


Figure 4-2aa
2016 Quino Host Plant Mapping and Historical Locations


INTENTIONALLY LEFT BLANK





Figure 4-2bb
2016 Quino Host Plant Mapping and Historical Locations

INTENTIONALLY LEFT BLANK

 Project Boundary

 Otay Ranch RMP Preserve


 Quino Survey Area


 Vegetation

CC=Chamise Chaparral

CSS=Diegan Coastal Sage Scrub

DH=Disturbed Habitat

 USFWS Quino Data

 CNDDDB Quino Data

Host Plants

Castilleja spp. (*C. exserta*; *C. densiflora*)


 1-99



Figure 4-2cc
2016 Quino Host Plant Mapping and Historical Locations

INTENTIONALLY LEFT BLANK

Biological Resources Technical Report for Otay Ranch Village 14 and Planning Areas 16/19

Current and Historic Quino Checkerspot Butterfly Observations

No Quino checkerspot butterfly adults or larvae were observed within the Project Area by Dudek in 2014 or by HELIX in 2015 or 2016 (HELIX 2015, 2016). HELIX reviewed the CNDDDB and USFWS databases for documented Quino checkerspot butterfly locations within and adjacent to the Project Area. The databases contain scattered Quino checkerspot butterfly locations throughout the broader Proctor Valley region, with the dates of the documented sightings ranging from 1990 to 2007, and recent observations from 2017 (Figures 4-2a through 4-2cc). Only one location (Historical Sighting Location 1) has been documented within the Village 14 Development Footprint. A second location occurs just north of the west-central portion of the Village 14 Development Footprint (Historical Sighting Location 2). Both historical sightings are described below.

Current Observations: In 2017, several individuals were documented within the vicinity of the Project Area by USFWS (USFWS 2017). These observations are considered to be incidental because they were made during a general reconnaissance of the area and not pursuant to a focused or protocol survey for the species. Two individuals were observed west of the central portion of the Village 14 Development Footprint, and four individuals were observed immediately off site west of Proctor Valley Road. One more individual was observed immediately east of Proctor Valley Road and one individual adjacent to the northeastern portion of the Development Footprint.

Historical Sighting Location 1: In 2001, Faulkner (San Diego Natural History Museum) and Rocks (URS) documented 12 Quino checkerspot butterfly butterflies along a ridgeline on the eastern portion of the Central Village 14 Development Footprint as part of a survey for an adjacent property (Rocks 2015). This area contains an old road and appears to have been previously cleared of vegetation, possibly as part of historical firebreaks, past firefighting activities, or some other physical disturbance. The 2016 host plant mapping by HELIX identified two patches of Quino checkerspot butterfly host plants in the area (0.12 acres and 0.25 acres) with high densities, along with two high-density, three medium-density, and several low-density point locations of host plants. The 2015 host plant mapping by HELIX identified a 0.24-acre patch of Quino checkerspot butterfly host plants along the old disturbed roadway. There was also a smaller patch of host plants and six isolated host plant points in the vicinity. No Quino checkerspot butterflies were observed in this area during the 2015 or 2016 surveys conducted by HELIX. The area generally supports chaparral except for the disturbed areas noted above (Figures 4-2a through 4.2cc).

Historical Sighting Location 2: A second location occurs just north of the west-central portion of the Village 14 Development Footprint approximately 200 feet north of the Project Area, and

Biological Resources Technical Report for Otay Ranch Village 14 and Planning Areas 16/19

was documented by Mooney Jones and Stokes as part of a USFWS-funded post-fire study associated with the 2003 Old Fire. One Quino checkerspot butterfly was observed in 2005 along a ridgetop west of Proctor Valley Road consisting of burned coastal sage scrub/chamise chaparral. Two Quino checkerspot butterflies were observed in the same location in 2006, and one Quino checkerspot butterfly was observed in the same location in 2007 (Borcher 2015). HELIX surveyed this area in 2015 and found scattered host plant points, but no Quino checkerspot butterflies. HELIX's 2016 surveys occurred adjacent to this historic sighting location, and scattered host plants were mapped but no Quino checkerspot butterflies were observed. Under the Proposed Project, the actual data point would be avoided but is located within 300 feet of the proposed Development Footprint and within 250 feet of grading for Proctor Valley Road.

Host Plant Distribution within the Development Footprint

2016 Host Plant Mapping

The 2016 host plant distribution shown in Figure 3-1b reflects an above-average year for host plant expression based on the feedback from the biologists who completed the surveys in 2016 and the County of San Diego's biologist. Host plants that were mapped in 2016 generally occurred in the same areas as in 2015, but occurred in lower densities compared to 2015. Because of the limited amount of owl's clover across the site, only a summary of dwarf plantain locations is provided.

