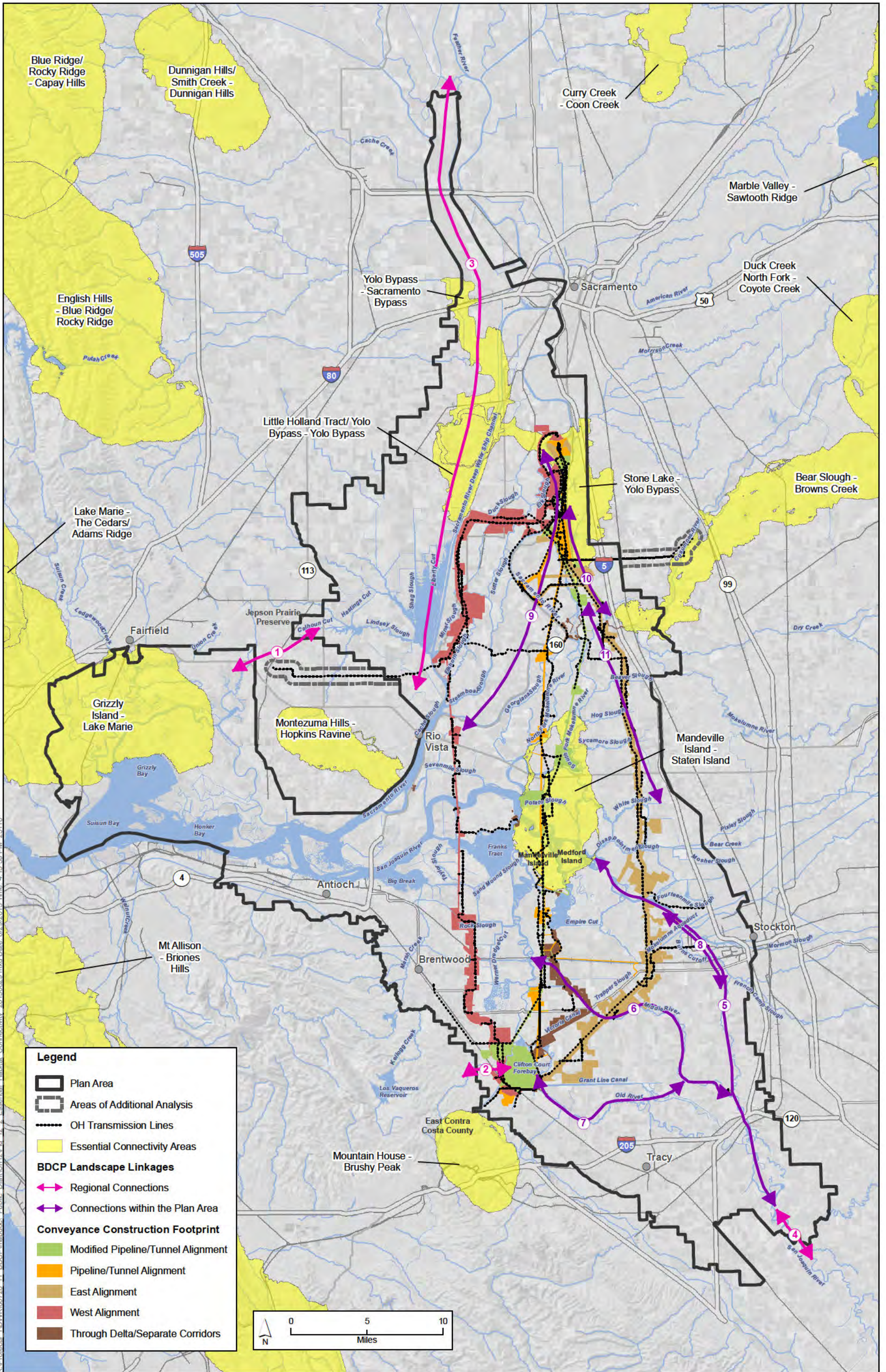


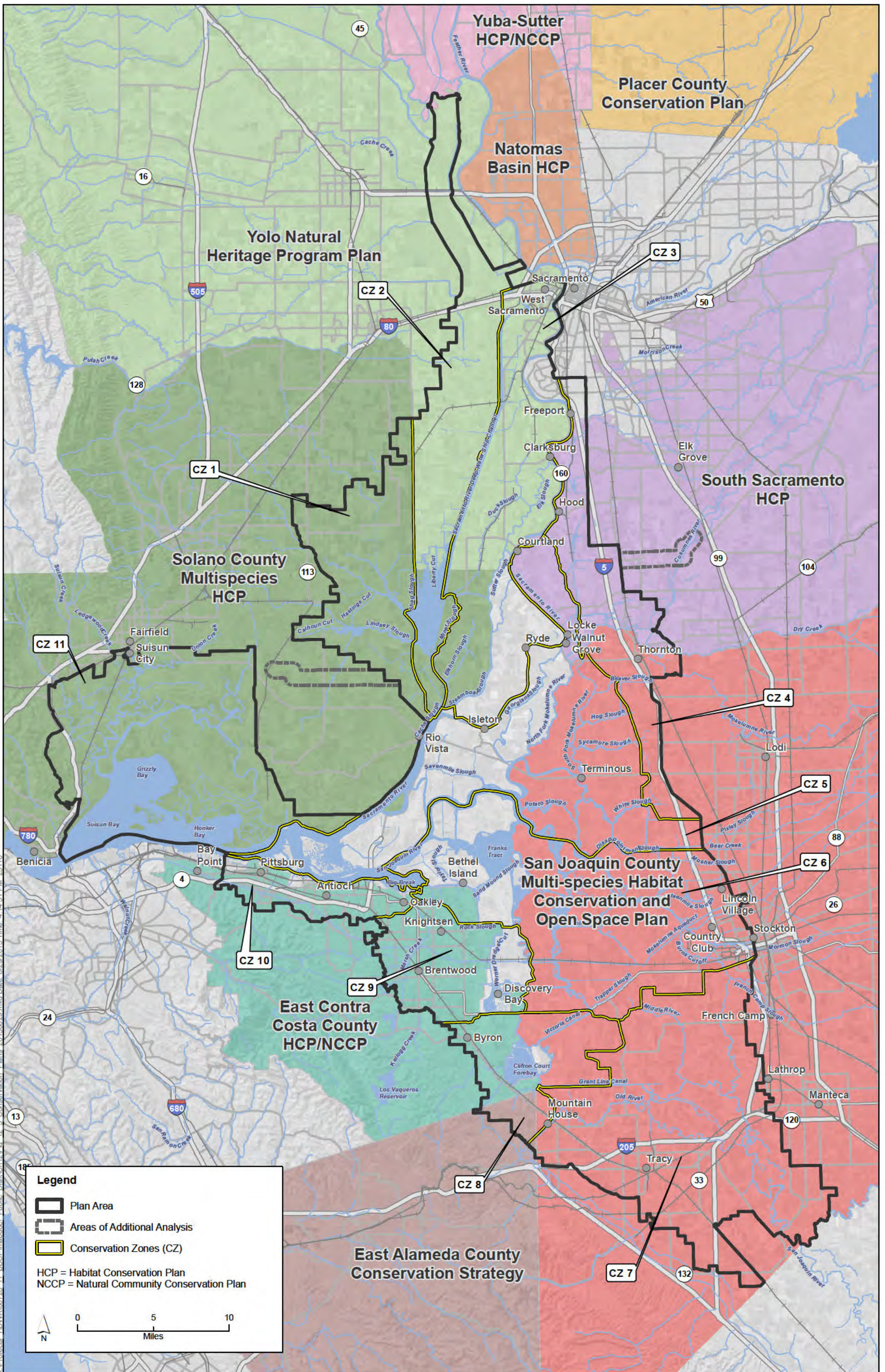
Sources: Plan Area, ICF 2012; Areas of Additional Analysis, ICF 2012; Restoration Opportunity Areas, SAIC 2011; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Constructability (Rev 3b), DHCCP DWR 2012; Conservation Zones, SAIC 2012; Natural Communities, ICF 2013.

