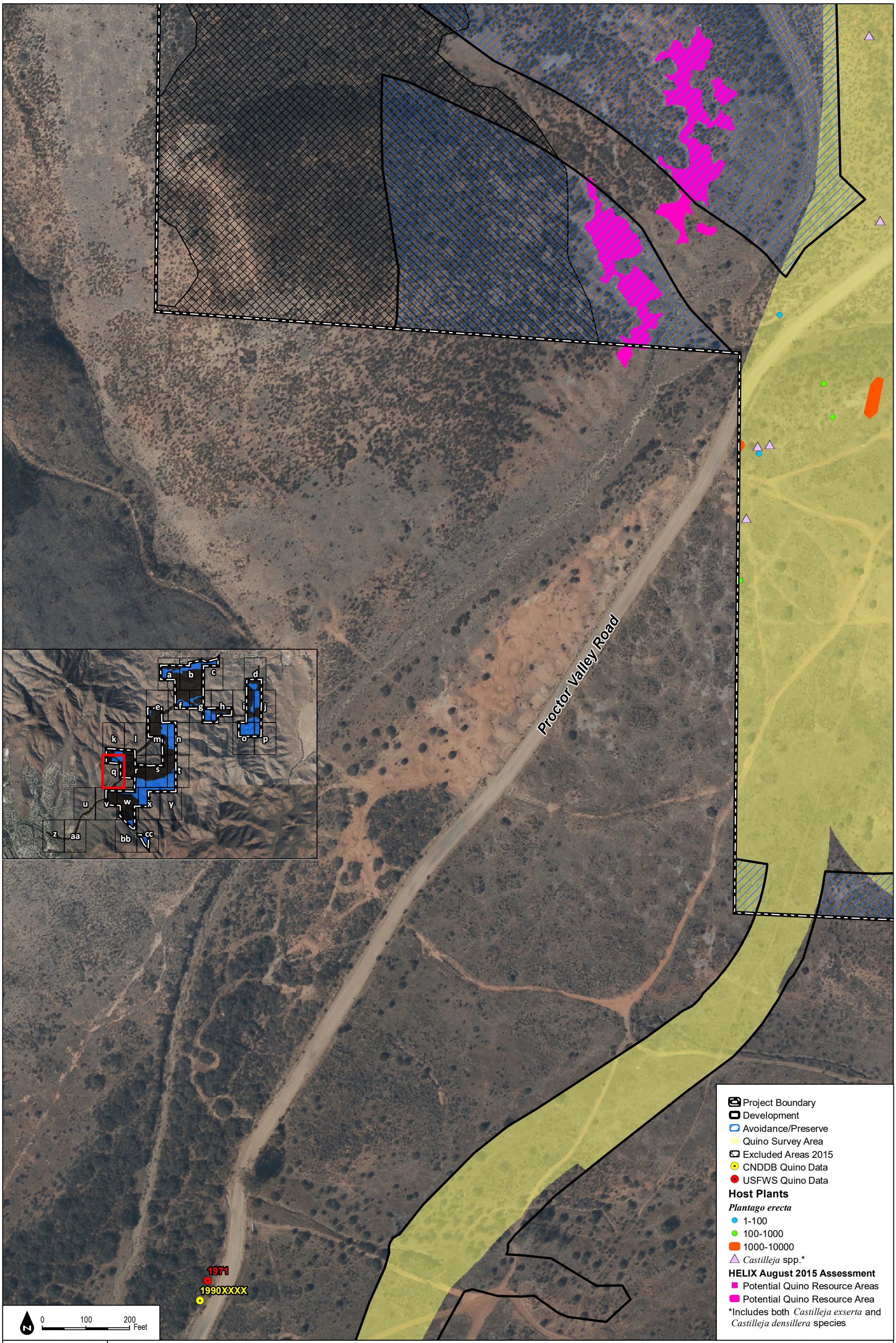

DUDEK

SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

Figure 4-3q

2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

Otay Ranch Village 14 and Planning Areas 16/19

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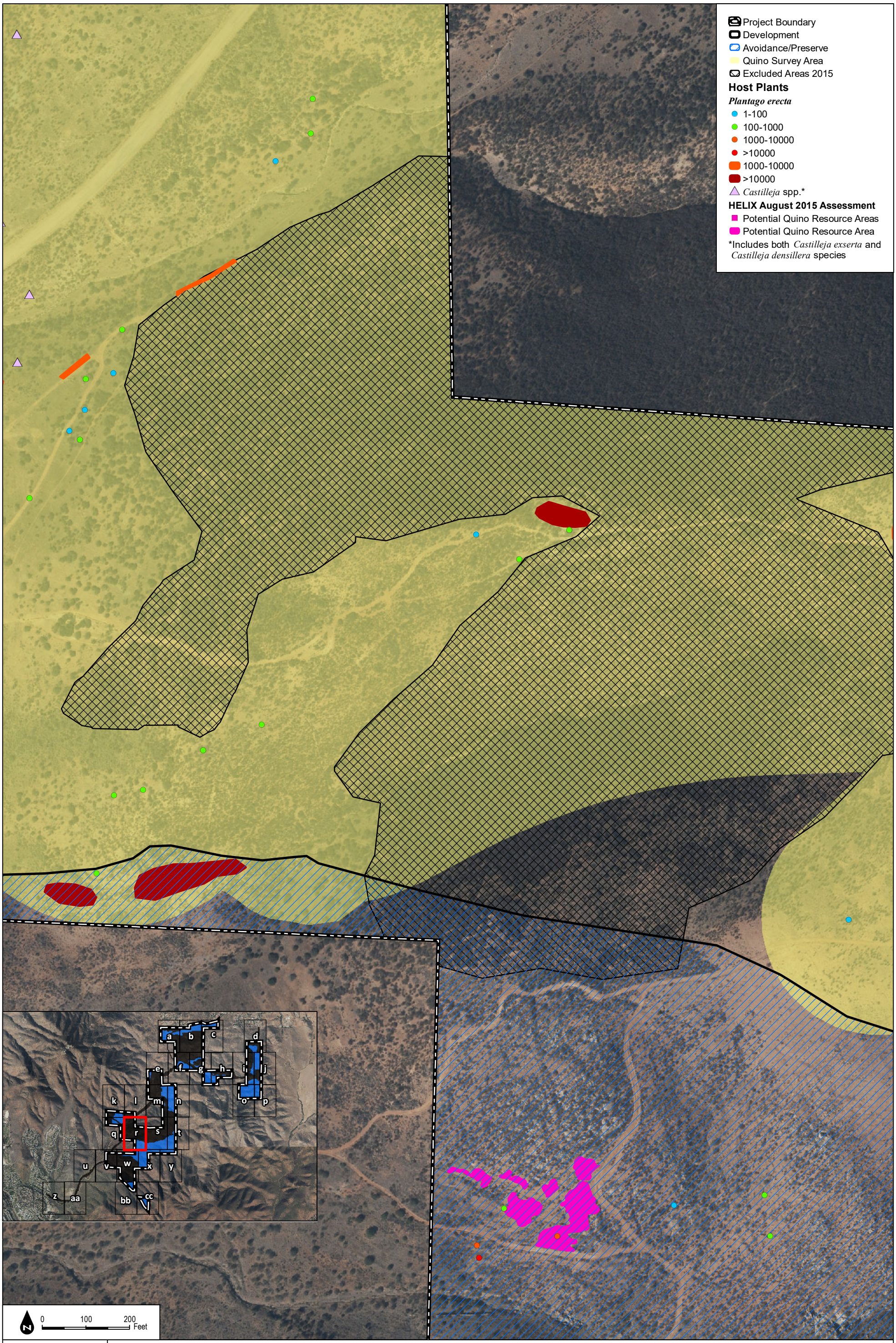

SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

DUDEK

Figure 4-3r

2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

Otay Ranch Village 14 and Planning Areas 16/19

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Project Boundary
Development
Avoidance/Preserve
Quino Survey Area
Excluded Areas 2015
USFWS Quino Data

Host Plants

Plantago erecta

1-100
100-1000
1000-10000

HELIX August 2015 Assessment

Potential Quino Resource Areas
Potential Quino Resource Area

*Includes both *Castilleja exserta* and *Castilleja densillera* species

a b c d e f g h i j k l m n o p q r s t u v w x y z aa bb cc

2001

0 100 200 Feet

SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

DUDEK

Figure 4-3s

2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

Otay Ranch Village 14 and Planning Areas 16/19

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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

DUDEK

Figure 4-3t

2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

Otay Ranch Village 14 and Planning Areas 16/19

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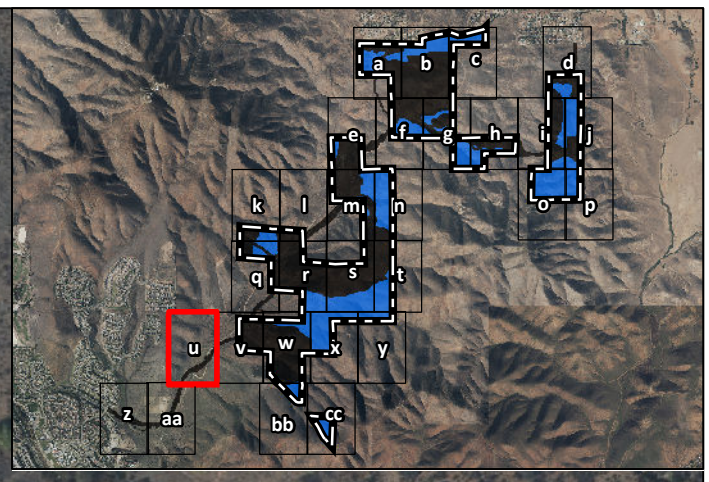
Project Boundary
Development
Avoidance/Preserve
Quino Survey Area