- 55% of the host plant locations within the Village 14 Development Footprint (209 points and patches of the 380 total host plant locations) were mapped as low density (1–100 plants). Within the Village 14 Development Footprint, 61% of the host plant locations were mapped as low density (137 points and patches of the 225 locations). Within the Planning Area 16 Development Footprint, 52% of the host plant locations were mapped as low density (63 points of the 121 locations). Within the Otay Ranch RMP Preserve (Impacted), 29% of the host plant locations were mapped as low density (4 points of the 14 locations). Within the off-site Development Footprint, 25% of the host plant locations were mapped as low density (5 points of the 20 locations). No low-density host plant locations were mapped within Planning Area 19 or within the impacted LDA.
- 31% of the host plant locations within the Development Footprint (118 points and patches) were mapped as medium density (100–1,000 plants). Within the Village 14 Development Footprint, 23% of the host plant locations were mapped as medium density (51 points and patches of the 225 locations). Within the Planning Area 16 Development Footprint, 40% of the host plant locations were mapped as medium density (48 points and patches of the 121

Biological Resources Technical Report for Otay Ranch Village 14 and Planning Areas 16/19

locations). Within the Otay Ranch RMP Preserve (Impacted), 71% of the host plant locations were mapped as medium density (10 points and patches of the 14 locations). Within the off-site Development Footprint, 45% of the host plant locations were mapped as medium density (9 points and patches of the 20 locations). No medium-density host plant locations were mapped within Planning Area 19 or within the impacted LDA.

- 14% of the host plant locations within the Development Footprint (53 points and patches) were mapped as high density (1,000–10,000 plants), as shown in Figure 3-1b. Within the Village 14 Development Footprint, 16% of the host plant locations were mapped as high density (37 points and patches of the 225 locations). Within the Planning Area 16 Development Footprint, 8% of the host plant locations were mapped as high density (10 points and patches of the 121 locations). Within the off-site Development Footprint, 30% of the host plant locations were mapped as high density (6 patches of the 20 locations). No high-density host plant locations were mapped within Planning Area 19, Otay Ranch RMP Preserve impacted, or impacted LDA.
- A majority of the areas with high densities of host plants within the Development Footprint in 2016 occurred within small openings of larger tracts of chaparral, with the other higher-density patches occurring in sage scrub and non-native grassland areas.
- One of the high-density areas in the eastern portion of the Central Village 14 Development Footprint appears to be an area that was previously cleared of vegetation, possibly as part of historical firebreaks, past firefighting activities, or some other physical disturbance (i.e., approximately 300 feet southeast of Historical Sighting 1; Figure 3-1b).