**Figure 12-1**  
**Distribution of Natural Communities in the Study Area**



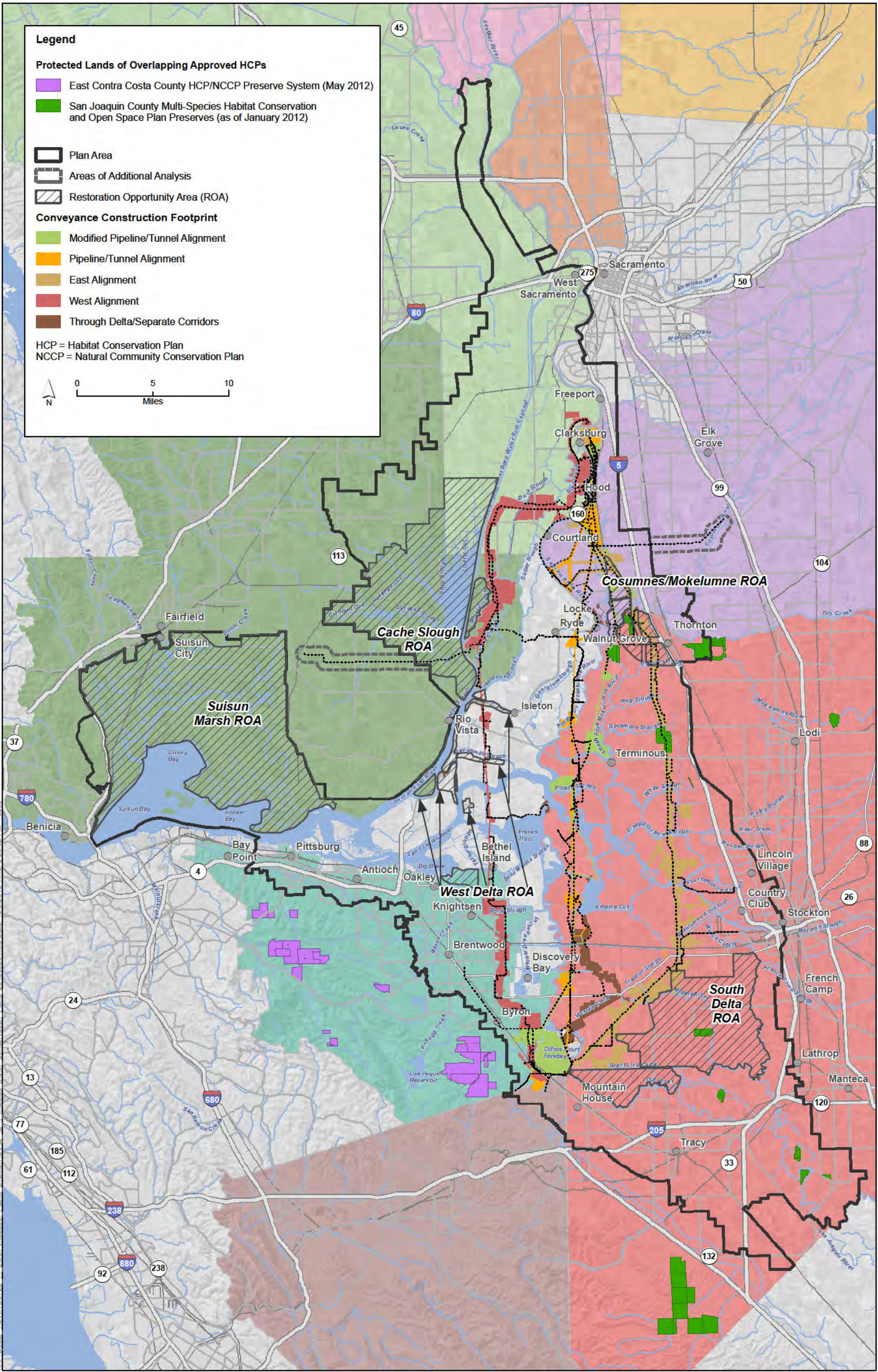
Sources: Plan Area, ICF 2012; Areas of Additional Analysis, ICF 2012; Constructability (Rev 2b), DHCCP DWR 2013, Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Conservation Zones, SAIC 2012; Essential Connectivity Areas, Caltrans and CDFG 2010.