HELIX August 2015 Assessment

Potential Quino Resource Areas

*Includes both *Castilleja exserta* and *Castilleja densillera* species



0 100 200 Feet

SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

DUDEK

Figure 4-3u

2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

Otay Ranch Village 14 and Planning Areas 16/19

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Project Boundary
Development
Avoidance/Preserve
Quino Survey Area
Excluded Areas 2015
Castilleja spp.*
HELIX August 2015 Assessment
Potential Quino Resource Areas
*Includes both *Castilleja exserta* and *Castilleja densillera* species

0 100 200 Feet

SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

DUDEK

Figure 4-3v
2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

Otay Ranch Village 14 and Planning Areas 16/19

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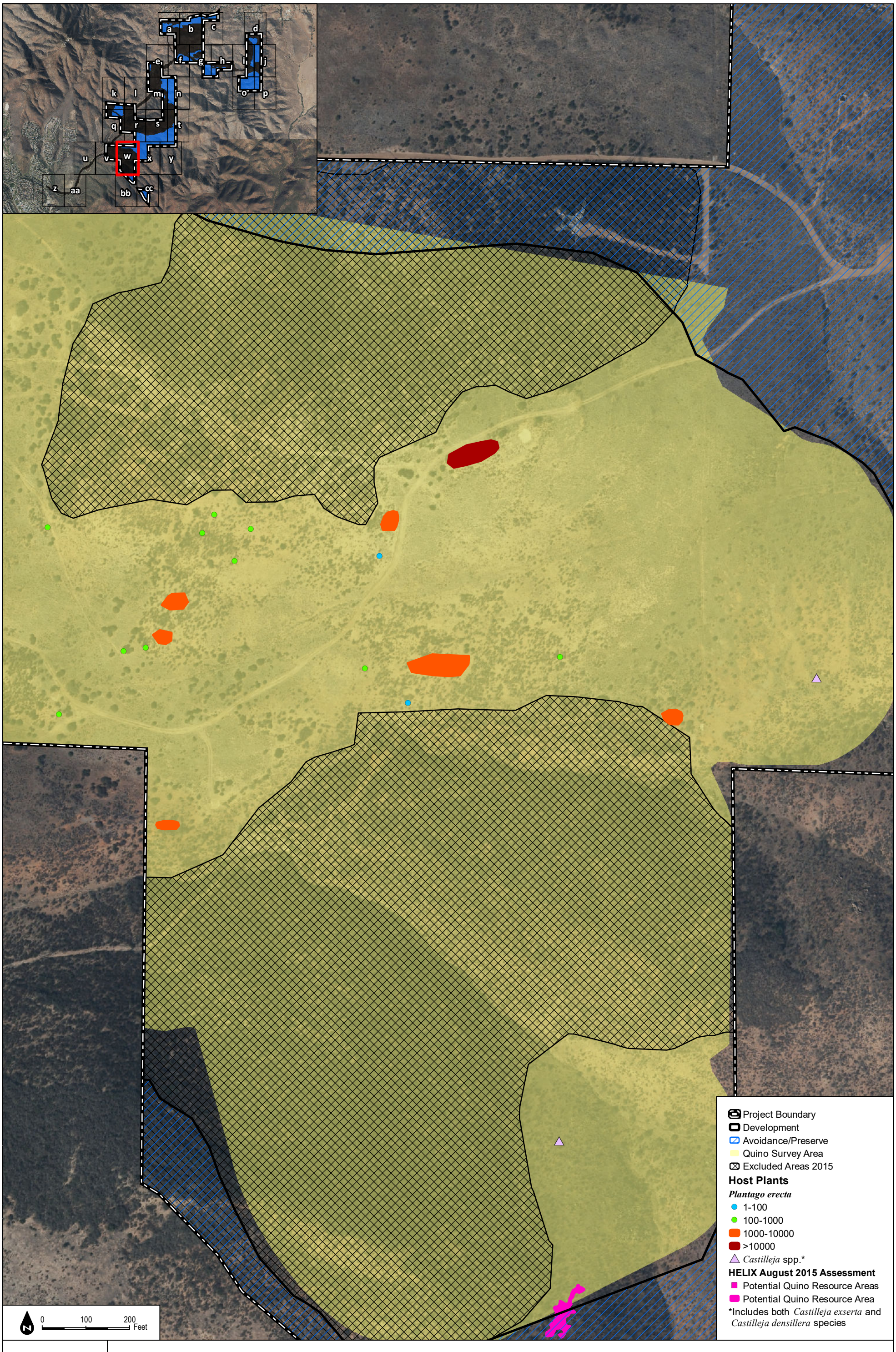

DUDEK

SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

Figure 4-3w

2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

Otay Ranch Village 14 and Planning Areas 16/19

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SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

DUDEK

Figure 4-3x

2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

Otay Ranch Village 14 and Planning Areas 16/19

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DUDEK

SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

Figure 4-3y

2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

Otay Ranch Village 14 and Planning Areas 16/19

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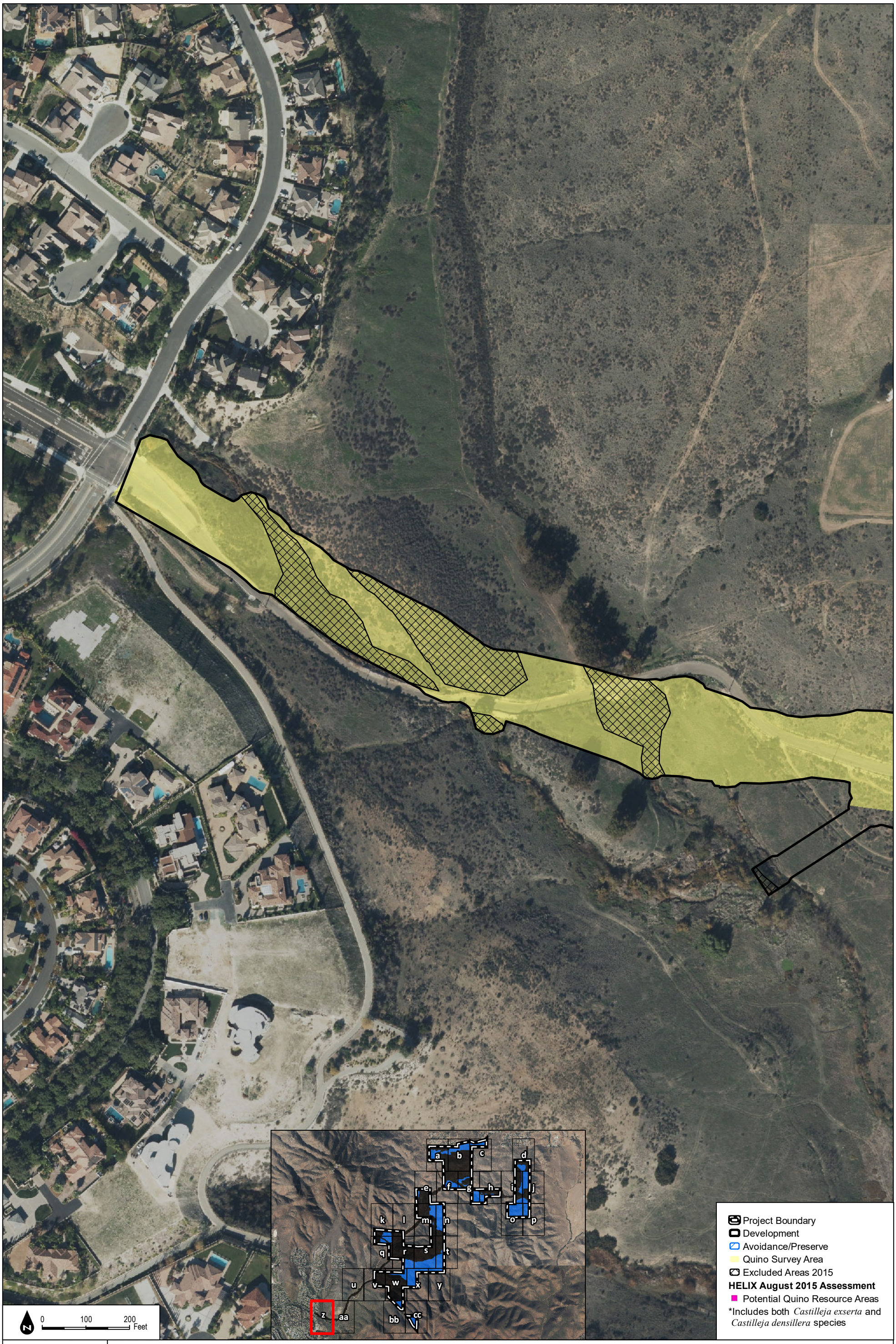

DUDEK

SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

Figure 4-3z

2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

Otay Ranch Village 14 and Planning Areas 16/19

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Project Boundary
Development
Avoidance/Preserve
Quino Survey Area
CNDDB Quino Data
USFWS Quino Data