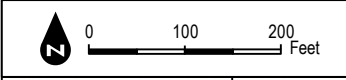
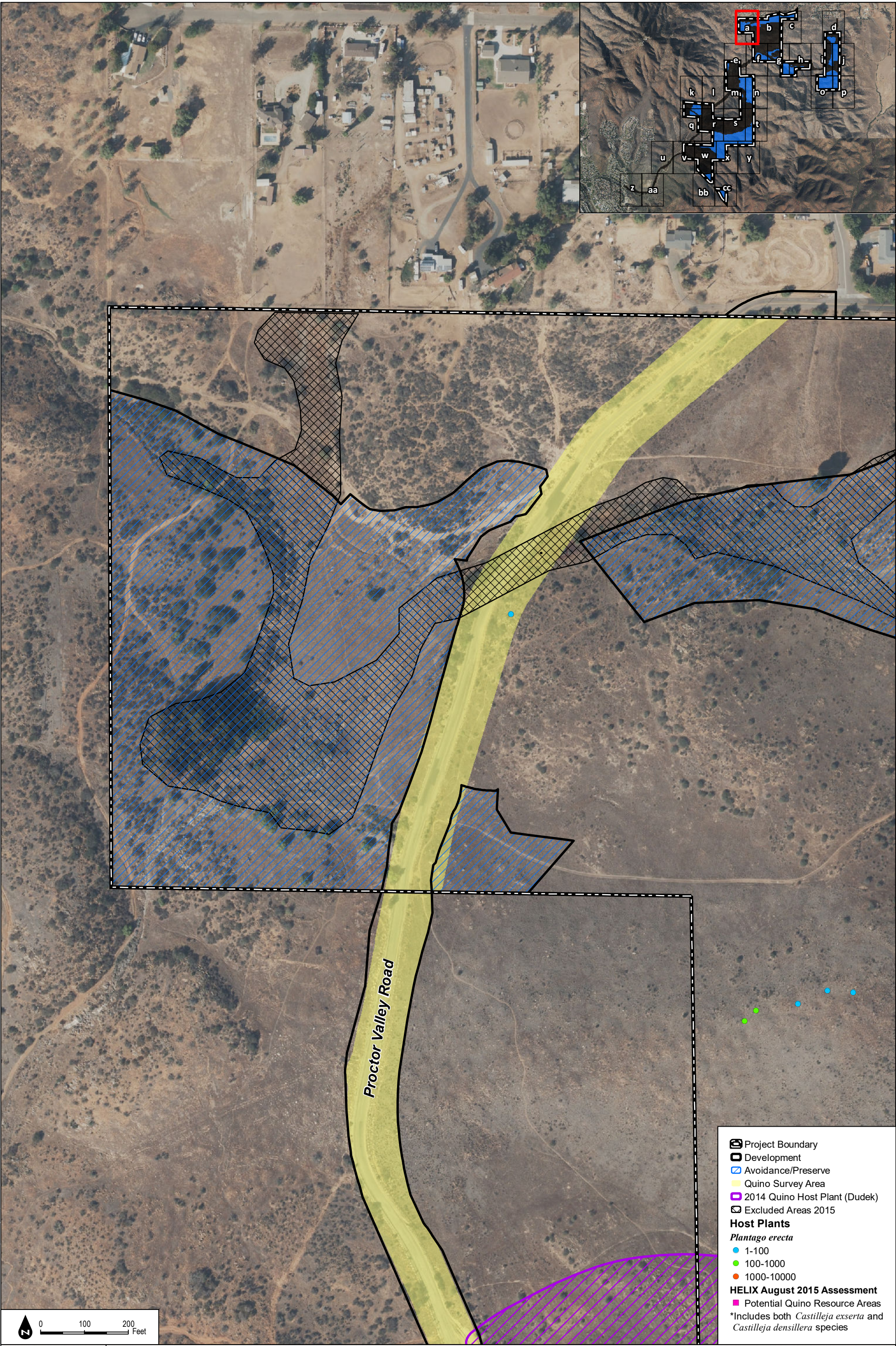
To summarize the 2016 survey data, the majority of the host plant locations within the Development Footprint (292 of the 380 mapped locations; 77%) were mapped as point locations ranging from a few square feet to 250 square feet. Furthermore, of the 292 point locations, the majority of these (280 of the 292 locations; 96%) 