**Figure 12-2**  
**Essential Habitat Connectivity**



Sources: Plan Area, ICF 2012; Areas of Additional Analysis, ICF 2012; Conservation Plan Boundaries, ICF 2012; Conservation Zones, SAIC 2012.

Figure 12-3  
BDCP Plan Area in Relation to Other Conservation Plan Boundaries



**Legend**

**Protected Lands of Overlapping Approved HCPs**

- East Contra Costa County HCP/NCCP Preserve System (May 2012)
- San Joaquin County Multi-Species Habitat Conservation and Open Space Plan Preserves (as of January 2012)

**Plan Area**

- Plan Area
- Areas of Additional Analysis
- Restoration Opportunity Area (ROA)

**Conveyance Construction Footprint**

- Modified Pipeline/Tunnel Alignment
- Pipeline/Tunnel Alignment
- East Alignment
- West Alignment
- Through Delta/Separate Corridors

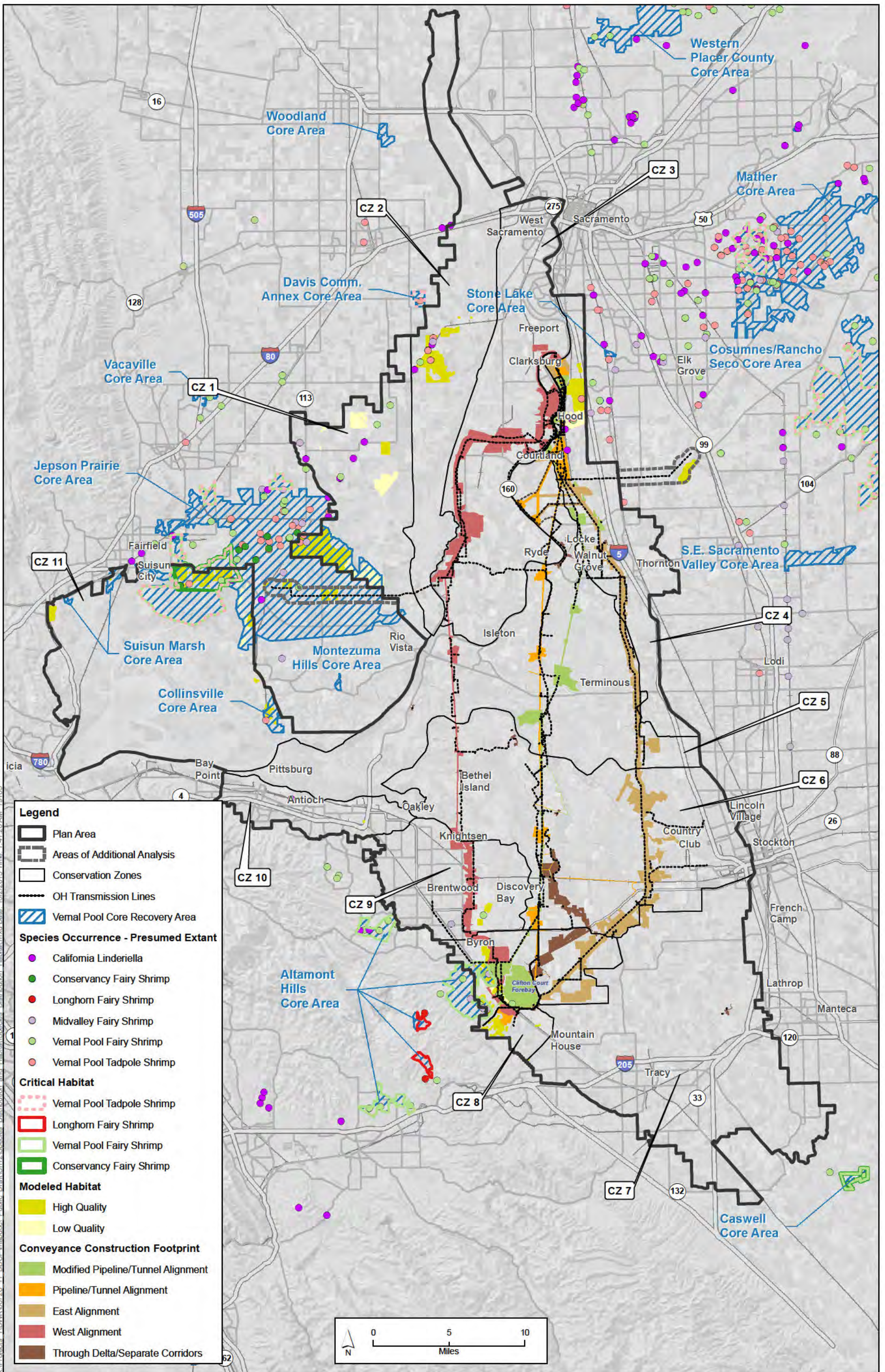
HCP = Habitat Conservation Plan  
NCCP = Natural Community Conservation Plan