HELIX August 2015 Assessment

Potential Quino Resource Areas

*Includes both *Castilleja exserta* and *Castilleja densillera* species

Proctor Valley Road

1990XXXX

1973

1972

a b c d e f g h i j k l m n o p q r s t u v w x y z aa bb cc

0 100 200 Feet

SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

DUDEK

Figure 4-3aa

2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

Otay Ranch Village 14 and Planning Areas 16/19

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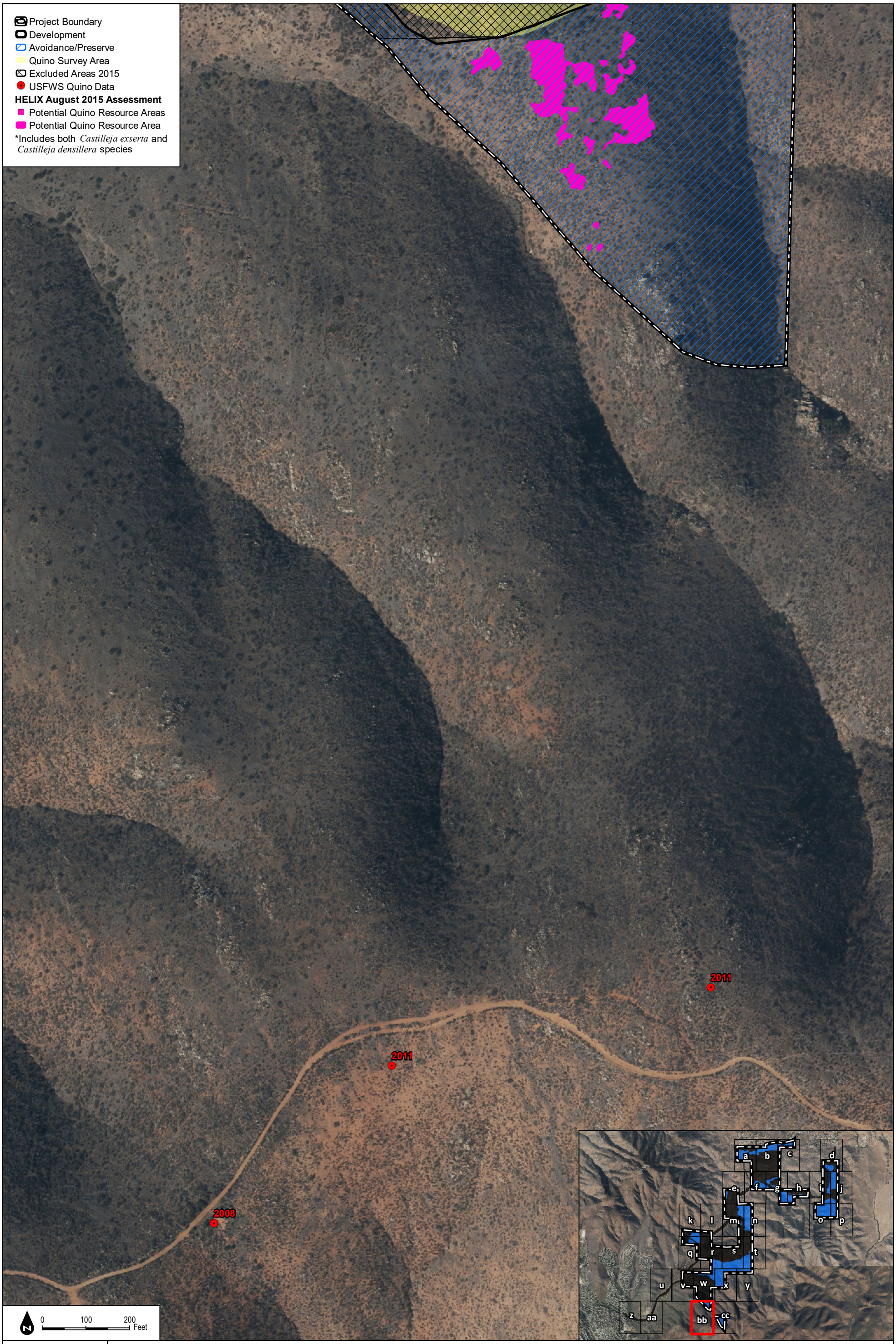

SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

Figure 4-3bb

2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

DUDEK

Otay Ranch Village 14 and Planning Areas 16/19

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Project Boundary
Development
Avoidance/Preserve
CNDDB Quino Data
USFWS Quino Data

HELIX August 2015 Assessment

Potential Quino Resource Areas

*Includes both *Castilleja exserta* and *Castilleja densillera* species

2000XXXX
2000
2009

a b c d e f g h i j k l m n o p q r s t u v w x y z aa bb cc

0 100 200 Feet

SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

DUDEK

Figure 4-3cc

2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

Otay Ranch Village 14 and Planning Areas 16/19

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Focused 2015 host plant mapping and surveys were conducted only for the development impact area associated with the land exchange that was proposed at that time. For this reason, 2015 host plant mapping provided in Figures 4-3a through 4-3cc does not represent a comprehensive assessment of the Project Area. Nevertheless, the mapping data is discussed in this report to provide context for the general expression of resources in 2015. Host plants were mapped in Planning Areas 16/19 during the 2016 survey. Results of the 2015 host plant mapping are summarized below and described in detail within Appendix D:

- The majority of the host plant locations—both points and patches—were mapped as low density (38 locations with 1–100 plants representing 33% of points/patches) or medium density (39 locations with 100–1,000 plants representing 34% of points/patches) within the proposed Village 14 Development Footprint.
- There were33 locations within the currently proposed Village 14 Development Footprint that were mapped as high density (1,000–10,000 individuals) (29% of points/patches). There were also four locations within the Village 14 Development Footprint were mapped as very high density (more than 10,000 individuals) (4% of points/patches). As was the case in 2016, the 2015 surveys indicated that the majority of the high-density host plant areas within the Village 14 Development Footprint occurred within small openings of chaparral or were adjacent to areas excluded from surveys in 2015 because they were considered too dense to support Quino checkerspot butterfly.
- 71% of the host plant locations (including both points and patches) within the proposed Village 14 Development Footprint were mapped as low density (1–100 plants) or medium density (100–1,000 plants) within a matrix of chaparral.

2014 Host Plant Mapping

The 2014 focused host plant mapping conducted by Dudek biologists only yielded five host plant patches. Since subsequent surveys and mapping resulted in greater host plant distribution, those five host plant patches are not included in any figures, nor are they discussed further herein.

Host Plant Distribution within Otay Ranch RMP Preserve, Non-Graded LDA, and Conserved Open Space (2016 Mapping)

HELIX biologists completed host plant mapping within the Otay Ranch RMP Preserve portion of the Project Area in 2016. Results are summarized below and described in detail in Appendix D:

- 60% of the host plant locations within the Otay Ranch RMP Preserve (55 points of the 92 locations) were mapped as low density (1–100 plants). Within non-graded LDA, 67% of the host plant locations were mapped as low density (2 points of the 3 locations). Within

the Conserved Open Space, 65% of the host plant locations were mapped as low density (24 points of the 37 locations).

- 29% of the host plant locations within the Otay Ranch RMP Preserve (27 points and patches of the 92 locations) were mapped as medium density (100–1,000 plants). Within the non-graded LDA, 33% of the host plant locations were mapped as medium density (1 point of the 3 locations). Within the Conserved Open Space, 16% of the host plant locations were mapped as medium density (6 points of the 37 locations).
- 11% of the host plant locations within the Otay Ranch RMP Preserve (10 points and patches of the 92 locations) were mapped as high density (1,000–10,000 plants), as shown in Figure 3-1b. Within the Conserved Open Space, 19% of the host plant locations were mapped as high density (7 points and patches of the 37 locations). No high-density host plant locations were mapped within non-graded LDA.
- The high-density host plant locations (1,000–10,000 individuals) within the non-graded areas occurred within openings of coastal sage scrub and chaparral.

The majority of the host plant locations in the Otay Ranch RMP Preserve (84 of the 92 mapped locations; 91%) were small points ranging from a few square feet to 250 square feet. Of the 84 locations, the majority of those (78 of the 84 locations; 93%) were low density (1–100 plants) or medium density (100–1,000 plants), and most occurred within a matrix of chaparral and coastal sage scrub communities.

Hermes Copper Butterfly (*Lycaena hermes*), FC/County Group 1

Hermes copper butterfly is a federal candidate for listing and County Group 1 species. Hermes copper butterfly inhabits patches of spiny redberry (*Rhamnus crocea*) and California buckwheat (*Eriogonum fasciculatum*) that grows in southern mixed chaparral and coastal sage scrub (County of San Diego 2010a). Hermes copper butterfly is endemic to San Diego County and northern Baja California. Its adult flight period is from mid-May through early July. Nectaring species observed in the Project Area include chamise (*Adenostoma fasciculatum*), California sunflower (*Encelia californica*), slender sunflower (*Helianthus gracilentus*), poison oak (*Toxicodendron diversilobum*), and short-podded mustard (*Hirschfeldia incana*).

There is 26.8 acres of suitable habitat for this species within the Project Area. No Hermes copper butterflies were observed during the 2015 or 2017 protocol surveys; however, this species could occur in the Project Area in the future if populations expand in San Diego County. There were five locations of Hermes copper butterfly within 5 miles of the Project Area recorded 2004 to 2006 (CDFW 2017). All five occurrences were within the San Diego National Wildlife Refuge. Populations within the San Miguel Mountain portion of the refuge were determined to be

extirpated after loss of habitat during the 2007 Harris Fire (Marschalek and Deutschman 2017). There were additional populations within the Rancho Jamul Ecological Preserve immediately adjacent to the Project Area, but those populations were also assumed to be extirpated due to 2003 and 2007 fires within the area (Marschalek and Deutschman 2017). According to the San Diego County Hermes Copper (*Lycaena hermes*) Habitat Conservation and Management Plan prepared by Marschalek and Deutschman (2017), these previously known populations were surveyed in 2016, and no Hermes copper butterflies were observed. Based on the lack of observations during the 2015 and 2017 surveys within the Project Area, and the extirpation of surrounding populations, there is a moderate potential for Hermes copper butterfly to use the habitat within Project Area in the future. However, based on the 2015 and 2017 surveys, Hermes copper butterfly does not currently occupy any habitat within the Project Area.

