bumble bee	SC	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Unlikely - Habitat not present

Scientific Name	Common Name	Special Status	Habitat	Potential to Occur
Branchinecta lynchi	vernal pool fairy shrimp	FT	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Unlikely - Habitat not present
Branchinecta sandiegonensis	San Diego fairy shrimp	FE	Endemic to San Diego and Orange County mesas. Vernal pools.	Unlikely - Habitat not present
Euphydryas editha quino	quino checkerspot butterfly	FE	Sunny openings within chaparral & coastal sage shrublands in parts of Riverside & San Diego counties. Hills and mesas near the coast. Need high densities of food plants Plantago erecta, P. insularis, and Orthocarpus purpurescens.	Unlikely - Habitat not present
Streptocephalus woottoni	Riverside fairy shrimp	FE	Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.	Unlikely - Habitat not present
Reptiles and Amphibians				
Anaxyrus californicus	arroyo toad	FE	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	Unlikely - Habitat not present. Creek segments in the survey area lack potential breeding pools and adjacent uplands are highly disturbed.
Anniella stebbinsi	Southern California legless lizard	SSC	Generally, south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally, in moist, loose soil. They prefer soils with a high moisture content.	Unlikely - Habitat would likely be unsuitable due to high disturbance.
Arizona elegans occidentalis	California glossy snake	SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Unlikely - Habitat not present
Aspidoscelis hyperythra	orange-throated whiptail	WL	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.	Unlikely - Habitat not present
Aspidoscelis tigris stejnegeri	coastal whiptail	SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland & riparian areas. Ground may be firm soil, sandy, or rocky.	Unlikely - Habitat not present
Coleonyx variegatus abbotti	San Diego banded gecko	SSC	Coastal & cismontane Southern California. Found in granite or rocky outcrops in coastal scrub and chaparral habitats.	Unlikely - Habitat not present

Scientific Name	Common Name	Special Status	Habitat	Potential to Occur
Crotalus ruber	red-diamond rattlesnake	SSC	Chaparral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Unlikely - Habitat not present
Emys marmorata	western pond turtle	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Unlikely - Habitat not present. Survey area lacks pool depth needed to provide cover.
Phrynosoma blainvillii	coast horned lizard	SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Unlikely - Habitat not present
Plestiodon skiltonianus interparietalis	Coronado skink	WL	Grassland, chaparral, pinon-juniper and juniper sage woodland, pine-oak and pine forests in Coast Ranges of Southern California. Prefers early successional stages or open areas. Found in rocky areas close to streams and on dry hillsides.	Unlikely - Habitat not present
Rana draytonii	California red-legged frog	FT	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Unlikely - Habitat not present
Salvadora hexalepis virgultea	coast patch-nosed snake	SSC	Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites.	Unlikely - Habitat not present
Spea hammondii	western spadefoot	SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Unlikely - Habitat not present
Taricha torosa	Coast Range newt	SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats & will migrate over 1 km to breed in ponds, reservoirs & slow moving streams.	Unlikely - Habitat not present
Thamnophis hammondii	two-striped gartersnake	SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Unlikely - Habitat not present
Fish				
Gila orcuttii	arroyo chub	SSC	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave & San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.	Low - Known to occur in downstream reaches of Rainbow Creek from the Santa Margarita River confluence to approximately 2.75 miles downstream of the survey area. Current depth in survey area is less than the preferred 40 cm. No known occurrences upstream of I-15.

Scientific Name	Common Name	Special Status	Habitat	Potential to Occur
Birds				
Accipiter cooperii	Cooper's hawk	WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	High - Potential for nesting and foraging in the riparian habitat present along Rainbow Creek.
Agelaius tricolor	tricolored blackbird	ST, BCC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	Unlikely - Habitat not present
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	WL	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	Unlikely - Habitat not present
Aquila chrysaetos	golden eagle	FP, WL, BCC	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Unlikely - Habitat not present
Artemisiospiza belli belli	Bell's sage sparrow	WL, BCC	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	Low - Marginally suitable habitat present in open field areas; however, these areas are highly managed and near residences and human disturbance. In addition, burrowing owls are not currently known to occur in Rainbow. The nearest occurrence is over 5 miles away in Temecula.
Athene cunicularia	burrowing owl	SSC, BCC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Unlikely - Habitat not present
Buteo regalis	ferruginous hawk	SSC, BCC	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Unlikely - Habitat not present
Buteo swainsoni	Swainson's hawk	ST, BCC	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Unlikely - Nesting populations of San Diego County are presumed extirpated
Campylorhynchus brunneicapillus sandiegensis	coastal cactus wren	SSC	Southern California coastal sage scrub. Wrens require tall opuntia cactus for nesting and roosting.	Unlikely - Habitat not present