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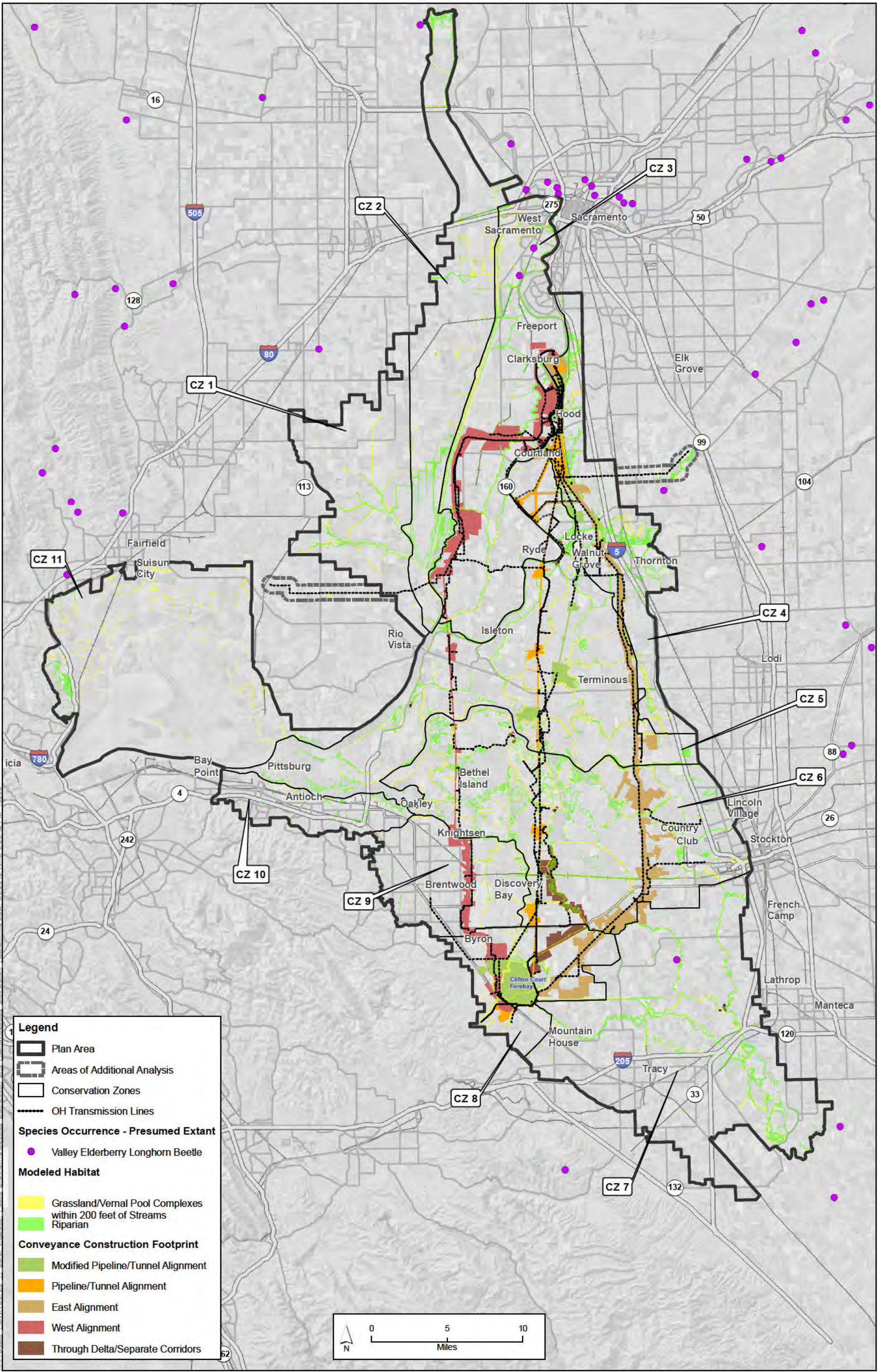
Sources: Plan Area, ICF 2012; Constructability (Rev 2b), DHCCP DWR 2013, Constructability (Rev 10), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; ROA, ICF 2012, San Joaquin County Preserves, ICF 2012; East Contra Costa County Preserves, Contra Costa County 2012; Conservation Zones, SAIC 2012