Mammals

Pallid Bat (*Antrozous pallidus*), SSC/County Group 2

Pallid bat is an SSC and County Group 2 species. Pallid bat is widespread throughout the western United States; southern British Columbia, Canada; and mainland and Baja, Mexico (Hall 1981; Hermanson and O'Shea 1983). Within the United States, it ranges east into southern Nebraska, western Oklahoma, and western Texas. Pallid bat occurs throughout California, except for the highest elevations of the Sierra Nevada, in Southern California counties, including Los Angeles, San Bernardino, San Diego, Riverside, Orange, and Ventura (CDFW 2016c).

Pallid bat is locally common in arid deserts (especially the Sonoran life zone) and grasslands throughout the western United States, and also occurs in shrublands, woodlands, and forests at elevations up to 8,000 feet (Hermanson and O'Shea 1983). Although it prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging, it has been observed far from such areas (Hermanson and O'Shea 1983).

This species has high potential to occur within the Project Area. Within the Project Area, suitable foraging habitat includes non-native grassland, chaparral (chamise chaparral, southern mixed chaparral), cismontane alkali marsh, developed, disturbed habitat, eucalyptus woodland, mulefat scrub, southern coast live oak riparian forest, open water, and coastal sage scrub (including disturbed). Due to the low potential for bats to roost within the Development Footprint, focused surveys for bats were not conducted. Small patches of potential tree roosting habitat for bat species and rock outcrops that could provide roosting are located within the Otay Ranch RMP Preserve, non-graded portions of the LDA, and outside of the Project Area. Large boulders, caves, or cliffs were not observed within the Project Area. These features may occur outside of the Project Area within the adjacent mountains. Although there is foraging habitat located within

the Project Area, including the Development Footprint, any potential roosting habitat (large trees or rock outcrops) is located outside of the Development Footprint.

Western Mastiff Bat (*Eumops perotis californicus*), SSC/County Group 2

Western mastiff bat is an SSC and County Group 2 species. Western mastiff bat's year-round range includes the San Joaquin Valley, the coastal region from the San Francisco Bay area south to San Diego, and the Transverse and Peninsular Ranges and Mojave and Colorado Deserts of Southern California. It is absent in California from the agricultural regions of the Central Valley, northwestern California, and the Great Basin Desert of northeastern California (Zeiner et al. 1990b). Records from counties in southern California include Los Angeles, San Diego, Orange, Riverside, San Bernardino, Imperial, and Ventura (CDFW 2016c).

Western mastiff bat occurs in a wide variety of chaparral, coastal scrub, coniferous and deciduous forest and woodland, and desert scrub habitats (Best et al. 1996; Zeiner et al. 1990b). Day roosts are established in crevices in rocky canyons and cliffs where the canyon/cliff is vertical or nearly vertical (Best et al. 1996), as well as trees and tunnels (Zeiner et al. 1990b). This species has also adapted to roosting in buildings, and has been observed hanging from various other kinds of built structures, including awnings, ledges over doors and windows, large cracks in masonry, and rafters (Best et al. 1996).

This species has high potential to occur within the Project Area. Suitable foraging habitat within the Project Area includes chaparral (chamise chaparral including disturbed, southern mixed chaparral), cismontane alkali marsh, eucalyptus woodland, mulefat scrub, southern coast live oak riparian forest, open water, non-native grassland, and coastal sage scrub (including disturbed). Due to the low potential for bats to roost within the Development Footprint, focused surveys for bats were not conducted. Small patches of potential tree roosting habitat for bat species and rock outcrops that could provide for roosting are located within the Otay Ranch RMP Preserve, non-graded portions of the LDA, Conserved Open Space, and outside of the Project Area. Areas of the LDA would be protected by an open space easement per the requirements of the Otay Ranch RMP, and areas of Conserved Open Space would be protected by a biological open space easement. Large boulders, caves, or cliffs were not observed within the Project Area. These features may occur outside of the Project Area within the adjacent mountains. Although there is foraging habitat located within the Project Area, including the Development Footprint, any potential roosting habitat (large trees or rock outcrops) is located outside of the Development Footprint.

Western red bat (Lasiurus blossevillii), SSC/County Group 2

Western red bat is an SSC and County Group 2 species. Western red bat occurs in California from Shasta County and Mendocino County in the north, through the central coastal region and Central Valley west of the Sierra Nevada/Cascade Ranges to coastal Southern California (Cryan 2003; Zeiner et al. 1990b), east into Arizona and New Mexico, and south into Baja California and mainland Mexico to South America (Cryan 2003). It does not occur in desert regions. Western red bat was considered a subspecies of red bat (*L. borealis teliotis*) (Shump and Shump 1982), but more recent genetic studies separated red bat into two species: western red bat and eastern red bat (*L. borealis*) (Baker et al. 1988; Morales and Bickham 1995). Western red bat is considered locally common.

This species has high potential to occur within the Project Area. Western red bats typically roost in tree canopies. Suitable foraging habitat within the Project Area includes eucalyptus woodland and southern coast live oak riparian forest. Due to the low potential for bats to roost within the Development Footprint, focused surveys for bats were not conducted. Small patches of potential tree roosting habitat for bat species and rock outcrops that could provide for roosting are located within the Otay Ranch RMP Preserve, non-graded portions of the LDA, Conserved Open Space, and outside of the Project Area. Areas of the LDA would be protected by an open space easement per the requirements of the Otay Ranch RMP, and areas of Conserved Open Space would be protected by a biological open space easement. Large boulders, caves, or cliffs were not observed within the Project Area. These features may occur outside of the Project Area within the adjacent mountains. Although there is foraging habitat located within the Project Area, including the Development Footprint, any potential roosting habitat (large trees or rock outcrops) is located outside of the Development Footprint.

San Diego Black-Tailed Jackrabbit (*Lepus californicus bennettii*), SSC/County Group 2

San Diego black-tailed jackrabbit is an SSC and County Group 2 species. It is confined to coastal Southern California, with marginal eastern records in Mount Piños, Arroyo Seco, Pasadena, San Felipe Valley, and Jacumba (Hall 1981). It is found in many diverse habitats, but primarily in arid regions supporting short-grass habitats. Jackrabbits typically are not found in high grass or dense brush where it is difficult for them to move quickly, and the openness of open scrub habitat likely is preferred over dense chaparral. Jackrabbits are common in grasslands that are overgrazed by cattle, and they are well adapted to using low-intensity agricultural habitats (Hall 1981).

This species was observed throughout the Project Area during biological surveys (Figures 4-1a, 4-1b, 4-1h, 4-1s, and 4-1v). Due to the high mobility of this species, not all observations were mapped. This species can occur throughout the upland vegetation communities within the Project Area.

San Diego Desert Woodrat (*Neotoma lepida intermedia*), SSC/County Group 2

San Diego desert woodrat is an SSC and County Group 2 species. This species is found in coastal Southern California into Baja California, Mexico (Reid 2006). Marginal eastern records for San Diego desert woodrat in the United States include San Luis Obispo, San Fernando in Los Angeles County, the San Bernardino Mountains and Redlands in San Bernardino County, and Julian in San Diego County (Hall 1981). Desert woodrats are found in a variety of shrub and desert habitats, and are primarily associated with rock outcroppings, boulders, cacti, or areas of dense undergrowth.

Woodrat middens were observed (but not mapped), indicating this species occurs within the Project Area. Suitable habitat within the Project Area includes upland vegetation communities.

Big Free-Tailed Bat (*Nyctinomops macrotis*), SSC/County Group 2

Big free-tailed bat is an SSC and County Group 2 species. Big free-tailed bat occurs in urban areas throughout Southern California counties, including Los Angeles, San Diego, Riverside, Imperial, and Orange (CDFW 2016c). Common habitat includes roosts in buildings, caves, and occasionally in holes in trees (Parish and Jones 1999). Big free-tailed bat often forages over water sources and is not known to breed in California (Zeiner et al. 1990b).

This species has high potential to occur within the Project Area. Within the Project Area, suitable foraging habitat includes chaparral (chamise chaparral including disturbed, southern mixed chaparral), disturbed habitat, eucalyptus woodland, mulefat scrub, southern coast live oak riparian forest, non-native grassland, and coastal sage scrub (including disturbed). Due to the low potential for bats to roost within the Development Footprint, focused surveys for bats were not conducted. Small patches of potential tree roosting habitat for bat species and rock outcrops that could provide for roosting are located within the Otay Ranch RMP Preserve, non-graded portions of the LDA, Conserved Open Space, and outside of the Project Area. Areas of LDA would be protected by an open space easement per the requirements of the Otay Ranch RMP, and areas of Conserved Open Space would be protected by a biological open space easement. Large boulders, caves, or cliffs were not observed within the Project Area. These features may occur outside of the Project Area within the adjacent mountains. Although there is foraging habitat located within the Project Area, including the Development Footprint, any potential roosting habitat (large trees or rock outcrops) is located outside of the Development Footprint.

American Badger (*Taxidea taxus*), SSC/MSCP Covered Species/County Group 2

American badger is an SSC, MSCP Covered Species, and County Group 2 species. In California they are found throughout the state except in coastal Northern California (Zeiner et al. 1990b).

American badger typically occurs in open, sparsely vegetated habitats, but also uses modified habitats such as agriculture. It is found in dry, open areas with friable soils, and can occur throughout the Project Area. Its distribution in a landscape coincides with the availability of prey, burrowing sites, and mates, with distribution of males ranging wider than distribution of females during the breeding season and summer months (Minta 1993). In general, badger activity within a home range tends to concentrate in areas with suitable soils for burrowing or with colonies of ground squirrels.