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 habitats.

2015 Host Plant Mapping

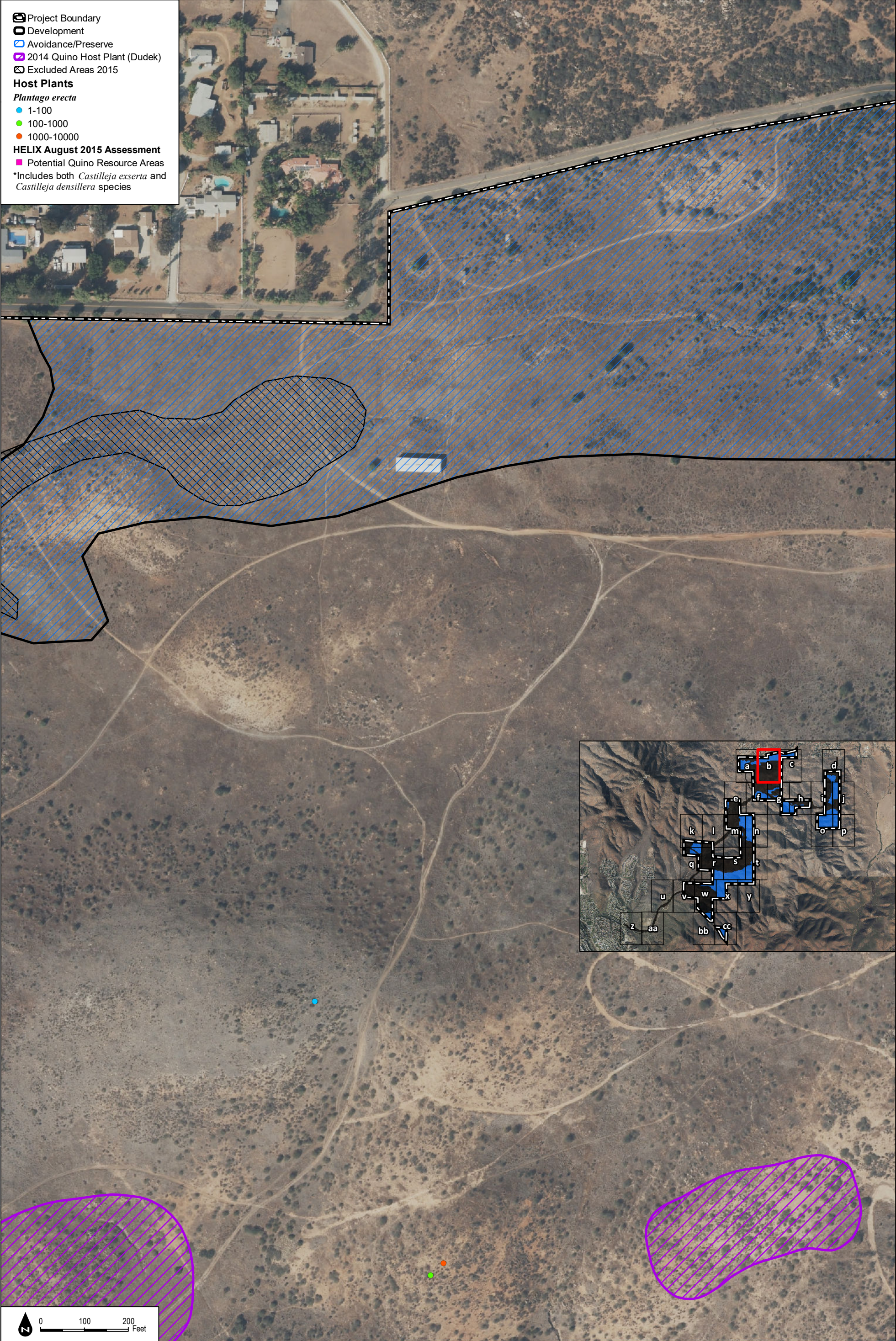
The 2015 host plant distribution shown in Figures 4-3a through 4-3cc, 2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations, reflects a more substantial host plant expression within the Village 14 Development Footprint because 2015 was an excellent year for host plants.