Scientific Name	Common Name	Special Status	Habitat	Potential to Occur
Circus hudsonius	northern harrier	BCC	Coastal salt & freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Unlikely - Habitat not present
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FT, SE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Unlikely - Habitat not present. Riparian habitat within the survey area is too narrow/fragmented.
Elanus leucurus	white-tailed kite		Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Unlikely - Habitat not present
Empidonax traillii extimus	southwestern willow flycatcher	FE, SE	Riparian woodlands in Southern California.	Unlikely - Habitat not present
Eremophila alpestris actia	California horned lark		Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	Moderate - Potential to forage in large open disturbed/fallow properties in the survey area. Nesting is unlikely due to ongoing disturbance.
Haliaeetus leucocephalus	bald eagle	FD, SE	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Unlikely - Habitat not present
Icteria virens	yellow-breasted chat		Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.	Moderate - Riparian habitat present along Rainbow Creek.
Ixobrychus exilis	least bittern		Colonial nester in marshlands and borders of ponds and reservoirs which provide ample cover. Nests usually placed low in tules, over water.	Unlikely - Habitat not present
Lanius ludovicianus	loggerhead shrike		Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Unlikely - Habitat not present
Nycticorax nycticorax	black-crowned night heron		Colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.	Unlikely - Nesting habitat not present. Potential to forage along creeks and ditches in the survey area.
Plegadis chihi	white-faced ibis		Shallow freshwater marsh. Dense tule thickets for nesting, interspersed with areas of shallow water for foraging.	Unlikely - Nesting habitat not present. Potential to forage in herbaceous wetlands in the survey area.

Scientific Name	Common Name	Special Status	Habitat	Potential to Occur
Polioptila californica californica	coastal California gnatcatcher	FT	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	Unlikely - Habitat not present
Setophaga petechia	yellow warbler		Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	Moderate - Potential for nesting and foraging in the riparian habitat present along Rainbow Creek.
Vireo bellii pusillus	least Bell's vireo	FE, SE	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	Low – The riparian habitat present along Rainbow Creek within the survey area was considered to be of marginal suitability because of the sparse shrub layer and high level of baseline noise and disturbance from vehicle traffic and immediately adjacent land uses such as agricultural activities along Huffstatler Street.
Mammals				
Antrozous pallidus	pallid bat	SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Unlikely - Roosting habitat not present. Potential to occur foraging.
Chaetodipus californicus femoralis	Dulzura pocket mouse	SSC	Variety of habitats including coastal scrub, chaparral & grassland in San Diego County. Attracted to grass-chaparral edges.	Unlikely - Habitat not present
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	SSC	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Unlikely - Habitat not present
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE, SC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	Unlikely - Habitat not present; Single occurrence is possibly extirpated.
Dipodomys stephensi	Stephens' kangaroo rat	FE, ST	Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil.	Unlikely - Habitat not present
Eumops perotis californicus	western mastiff bat	SSC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Unlikely - Roosting habitat not present. Potential to occur foraging.

Scientific Name	Common Name	Special Status	Habitat	Potential to Occur
Lepus californicus bennettii	San Diego black-tailed jackrabbit	SSC	Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	Unlikely - Habitat not present
Neotoma lepida intermedia	San Diego desert woodrat	SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	Unlikely - Habitat not present
Nyctinomops femorosaccus	pocketed free-tailed bat	SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	Unlikely - Roosting habitat not present. Potential to occur foraging.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	SSC	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	Unlikely - Habitat not present
Perognathus longimembris internationalis	Jacumba pocket mouse	SSC	Desert riparian, desert scrub, desert wash, coastal scrub and sagebrush. Rarely found on rocky sites; uses all canopy coverages.	Unlikely - Habitat not present

SOURCE: CNDDB 2020

[1] **Sensitivity Code Definitions:**

Federal: FE = Listed as endangered under the federal Endangered Species Act (FESA); FT = Listed as threatened under ESA; FD = Delisted species formerly listed under FESA; and BCC = USFWS bird of conservation concern;
State: SE = Listed as endangered under the California Endangered Species Act (CESA); ST = Listed as threatened under the CESA; SC = Candidate for listing (threatened or endangered) under CESA; SSC = CDFW Species of Special Concern; WL = CDFW Watch List species.

California Rare Plant Rank (CRPR):
Rank 1B = Plant species that are rare, threatened, or endangered in California and elsewhere.
Rank 2 = Plant species that are rare, threatened, or endangered in California, but more common elsewhere.
Rank 4 = Plants of limited distribution - a watch list
Threat Ranks
0.1 - Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2 - Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3 - Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

County Multiple Species Conservation Plan (MSCP):
Narrow Endemic Species = Species with very limited geographic ranges; Covered Species = Species included in the Incidental Take Authorization issued to the City by the federal or state government as part of the City's MSCP Subarea Plan, with the exception of listed species within federal jurisdictional waters.

[2] **Potential to Occur on Site:**
Observed: Species was detected during general or focused surveys within the project area (conducted within the last 5 years).
High: The project area is within the current range of the species and highly suitable habitat is present within the project area. The species has been detected in the last 25 years in the project area or within dispersal range for the species (if survey data is available).
Moderate: The project area is within the current range of the species and moderately suitable habitat is present within the project area.
Low: The project area is within the current range of the species and marginally suitable habitat is present or the project area is within the historic range or the species and highly suitable habitat is present; OR, focused surveys were conducted for the species and the species was not detected.
Unlikely: The project area is outside of the known current range of the species and/or suitable habitat is not present within the project area, or species not detected during general or focused surveys (for highly detectable species).