Within the Project Area, an American badger burrow was documented within the Otay Ranch RMP Preserve in the Planning Area 16. The burrow showed distinct claw marks indicative of a badger burrow (Figure 4-1a).

4.6.2 County Group 2 Species

County Group 2 species that have been observed or have high potential to occur in the Project Area are described below and included in Appendix J1. Additional species that have moderate potential to occur are described in more detail in Appendix J1.

Reptiles

Coronado Skink (*Plestiodon skiltonianus interparietalis*) WL/County Group 2

Coronado skink is a WL and County Group 2 species. This species is common within grassland, woodlands, pine forests, chaparral, especially open sunny areas (e.g., clearings, edges of creeks), and rocky areas near streams with lots of vegetation. However, this species may also be found in areas away from water. Coronado skink is found in inland Southern California south through the north Pacific coast region of northern Baja California (Nafis 2014).

Although Coronado skink was not detected during surveys, this species has high potential to occur within the Project Area. Suitable habitat occurs in the Project Area and includes chaparral (southern mixed chaparral, chamise chaparral including disturbed) and eucalyptus woodland.

Orangethroat Whiptail (*Aspidoscelis hyperythra*), WL/MSCP Covered Species/County Group 2

Orangethroat whiptail is a WL, MSCP Covered Species, and County Group 2 species. Orangethroat whiptail inhabits coastal scrub, chamise–redshank chaparral, mixed chaparral, and valley–foothill hardwood habitats (Zeiner et al. 1988–1990). In California, its range extends into Orange, Riverside, and San Diego Counties west of the crest of the Peninsular Ranges in elevations from sea level to 3,412 feet amsl (Jennings and Hayes 1994). Individuals seek cover in dense vegetation, rocks, logs, and decaying vegetation.

Orangethroat whiptail has high potential to occur within the Project Area. Within the Project Area, suitable habitat includes chaparral (chamise chaparral including disturbed, southern mixed chaparral), coastal sage scrub (including disturbed), disturbed habitat, eucalyptus woodland, mulefat scrub, and southern coast live oak riparian forest.

Rosy Boa (*Lichanura trivirgata*), County Group 2

Rosy boa is not considered special status by any state or federal agencies; however, it is a County Group 2 species. Rosy boa in California ranges from Los Angeles, eastern Kern, and southern Inyo Counties, and south through San Bernardino, Riverside, Orange, and San Diego Counties (Spiteri 1988; Stebbins 2003; Zeiner et al. 1990b). It occurs at elevations from sea level to 5,000 feet amsl in the Peninsular and Transverse Ranges. Within its range in Southern California, rosy boa is absent only from the southeastern corner of California around the Salton Sea and the western and southern portions of Imperial County (Zeiner et al. 1990b). Rosy boa inhabits rocky shrubland and desert habitats, and is attracted to oases and streams, but does not require permanent water (Stebbins 2003).

Rosy boa was observed once during surveys within the Otay Ranch RMP Preserve in Village 14, east of the Development Footprint (Figures 4-1s). Suitable habitat occurs within the Project Area in vegetation communities with rocky outcroppings.

Birds

California Horned Lark (*Eremophila alpestris actia*), WL/County Group 2

California horned lark is a WL and County Group 2 species. California horned lark is a permanent resident found throughout much of the southern half of California. This species breeds and resides in the coastal region of California from Sonoma County southeast to the U.S./Mexico border, including most of the San Joaquin Valley, and eastward to the foothills of the Sierra Nevada (Beason 1995; Grinnell and Miller 1944). It is found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above tree line. This species prefers open habitats, grassland, rangeland, shortgrass prairie, montane meadows, coastal plains, and fallow grain fields, and it nests on the ground in a hollow scrape.

This species was observed during biological surveys, with several individuals generally occurring at mapped locations (Figures 4-1b, 4-1c, and 4-1s). However, due to the high mobility of this species, not all observations were mapped. Mapped locations included observations within the Otay Ranch RMP Preserve in Village 14 and Planning Areas 16/19. There is suitable foraging and nesting habitat within the Project Area.

Western Bluebird (*Sialia mexicana*), MSCP Covered Species/County Group 2

Western bluebird is an MSCP Covered Species and County Group 2 species. It is a common resident bird in San Diego County, where it prefers montane coniferous and oak woodlands (Unitt 2004). It nests in old-growth red fir, mixed conifer, and lodegpole pine habitats near wet meadows used for foraging. Because this species is not considered special status by state or federal agencies, it is not tracked in the CNDDB.

Western bluebirds were observed during surveys. One observation was mapped along Proctor Valley Road North at the edge of the Project Area (Figure 4-1a). There is suitable nesting habitat within the eucalyptus trees. Suitable foraging habitat includes many of the vegetation communities in the Project Area.

Barn Owl (*Tyto alba*), County Group 2

Barn owl is a not considered special status by any state or federal agencies; however, it is a County Group 2 species. It is common throughout its range throughout most continents; in the Americas, it occurs in much of continental United States, south through Central and South America, to Tierra del Fuego (Marti et al. 2005). In San Diego County, it is an uncommon permanent resident and occurs in urban settings, roosting in buildings, palm leaves, and nest boxes.

Barn owls do not seem to use specific habitat affinities, provided there are ample sites for nesting opportunities and adequate ground for hunting small mammals (Taylor 1994). Habitat types that are commonly used include open habitats such as grassland, chaparral, riparian, and other wetland types from sea level to 5,512 feet amsl (Zeiner et al. 1990a).

This species was observed during focused surveys for coastal California gnatcatcher in the northwest portion of the Project Area, east of Proctor Valley Road, but its location was not mapped. Although there is suitable habitat for foraging, there are limited trees or similar structures that would support nesting for this species. Suitable foraging habitat in the Project Area includes the majority of the vegetation communities.

Mammals

Yuma Myotis (*Myotis yumanensis*), County Group 2

Yuma myotis is not considered special status by any state or federal agencies; however, it is a County Group 2 species. It occurs throughout California except for the most arid areas of the Mojave and Colorado Deserts (Zeiner et al. 1990b). Records from counties in Southern California include San Diego, San Bernardino, Los Angeles, Riverside, Imperial, and Orange

(CDFW 2017). Although Yuma myotis occurs in a wide variety of life zones at elevations ranging from sea level to 10,820 feet, its actual distribution is closely associated with access to water (Zeiner et al. 1990b). Forests and woodlands are primary habitats, and foraging usually occurs within open, uncluttered habitats and low over-water sources such as ponds, streams, and stock ponds (Brigham et al. 1992; Zeiner et al. 1990b).

This species has high potential to occur within the Project Area. Within the Project Area, suitable foraging habitat includes chaparral (chamise chaparral, including disturbed, southern mixed chaparral), cismontane alkali marsh, coastal sage scrub (including disturbed), eucalyptus woodland, mulefat scrub, non-native grassland, and southern coast live oak riparian forest. Due to the low potential for bats to roost within the Development Footprint, focused surveys for bats were not conducted. Small patches of potential tree roosting habitat for bat species and rock outcrops that could provide roosting are located within the Otay Ranch RMP Preserve, non-graded portions of the LDA, and outside of the Project Area. Large boulders, caves, or cliffs were not observed within the Project Area. These features may occur outside of the Project Area within the adjacent mountains. Although there is foraging habitat located within the Project Area, including the Development Footprint, any potential roosting habitat (large trees or rock outcrops) is located outside of the Development Footprint.

Mule Deer (*Odocoileus hemionus*), MSCP Covered Species/County Group 2

Mule deer is an MSCP Covered Species and County Group 2 species. It is a common species with a widespread distribution throughout the western United States and Canada, and south into mainland and Baja California, Mexico (Hall 1981). It occurs throughout most of California, except in deserts and intensively farmed areas without cover (Zeiner et al. 1990b). Throughout its range, mule deer uses coniferous and deciduous forests, riparian habitats, desert shrub, coastal scrub, chaparral, and grasslands with shrubs. It is often associated with successional vegetation, especially near agricultural lands (NatureServe 2014). It uses forested cover for protection from the elements and open areas for feeding (Wilson and Ruff 1999). Mule deer fawn in a variety of habitats that have available water and abundant forage, including moderately dense shrubs and forests, dense herbaceous stands, and higher-elevation riparian and mountain shrub vegetation.

Mule deer were observed during biological surveys, but the locations were not mapped due to the high mobility of this species. Mule deer were flushed from upland habitats several times during surveys and are likely to use most of the Project Area.

Cougar (*Puma concolor*), MSCP Covered Species/County Group 2

Cougar is an MSCP Covered Species and County Group 2 species, and is a Specially Protected Mammal under California Fish and Game Code Section 4800. Its range throughout California extends from deserts to humid forests in the Coast Ranges, and from sea level to 10,000 feet amsl. It is most abundant in habitats that support its primary prey, mule deer, and its seasonal movements tend to follow migrating deer herds.

Cougar prefers habitats that provide cover, such as thickets in brush and timber in woodland vegetation (Zeiner et al. 1990b). It also uses caves and other natural cavities for cover and breeding. It requires extensive areas of riparian vegetation and brushy stages of various habitats with interspersions of irregular terrain, rocky outcrops, and tree/brush edges. Although the Project Area lacks riparian habitats, suitable rocky outcrops, irregular terrain, and good connectivity to large open spaces may serve as suitable habitat for this species.

This species has a high potential to move through the Project Area. Cougar sign (scat) was observed during gnatcatcher surveys in the northwestern portion of the Project Area, but the Project Area is generally open and does not provide good cover.