**Figure 12-4**  
**BDCP Features in Relation to Overlapping Regional Conservation Plans**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Critical Habitat, U.S. Fish and Wildlife Service 2006; Species Occurrences, ICF 2013; Vernal Pool Core Recovery Area, SAIC 2011; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

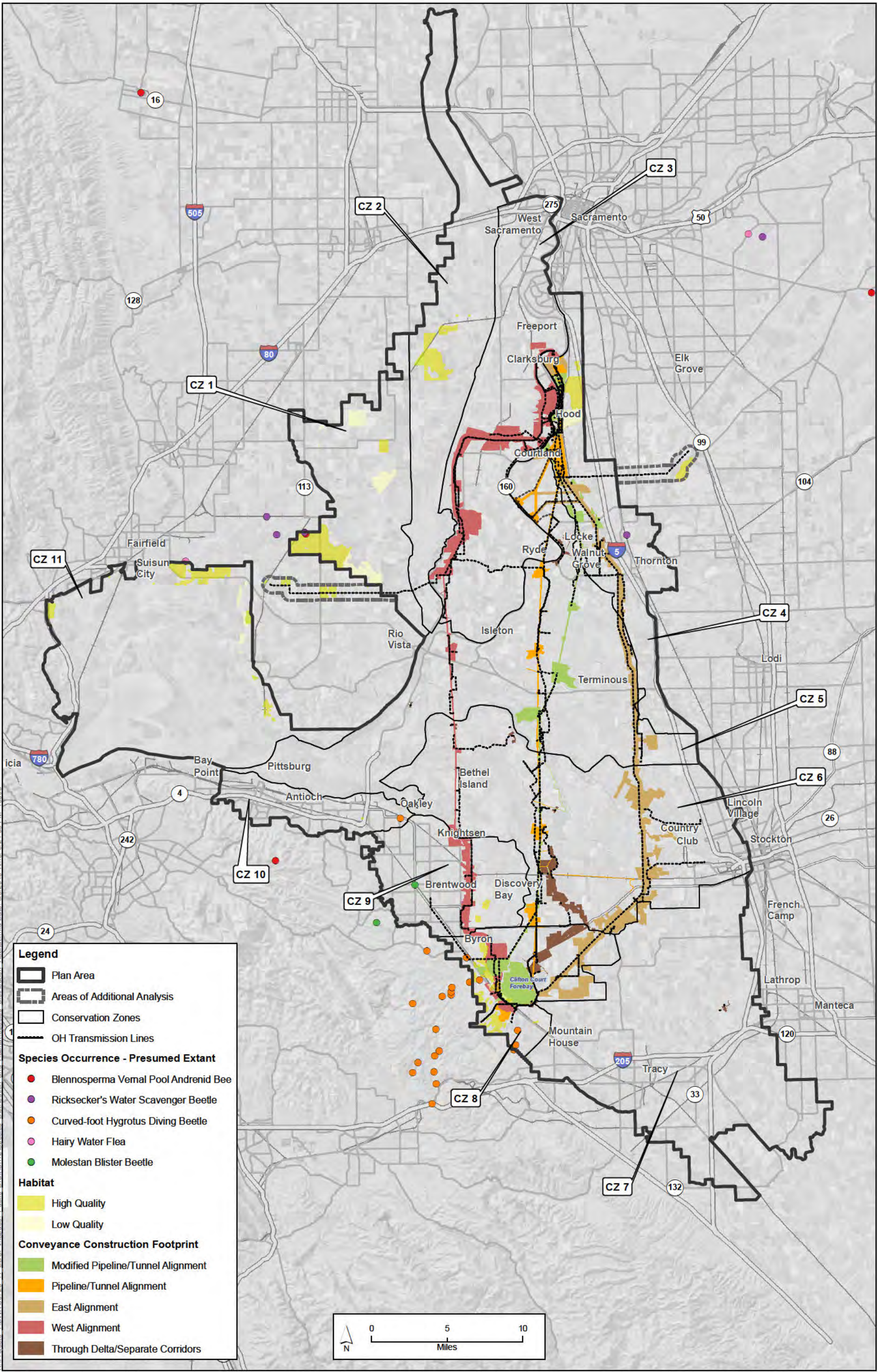
**Figure 12-5**  
**Vernal Pool Crustacean Distribution and Habitat in Study Area Vicinity**



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Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