**Biological Resources Technical Report
for Otay Ranch Village 14 and Planning Areas 16/19**

INTENTIONALLY LEFT BLANK



INTENTIONALLY LEFT BLANK



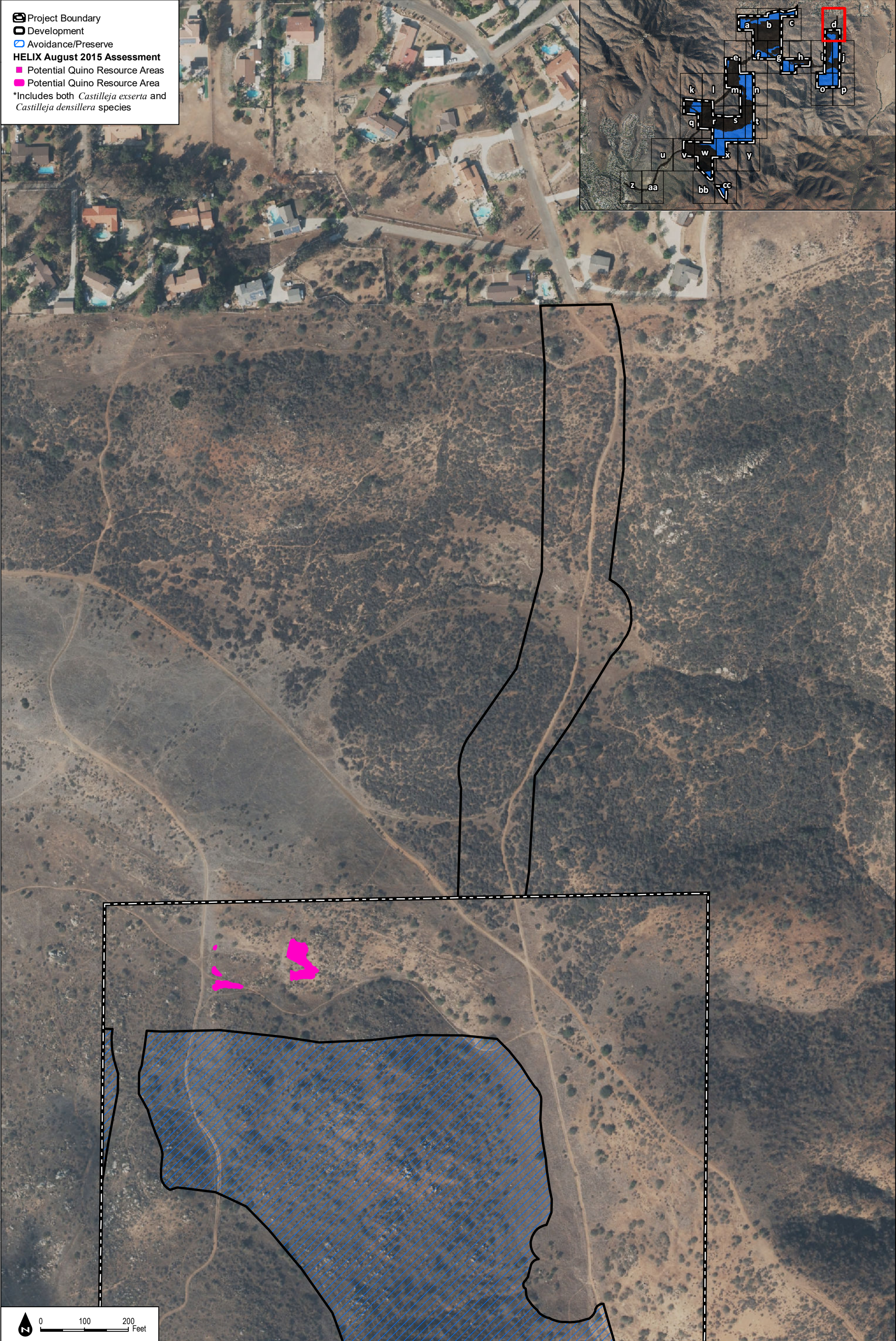
INTENTIONALLY LEFT BLANK



SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