Invertebrates

Monarch (*Danaus plexippus*), County Group 2

Monarch butterfly is not considered special status by any state or federal agencies; however, it is a County Group 2 species. It follows a pattern of seasonal migration. In the summer, this species is found in New England, the Great Lakes region, and the northern Rocky Mountains. These areas are occupied from May through late August to mid-September (Urquhart 1987). The New England and Great Lakes populations migrate southwest to wintering grounds in the Sierra Madre of Mexico. The Rocky Mountains population migrates southwest to wintering grounds along the California coast.

Species distribution is controlled by the distribution of its larval host plant (i.e., various milkweeds, genus *Asclepias*). Eggs are deposited and hatch on the underside of leaves of the milkweed plant. Upon hatching, the larvae feed on the fine hairs on the leaves of the plant and stay on the same plant throughout its molting stages. After molting, the larvae leave the milkweed and construct a chrysalis elsewhere. Once an adult monarch butterfly emerges from the chrysalis, it soon returns to a milkweed plant for foraging and shelter (Urquhart 1987).

Monarch butterfly wintering sites are considered special status by CDFW (2016a). Wintering sites in California are associated with wind-protected groves of large trees (primarily eucalyptus

or pine) with nectar and water sources nearby, generally near the coast. A few California sites (e.g., Pacific Grove and Natural Bridges) support concentrated numbers of overwintering adults, but adults often winter as scattered individuals or in small clusters (Emmel and Emmel 1973). Sexually mature monarch butterflies mate along their northern migratory route (while returning to their summer grounds) and deposit eggs on milkweed plants. Adults die shortly after mating and laying eggs, leaving the completion of the northern migration to their offspring.

Monarch butterfly was observed during Quino checkerspot butterfly surveys (Appendix D), and Mexican whorled milkweed (*Asclepias fascicularis*), a potential host plant, was recorded within the Project Area. There are small patches of eucalyptus within the Project Area, but they are not expected to be large enough to support wintering colonies. The nearest wintering colony of monarch butterfly in San Diego County is near the University of California, San Diego ~~coastal~~ site along Aluz Street, approximately 23 miles northwest of the Project Area (Pelton et al. 2016).

4.7 Jurisdictional Aquatic Resources

The results of the jurisdictional delineation conducted by Dudek biologists in 2014, 2015, and 2016 show that there are jurisdictional aquatic features in the Project Area. Jurisdictional aquatic resources, including wetlands/riparian areas and non-wetland waters/streambeds, mapped in the Project Area are shown in Figure 4-1 and Figures 4-1a through 4-1cc. Table 4-4 provides a summary, in acreages and linear feet, of these jurisdictional aquatic resources. Within the Project Area, ACOE, RWQCB, and CDFW jurisdictions follow the same boundaries. Jurisdictional resources within the Project Area total 13.73 acres (41,760 linear feet).

Table 4-4
ACOE/RWQCB/CDFW Jurisdictional Aquatic Resources within the Project Area

Vegetation Community/Jurisdictional Resource	*Project Area*			**Total**
	Village 14	*Planning Areas 16/19*	*Off-Site Improvement Areas*	
ACOE/RWQCB Wetlands and CDFW Riparian Areas				
Cismontane alkali marsh (including disturbed)	1.12 acres 2,953 lf	6.66 acres 4,640 lf	<0.01 acres 22 lf	7.78 acres 7,616 lf
Coastal freshwater marsh	—	—	0.43 acres 830 lf	0.43 acres 830 lf
Mulefat scrub	0.20 acres 190 lf	0.51 acres 719 lf	0.27 acres 234 lf	0.98 acres 1,143 lf
Southern coast live oak riparian forest	0.71 acres 907 lf	—	—	0.71 acres 907 lf

Table 4-4
ACOE/RWQCB/CDFW Jurisdictional Aquatic Resources within the Project Area

Vegetation Community/Jurisdictional Resource	*Project Area*			Total
	Village 14	*Planning Areas 16/19*	*Off-Site Improvement Areas*	
Southern willow scrub	—	0.27 acres 449 lf	0.05 acres 86 lf	0.32 acres 535 lf
Total	2.03 acres 4,049 lf	7.45 acres 5,808 lf	0.75 acres 1,172 lf	10.23 acres 11,029 lf
ACOE/RWQCB Non-Wetland Waters and CDFW Streambed				
Unvegetated channel	1.54 acres 19,005 lf	1.10 acres 7,938	0.43 acres 3,406 lf	3.06 acres 30,349 lf
Open water	—	0.44 acres 381 lf	—	0.44 acres 381 lf
Total	1.54 acres 19,005 lf	1.54 acres 8,319 lf	0.43 acres 3,406 lf	3.50 acres 30,730 lf
Total jurisdictional aquatic resources	3.57 acres 23,054 lf	8.98 acres 14,127 lf	1.18 acres 4,578 lf	13.73 acres 41,760 lf

lf = linear feet; ACOE = U.S. Army Corps of Engineers; CDFW = California Department of Fish and Wildlife; RWQCB = Regional Water Quality Control Board.

The Project Area is located within the Dulzura hydrologic area of the Otay watershed, primarily within the Jamul hydrologic subarea (Hydrological Subarea Code 910.33) and Proctor hydrologic subarea (Hydrological Subarea Code 910.32). The small triangle portion of the Otay Ranch RMP Preserve in Village 14 is located within the Savage hydrologic subarea (Hydrological Subarea Code 910.31). The Development Footprints for Village 14 and Planning Areas 16/19 are located entirely within the Jamul and Proctor hydrologic subareas. Drainages within the Project Area flow toward Proctor Valley from the higher elevations east and west of the Project Area. In general, the drainages from the higher elevations are relatively steep and narrow and do not hold water most of the year. A few areas along the flatter topography exhibit less-rapid flow and have thus developed more extensive hydrophytic vegetation and hydric soils. These areas occur along portions of the stream channels and are typically represented by cismontane alkali marsh vegetation. The drainages generally connect to the Proctor Valley drainage, which runs roughly parallel to Proctor Valley Road and flows in a north/south direction, eventually draining into Upper Otay Reservoir and then Lower Otay Reservoir.

4.8 Habitat Connectivity and Wildlife Corridors

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the immigration and emigration of animals. Wildlife corridors contribute to

population viability by ensuring the continual exchange of genes between populations, which helps maintain genetic diversity; providing access to adjacent habitat areas, representing additional territory for foraging and mating; allowing for a greater carrying capacity; and providing routes for colonization of habitat lands following local population extinctions or habitat recovery from ecological catastrophes (e.g., fires).

Habitat linkages are patches of native habitat that function to join two larger patches of habitat. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation. The linkage represents a potential route for gene flow and long-term dispersal. Habitat linkages may serve as both habitat and avenues of gene flow for small animals such as passerine birds, small mammals, and reptiles and amphibians. Habitat linkages may be represented by continuous patches of habitat or by nearby habitat "islands" that function as "stepping stones" for dispersal.

The MSCP Plan identifies 16 Biological Resource Core Areas (BRCAs) and associated habitat linkages within the MSCP Plan area. BRCAs are generally defined in the MSCP as areas "supporting a high concentration of sensitive biological resources which, if lost or fragmented, could not be replaced or mitigated elsewhere" (MSCP 1998). Figure 2-2, Generalized Core and Biological Resources Area and Linkages, included in the MSCP Plan depicts portions of Village 14 almost entirely within the Jamul Mountains BRCA, with a small portion within the Sweetwater Reservoir/San Miguel Mountain/Sweetwater River BRCA (Figure 4-4, Biological Resources Core Area). The southern portions of Planning Areas 16/19 are located within the Jamul Mountains BRCA (MSCP 1998).

The Baldwin Otay Ranch Wildlife Corridors Studies Report (Ogden 1992b) identifies several local and regional wildlife corridors in the Project Area. Figure 4-5, Wildlife Corridor and Habitat Linkages, shows the locations of these corridors in conjunction with land ownership. Although landscapes in San Diego County have changed significantly ~~over the last two~~in recent decades, the corridors identified in this study are still viable and currently traverse between large areas of open lands. Appendix L provides a review of wildlife corridor and crossing studies which are relevant to the Proposed Project. As determined in that memo, none of the conclusions drawn in the recent studies are inconsistent with, nor do they undermine, the validity of the Ogden Wildlife Corridor Study. It has also been determined that, through extensive field work and surveys for the Proposed Project, that conditions within and immediately surrounding the Project Area have not materially changed since the Ogden Wildlife Corridor Study was prepared in 1992. Thus, the study, including its empirical findings, remains valid.

As shown in Figure 4-5, these corridors are given identifications and are primarily located within public lands that provide undeveloped areas connected to each other that support wildlife movement across the landscape, including movement between various reservoirs, creeks, and upland habitats.

The L4 corridor traverses the Proctor Valley drainage and facilitates movement of species such as birds, small mammals, reptiles, and some amphibians. The corridor is currently within open space areas managed by various entities, except for the point where it crosses the southern and northern portions of the existing Proctor Valley Road. Within the Project Area, it traverses chamise chaparral, cismontane alkali marsh, coastal sage scrub vegetation types, non-native grassland, open water, unvegetated channel, developed land, and disturbed habitat. L4 connects to L3 in the northern portion, which then passes south through the BLM land in the eastern portion, connecting to R1. Where L3 connects to L4 in the south, L3 continues east through Otay Ranch RMP and ~~MCSP~~ MSCP Preserve lands, and BLM land and connects to R7 near the Jamul and San Ysidro Mountains. The L3 corridor is composed of two sections: the southern one that runs mostly east/west, and the northern one that runs mostly north/south. Within the Project Area, the L3 corridor traverses Diegan coastal sage scrub, disturbed habitat, non-native grassland, open water, and southern mixed chaparral. Regional corridor R1 is designated in a general east–west direction and follows along drainages toward Sweetwater Reservoir to the west and Jamul Mountains to the east. Species that travel farther distances could use this corridor as part of their home range or dispersal, including mule deer, coyote, and cougar, as well as birds and other species. The R1 corridor traverses chamise chaparral, coastal sage scrub vegetation types, non-native grassland, vernal pools, developed land, and disturbed habitat within the Project Area. Because Proctor Valley is situated adjacent to the Otay and Sweetwater Reservoirs, it could be used as a stopover or foraging area for species traveling between the reservoirs.