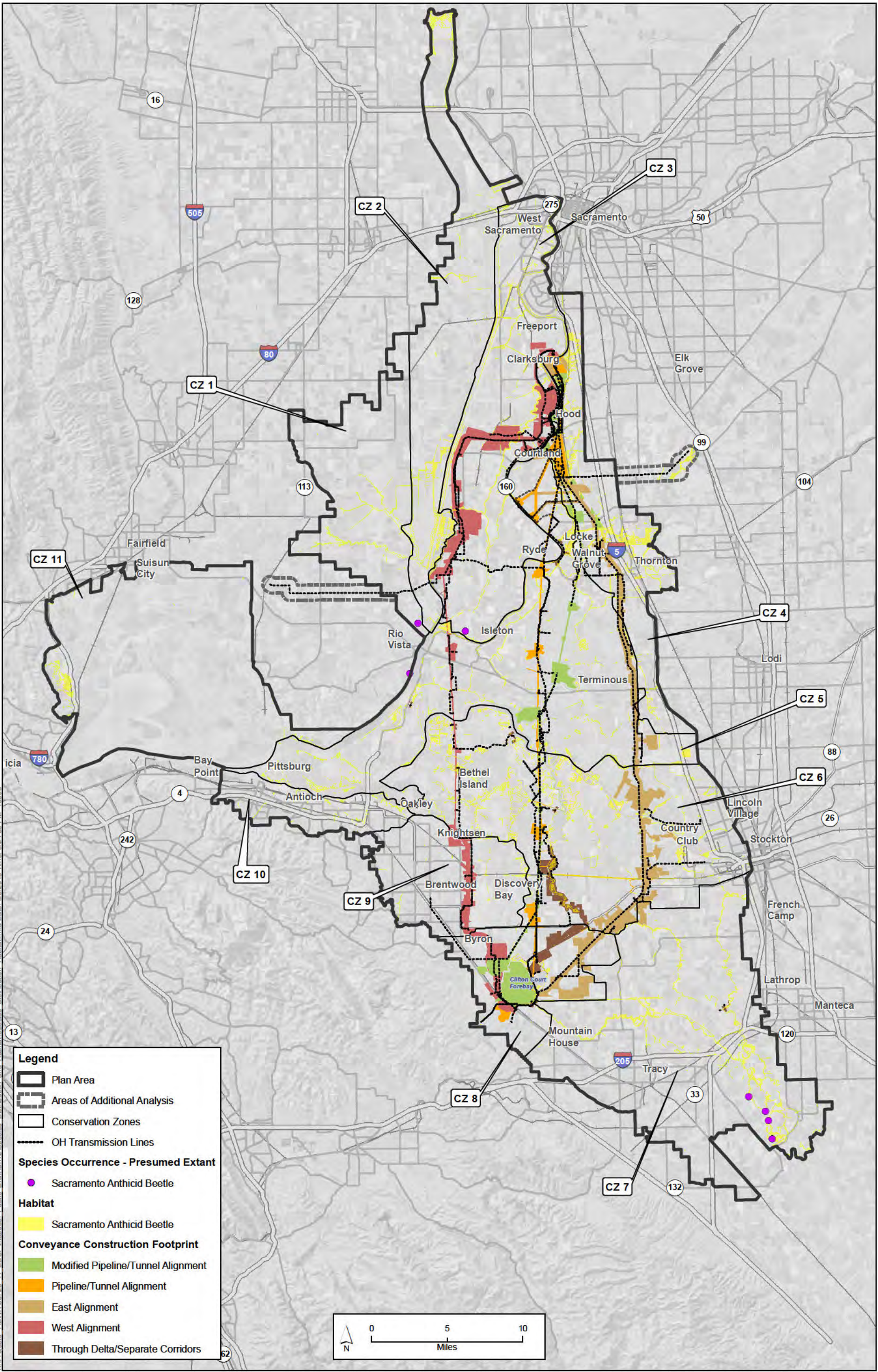
**Figure 12-6**  
**Valley Elderberry Longhorn Beetle Distribution and Habitat in Study Area Vicinity**



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Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDDB 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