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

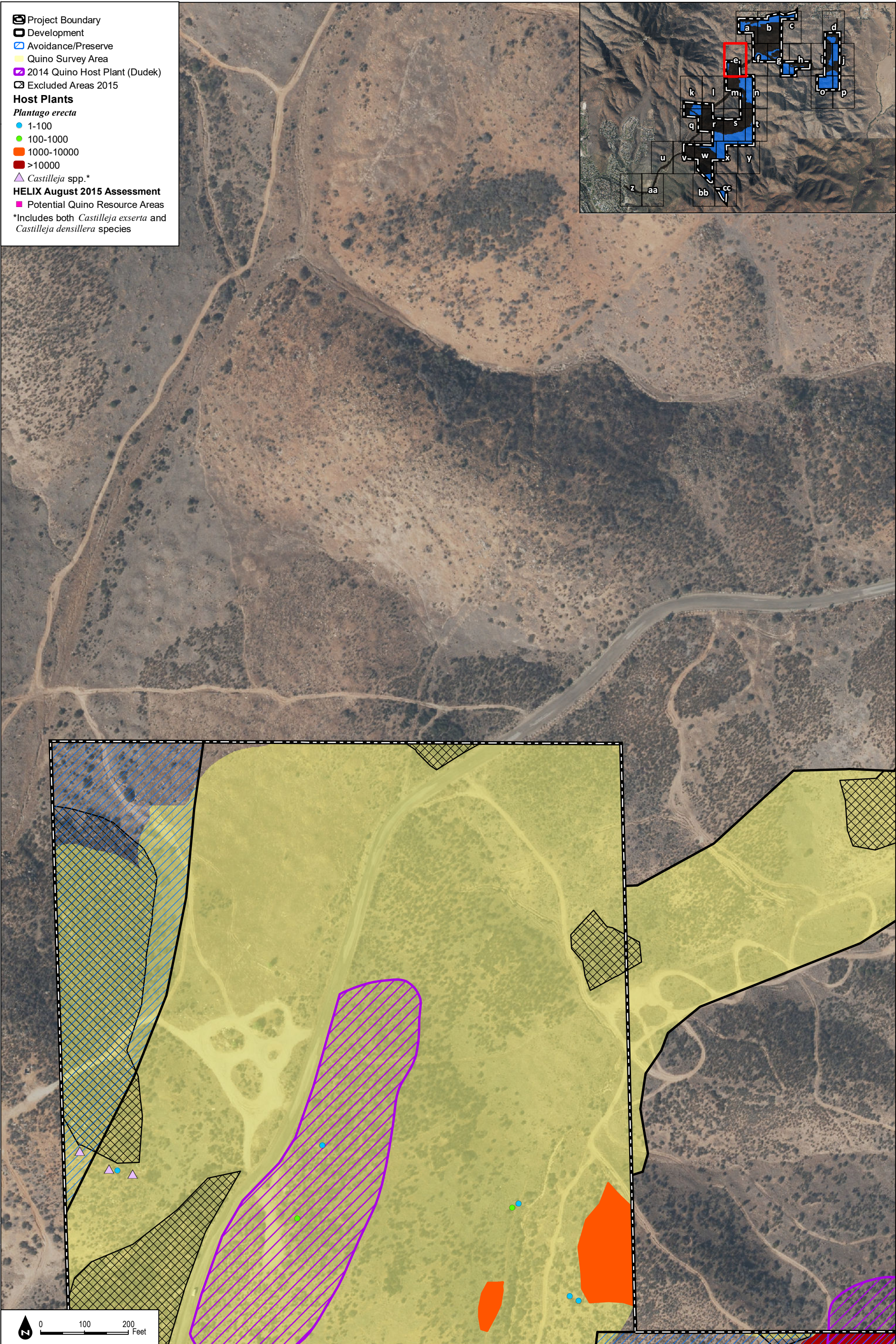
INTENTIONALLY LEFT BLANK



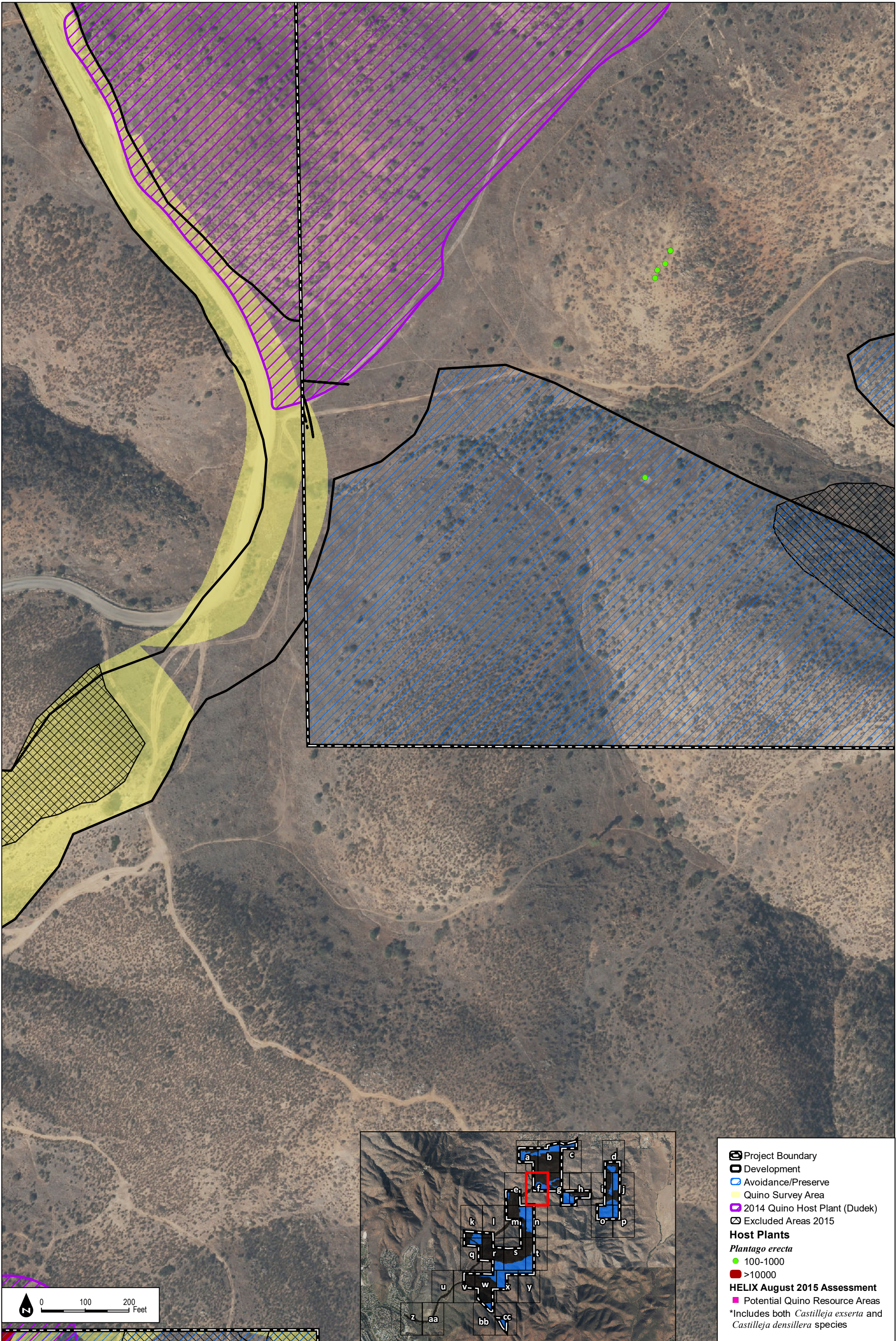
SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