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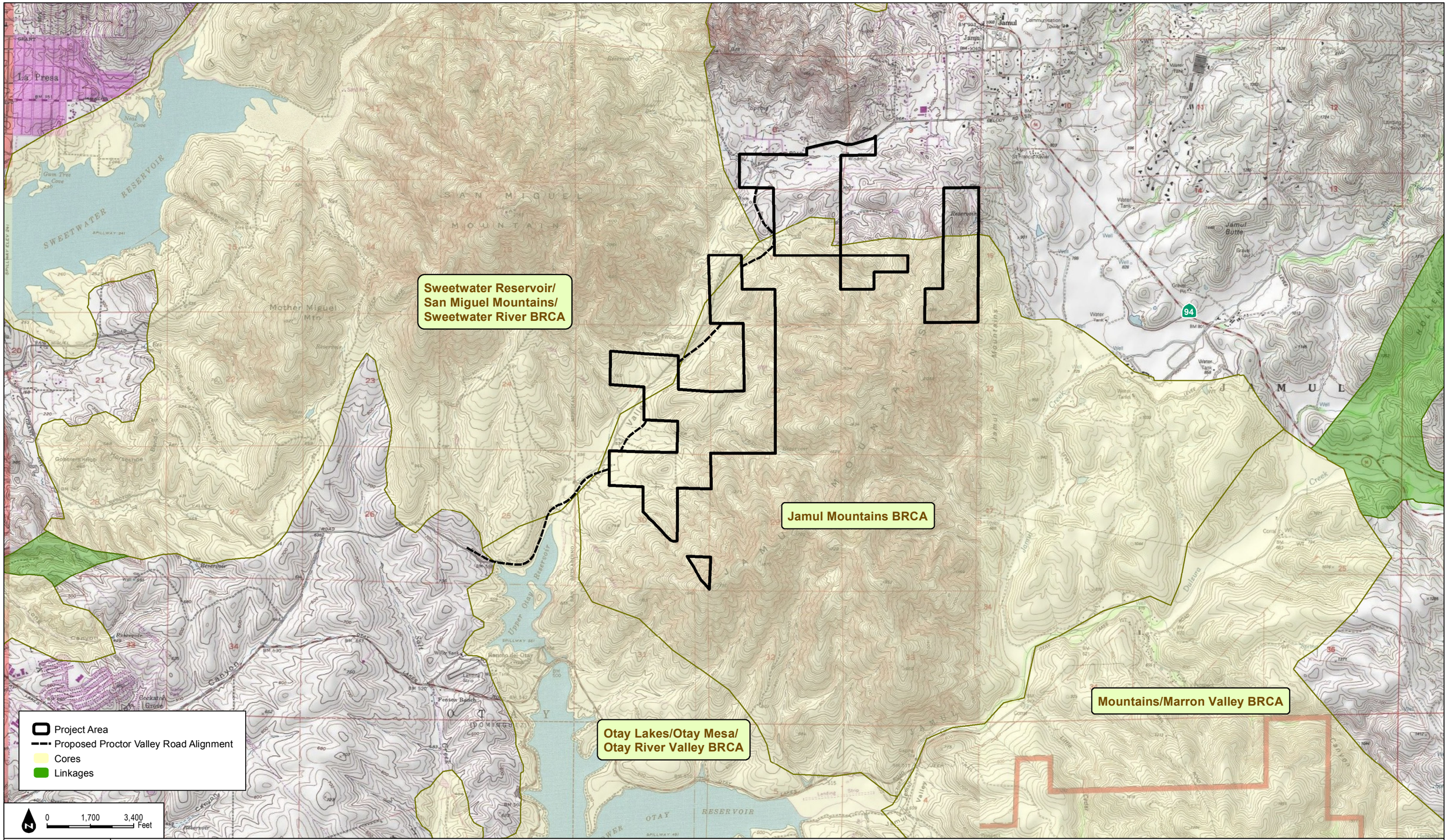

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SOURCE: USGS 7.5-minute Topographic Map; Hunsaker 2017; SANGIS 2016

FIGURE 4-4

Biological Resources Core Area

Otay Ranch Village 14 and Planning Areas 16/19

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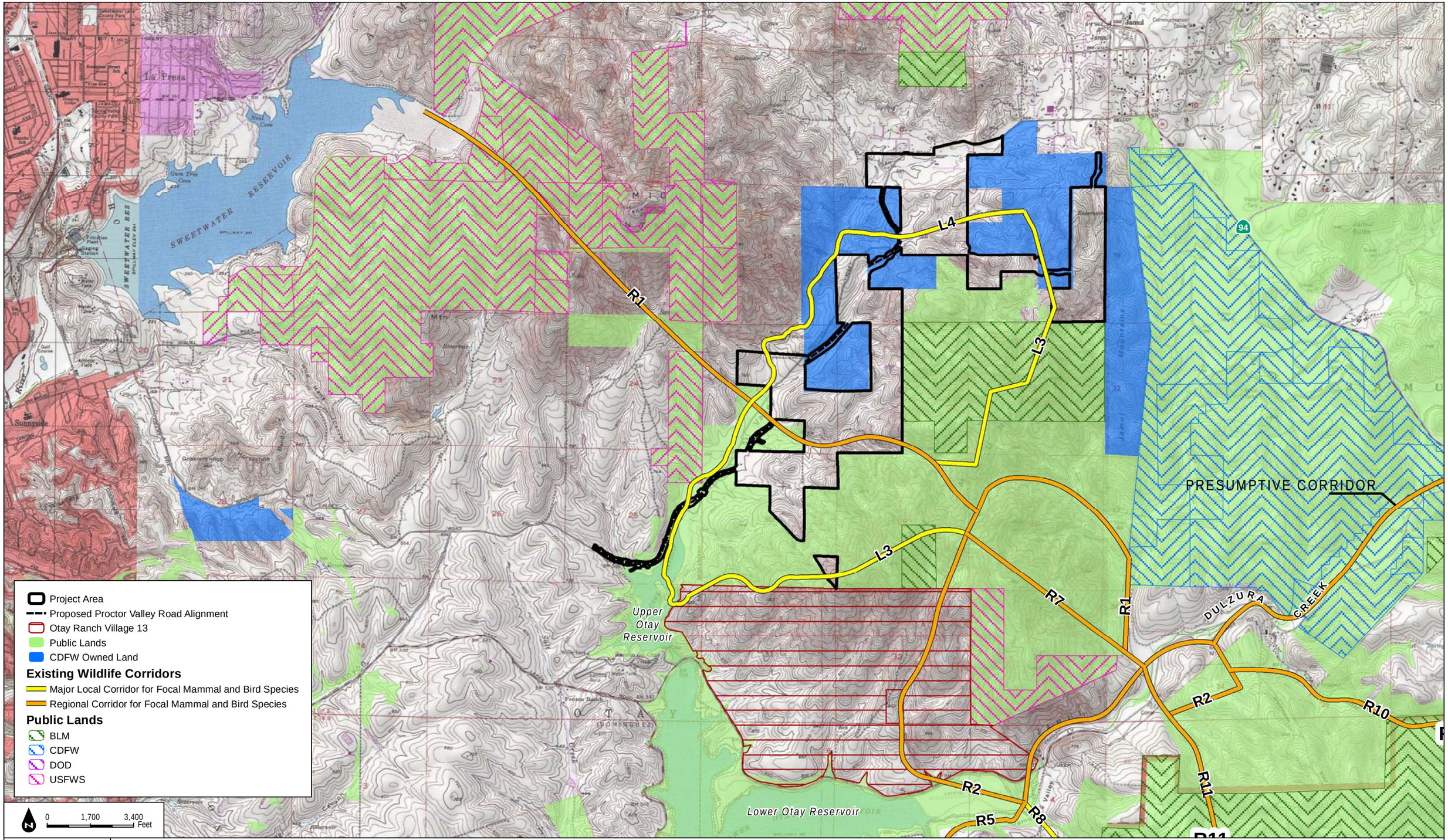

SOURCE: USGS 7.5-minute Topographic Map; Hunsaker 2017; SANGIS 2003; OGDEN 1992

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FIGURE 4-5

Wildlife Corridor and Habitat Linkages

Otay Ranch Village 14 and Planning Areas 16/19

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5 PROJECT EFFECTS

This section addresses direct, indirect, and cumulative impacts to biological resources that would result from implementation of the Proposed Project. A number of mitigation measures are included as part of the Proposed Project to avoid, minimize, and/or mitigate potential significant impacts to less-than-significant levels; these measures are summarized in Chapter 11 of this report.

Direct impacts were quantified by overlaying the anticipated limits of grading and fuel modification over the mapped biological resources and quantifying impacts (see Figure 5-1, Impacts to Biological Resources – Legend, and Figures 5-1a through 5-1cc, Impacts to Biological Resources). Impacts related to development of the Proposed Project within Village 14 and Planning Areas 16/19 would occur on approximately 722.6 acres;[13] the remainder of the Project Area would be designated as Otay Ranch RMP Preserve or Conserved Open Space. Additional development would occur off site on approximately 85.4 acres of lands owned by the City of San Diego, City of Chula Vista, and CDFW, and on a County of San Diego road easement, including 15.8 acres in Planning Areas 16/19 (CDFW and County).