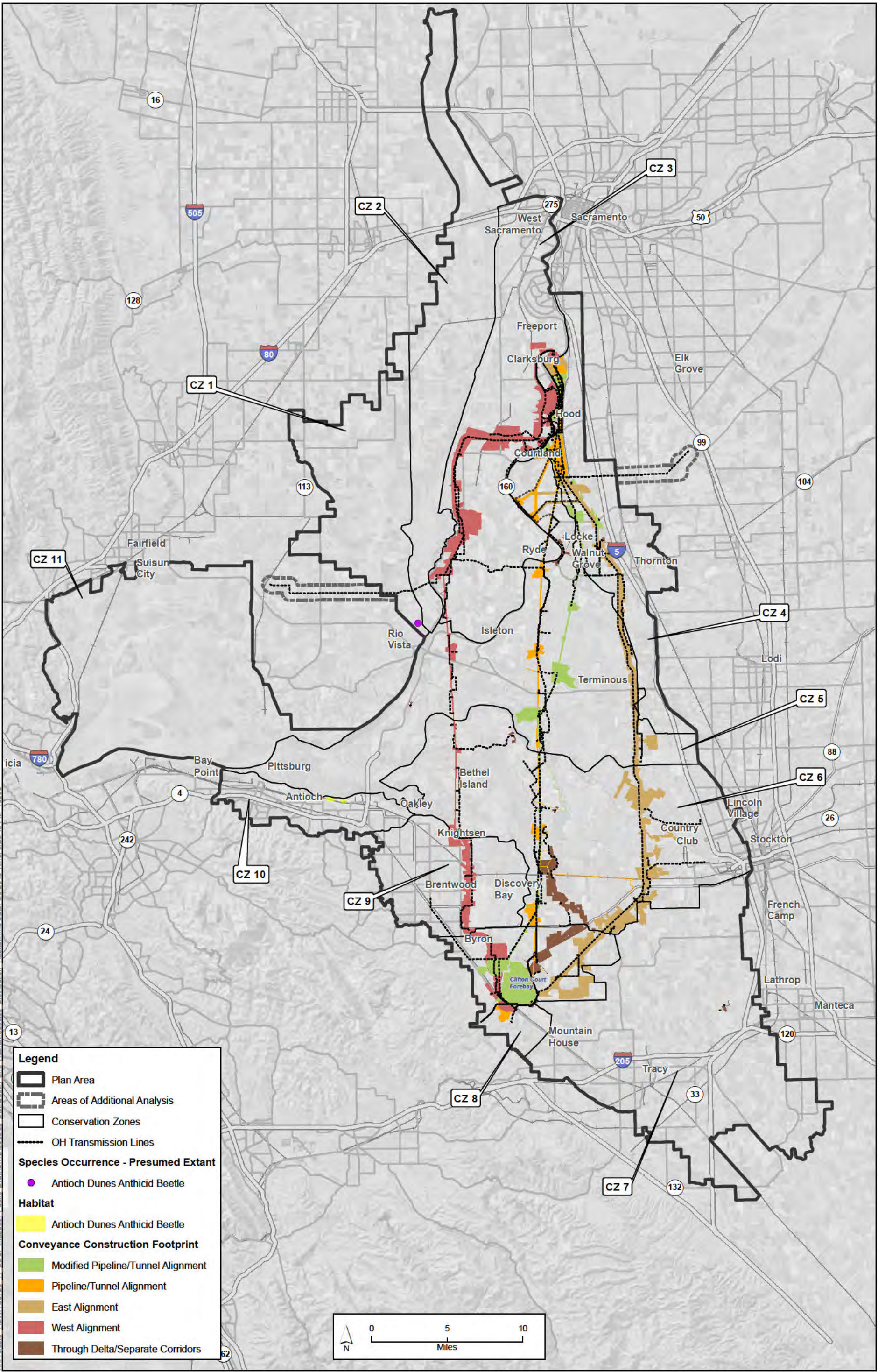
**Figure 12-7**  
**Other Vernal Pool Invertebrates Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

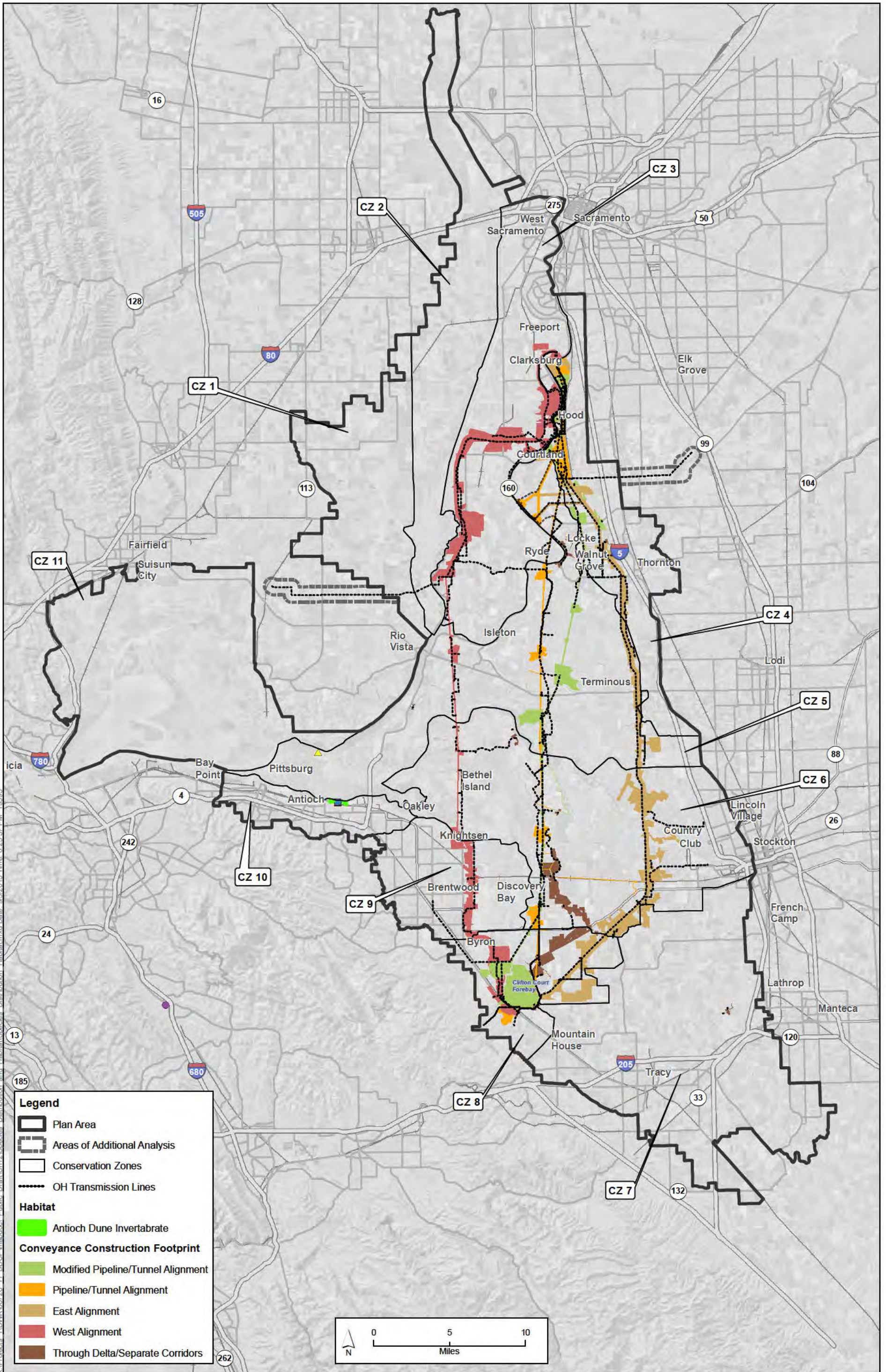
**Figure 12-8**  
**Sacramento Anthicid Beetle Distribution and Habitat in Study Area Vicinity**