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

INTENTIONALLY LEFT BLANK



INTENTIONALLY LEFT BLANK



INTENTIONALLY LEFT BLANK



SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

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

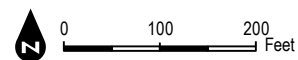
INTENTIONALLY LEFT BLANK



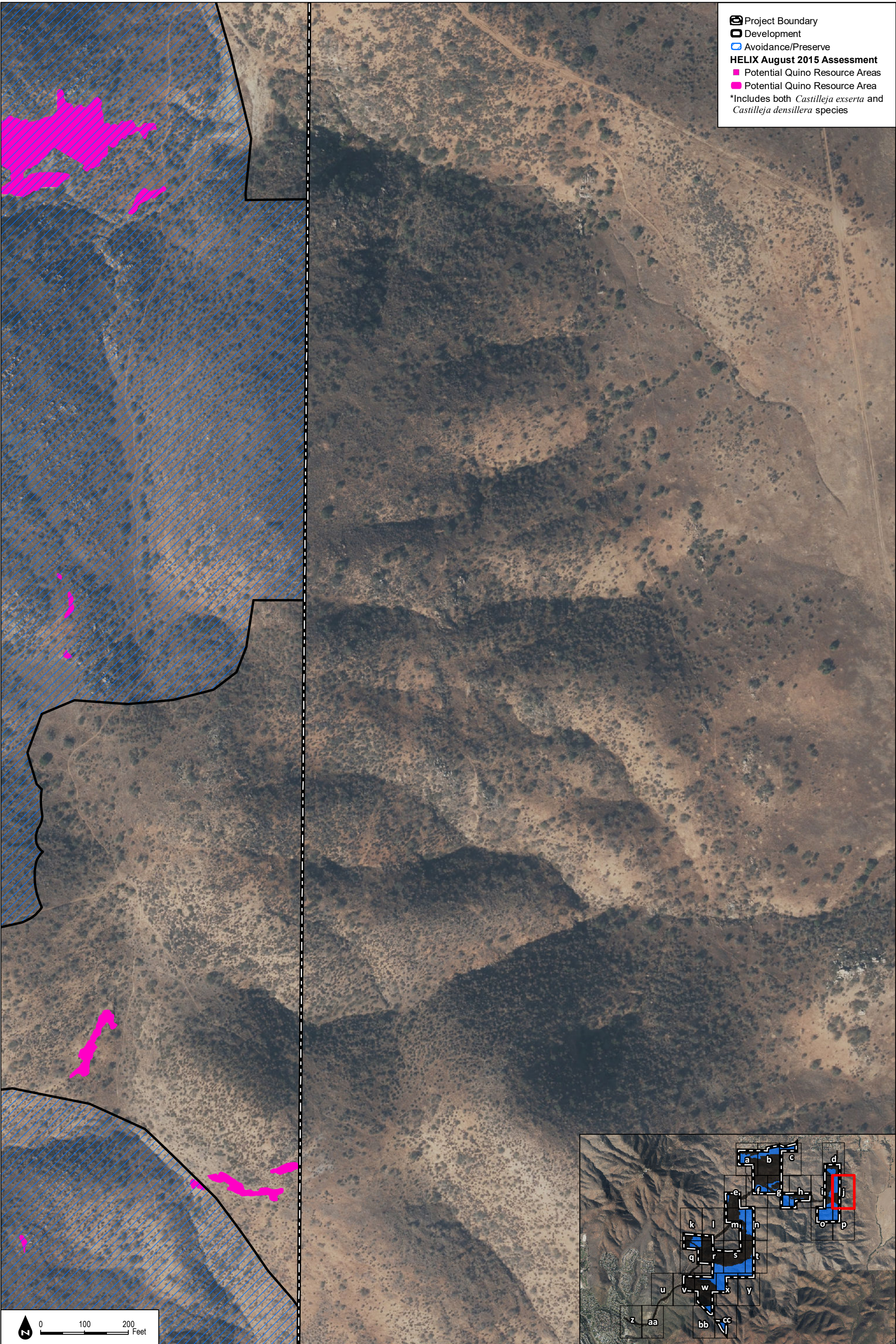
SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

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

INTENTIONALLY LEFT BLANK



INTENTIONALLY LEFT BLANK



INTENTIONALLY LEFT BLANK

Project Boundary

Development

Avoidance/Preserve

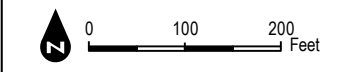
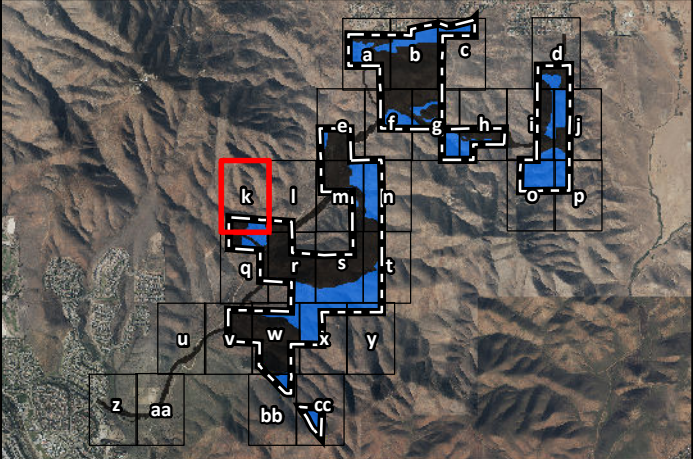
Quino Survey Area