Indirect impacts result from adverse "edge effects," either short-term indirect impacts related to construction, or long-term, chronic indirect impacts associated with the location of urban development in proximity to biological resources within natural open space. During construction of the Proposed Project, short-term indirect impacts may include dust and noise, which could temporarily disrupt habitat and species' vitality; changes in hydrology; disruption of wildlife activity due to increased human activity; and construction-related chemical pollutants. However, all Proposed Project grading would be subject to restrictions and requirements that address erosion and runoff, including the federal Clean Water Act and the National Pollution Discharge Elimination System, and preparation of a SWPPP and Standard Urban Stormwater Management Plan. These programs are expected to minimize Proposed Project impacts with respect to erosion/runoff, and the potential impacts from chemical pollutants. Long-term indirect impacts to adjacent open space may include generation of fugitive dust, intrusions by humans and domestic pets, noise, lighting, invasion by exotic plant and wildlife species, effects of toxic chemicals (fertilizers, pesticides, herbicides, and other hazardous materials), urban runoff from developed areas, litter, fire, habitat fragmentation, and hydrologic changes. As required by the Otay Ranch RMP (City of Chula Vista and County of San Diego 1993b.), the Proposed Project would include a 100-foot Preserve edge buffer, which is detailed in the Preserve Edge Plan. The Preserve edge would be a 100-foot buffer between the Otay Ranch RMP Preserve and development, and is located immediately adjacent to, but outside of, the Otay Ranch RMP Preserve. The 100-foot

[13] 21.9 acres would be permanent and temporary impacts associated with road improvements within the Otay Ranch RMP Preserve.

buffer is intended to reduce the edge effects of development on the Otay Ranch RMP Preserve. The Preserve Edge Plan details the uses allowed within the 100-foot-wide Preserve edge buffer, and provides a list of plant species that are appropriate adjacent to the Otay Ranch RMP Preserve. The Preserve Edge Plan addresses drainage, toxic substances, lighting, noise, fuel modification, fencing, and invasive species (RH Consulting Group et al. ~~2017~~2018). The 100-foot Preserve edge buffer totals approximately 91 acres.

Cumulative impacts refer to incremental individual environmental effects of two or more projects when considered together. These impacts taken individually may be minor but become collectively significant as they occur over time.

5.1 Riparian Habitat or Sensitive Vegetation Communities

5.1.1 Direct Impacts to Riparian Habitat or Sensitive Vegetation Communities

5.1.1.1 Temporary Direct Impacts

Impact V-1: Temporary Direct Impacts to Riparian Habitat or Sensitive Vegetation Communities within the Project Area (Including Off-Site Improvement Areas)

Short-term, construction-related, or temporary direct impacts to vegetation communities would primarily result from construction activities, including grading that would be restored following completion of the Proposed Project. The Proposed Project's temporary impacts would occur primarily as a result of constructing improvements to Proctor Valley Road (including realignment of the road) both on and off of the Project Area, and constructing access roads within Village 14 and Planning Area 16. Within Village 14 there would be 10.3 acres of temporary impacts to sensitive vegetation, of which 6.6 acres is within the Otay Ranch RMP Preserve. Within Planning Areas 16 there would be 3.4 acres of temporary impacts within the Otay Ranch RMP Preserve.

Within the Village 14 Development Footprint, grading of a slope along Proctor Valley Road would result in direct temporary impacts to 3.9 acres of granitic chamise chaparral, a sensitive vegetation community. The slope is located in the northern portion of Village 14 on the eastern side of Proctor Valley Road, immediately adjacent to Conserved Open Space. Grading within the Otay Ranch RMP Preserve would occur along Proctor Valley Road and roads within Planning Area 16. Off-site temporary impacts associated with improvements to Proctor Valley Road would total 53.2 acres, of which 49.4 acres of impact would be to riparian habitat or sensitive vegetation communities. Table 5-1 provides a list of impacts for the Project Area. Table 5-2 provides a summary of Proposed Project impacts, including from off-site improvements. A detailed summary of impacts for the off-site improvements, organized by ownership, is provided in Table 5-3.

In addition, clearing, trampling, or grading of vegetation outside designated construction zones could occur in the absence of avoidance and mitigation measures. These potential impacts could damage vegetation communities and alter their ecosystem, creating gaps in vegetation that allow exotic, non-native plant species to become established, thus increasing soil compaction and leading to soil erosion. All temporarily impacted areas would be revegetated upon completion of road construction/realignment activities.

The significance of these potential impacts was determined through application of the County's Significance Guidelines, as described in Section 7.1, Guidelines for the Determination of Significance, of this report.

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Table 5-1
Impacts to Vegetation Communities and Land Cover Types within Village 14 and Planning Areas 16/19 (Acres)

Habitat Types/Vegetation Communities (Code)[a]		Project Area Total	Village 14				Planning Areas 16/19				Off-Site Improvement Areas		Total Impacts	
			Permanent Impacts		*Temporary Impacts*		*Permanent Impacts*			*Temporary Impacts*	*Permanent Impacts*[c]	*Temporary Impacts*	*Permanent Impacts*	*Temporary Impacts*
			Dev.[b]	*Preserve*[c]	*Dev.*	*Preserve*	*Dev.*	*Preserve*[c]	*LDA*[c]	*Preserve*				
Riparian Habitat/ Jurisdictional Aquatic Resources	Cismontane alkali marsh (including disturbed) (52310)	7.8	—	0.1	—	<0.05	0.8	0.2	—	<0.05	—	—	1.1	<0.1
	Coastal and valley freshwater marsh (52410)	0.4	—	—	—	—	—	—	—	—	0.1	0.3	0.1	0.3
	Mulefat scub (63310)	1.0	—	—	—	—	<0.05	<0.05	—	0.1	0.1	0.2	0.1	0.3
	Open water (64100)	0.4	—	—	—	—	0.2	—	—	—	—	—	0.2	—
	Southern coast live oak riparian forest (61310)	0.7	—	—	—	—	—	—	—	—	—	—	—	—
	Southern willow scub (63320)	0.3	—	—	—	—	0.2	<0.05	—	<0.05	<0.05	<0.05	0.2	<0.1
	Unvegetated channel (64200)[d]	0.1	—	—	—	—	—	—	—	—	<0.05	0.1	<0.05	0.1
Riparian Habitat/Jurisdictional Aquatic Resources Total		*10.8*	—	*0.1*	—	*<0.05*	*1.1*	*0.2*	—	*0.1*	*0.2*	*0.6*	*1.6*	*0.7*
Sensitive Upland Communities	Granitic chamise chaparral (including disturbed) (37210)	308.6	219.9	5.7	3.9	1.3	—	—		—	5.2	13.6	230.9	18.8
	Granitic southern mixed chaparral (37121)	99.2	—	—	—	—	8.8	—	1.2	—	2.4	1.9	12.4	1.9
	Diegan coastal sage scrub (32500)	711.1	113.3	0.8	—	1.8	212.4	1.4	11.4~~10.4~~	2.3	14.2	14.6	353.5~~352.5~~	18.7
	Diegan coastal sage scrub (disturbed) (32500)	93.0	34.2	2.5	—	3.3	11.0	—	—	<0.05	3.3	6.3	51.0	9.6
	Diegan coastal sage scrub – *Baccharis*-dominated (including disturbed) (32530)	1.3	—	—	—	—	—	—	—	—	0.4	0.9	0.4	0.9
	Non-native grassland (42200)	112.2	32.0	0.2	—	0.1	34.1	0.3	—	1.0	3.6	11.4	70.2	12.5
Sensitive Upland Communities Total		*1,325.5*	*399.4*	*9.2*	*3.9*	*6.5*	*266.3*	*1.7*	*12.6~~11.6~~*	*3.3*	*29.1*	*48.8*	*718.4~~717.4~~*	*62.4*
Riparian Habitat/Jurisdictional Aquatic Resources and Sensitive Upland Communities Subtotal		**1,336.3**	**399.4**	**9.3**	**3.9**	**6.5**	**267.4**	**1.9**	**12.6~~11.6~~**	**3.3**	**29.3**	**49.4**	**720.0~~719.0~~**	**63.1**
Non-Sensitive Communities and Land Covers	Disturbed habitat (11300)	22.5	10.3	<0.05	—	0.1	4.7	<0.05	—	0.1	1.0	2.4	16.0	2.6
	Eucalyptus woodland (79100)	2.9	—	—	—	—	—	—	—	—	—	0.2	—	0.2
	Urban/developed (12000)	7.3	3.0	—	—	—	0.5	0.5	—	<0.05	1.9	1.2	5.9	1.2
Non-Sensitive Communities and Land Covers Total		*32.7*	*13.3*	*<0.05*	—	*0.1*	*5.2*	*0.5*	—	*0.1*	*2.9*	*3.8*	*21.9*	*4.0*
Total[e]		**1,369.0**	**412.7**	**9.3**	**3.9**	**6.6**	**272.6**	**2.4**	**12.6~~11.6~~**	**3.4**	**32.2**	**53.2**	**741.9~~740.9~~**	**67.1**

[a] Oberbauer et al. 2008.
[b] Dev. = Development Footprint; includes 116.4 acres of private HOA open space that would remain within the development.
[c] Fuel modification is included within the permanent impact areas. An additional 1.3 acre of impacts may be required for widening Proctor Valley Road North.
[d] Unvegetated stream channel is also an overlay within various vegetation communities, and is, therefore, not fully represented in this table. See Section 5.4, Jurisdictional Aquatic Resources, of this report.
[e] May not total due to rounding.

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