Excluded Areas 2015

HELIX August 2015 Assessment

Potential Quino Resource Areas

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



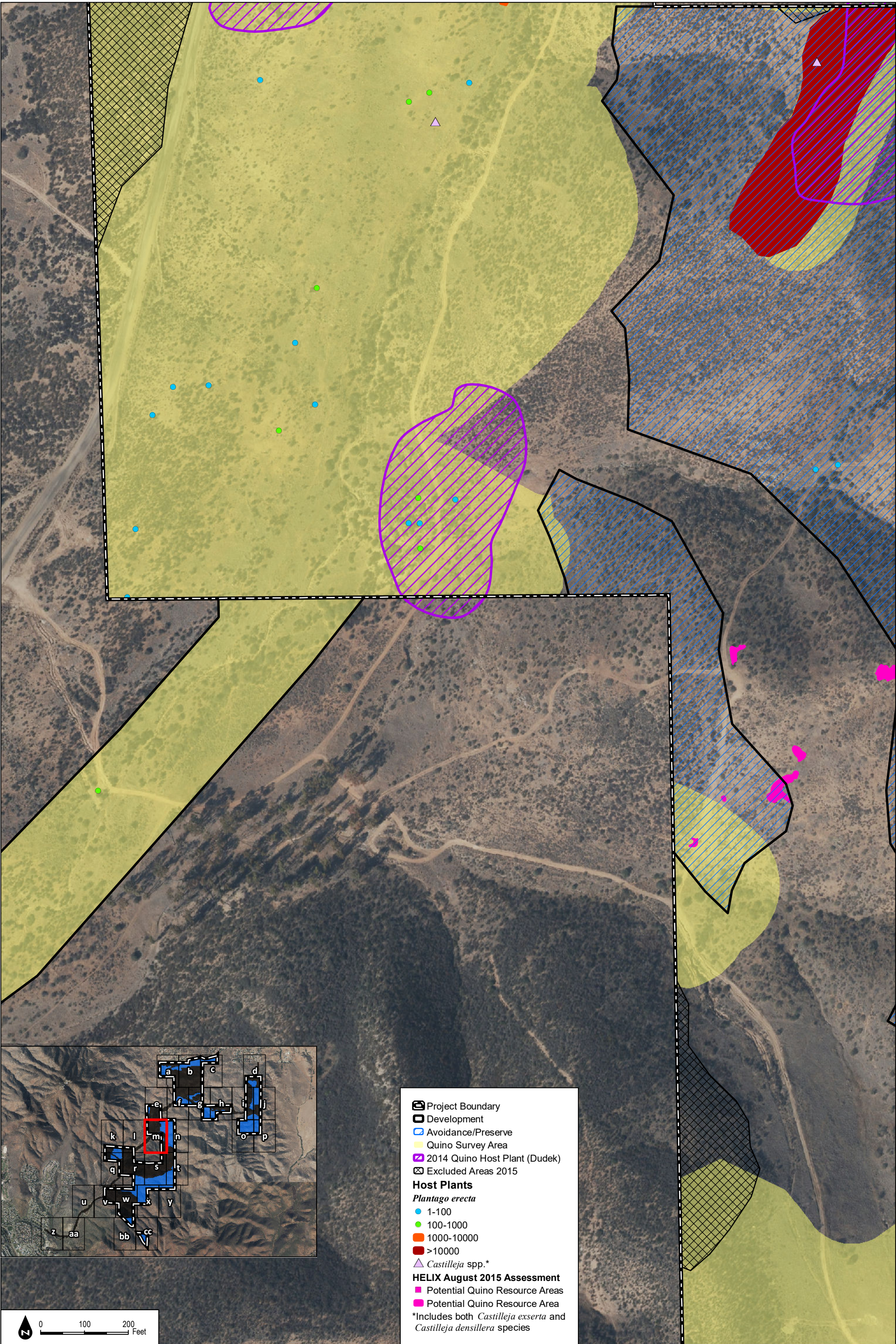
INTENTIONALLY LEFT BLANK



SOURCE: NAIP 2016, Hunsacker 2017, HELIX 2016

Figure 4-31
2015 Quino Host Plant Mapping, Potential Resource Areas, and Historical Locations

INTENTIONALLY LEFT BLANK



INTENTIONALLY LEFT BLANK