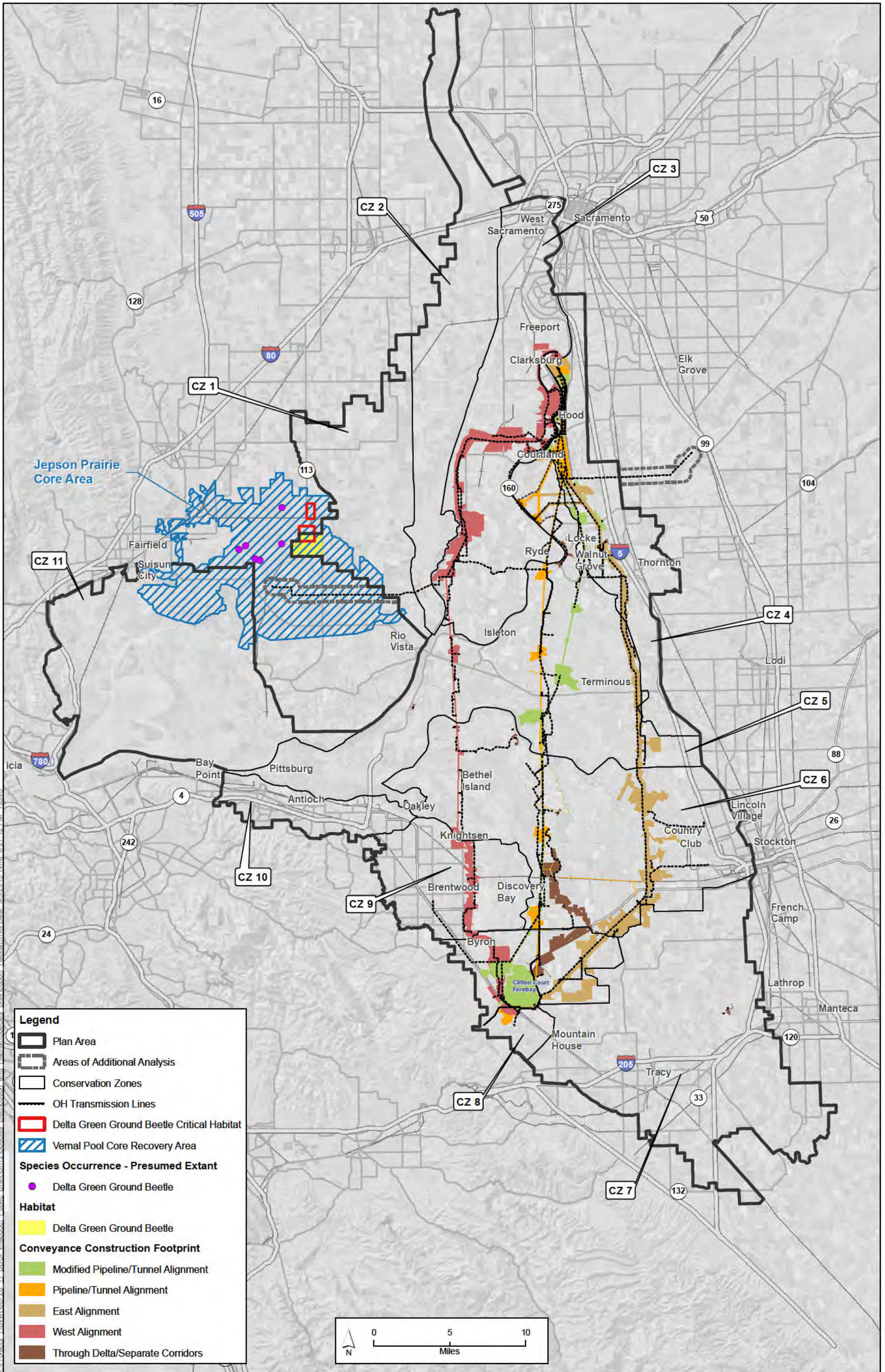
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-9**  
**Antioch Dunes Anthicid Beetle Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

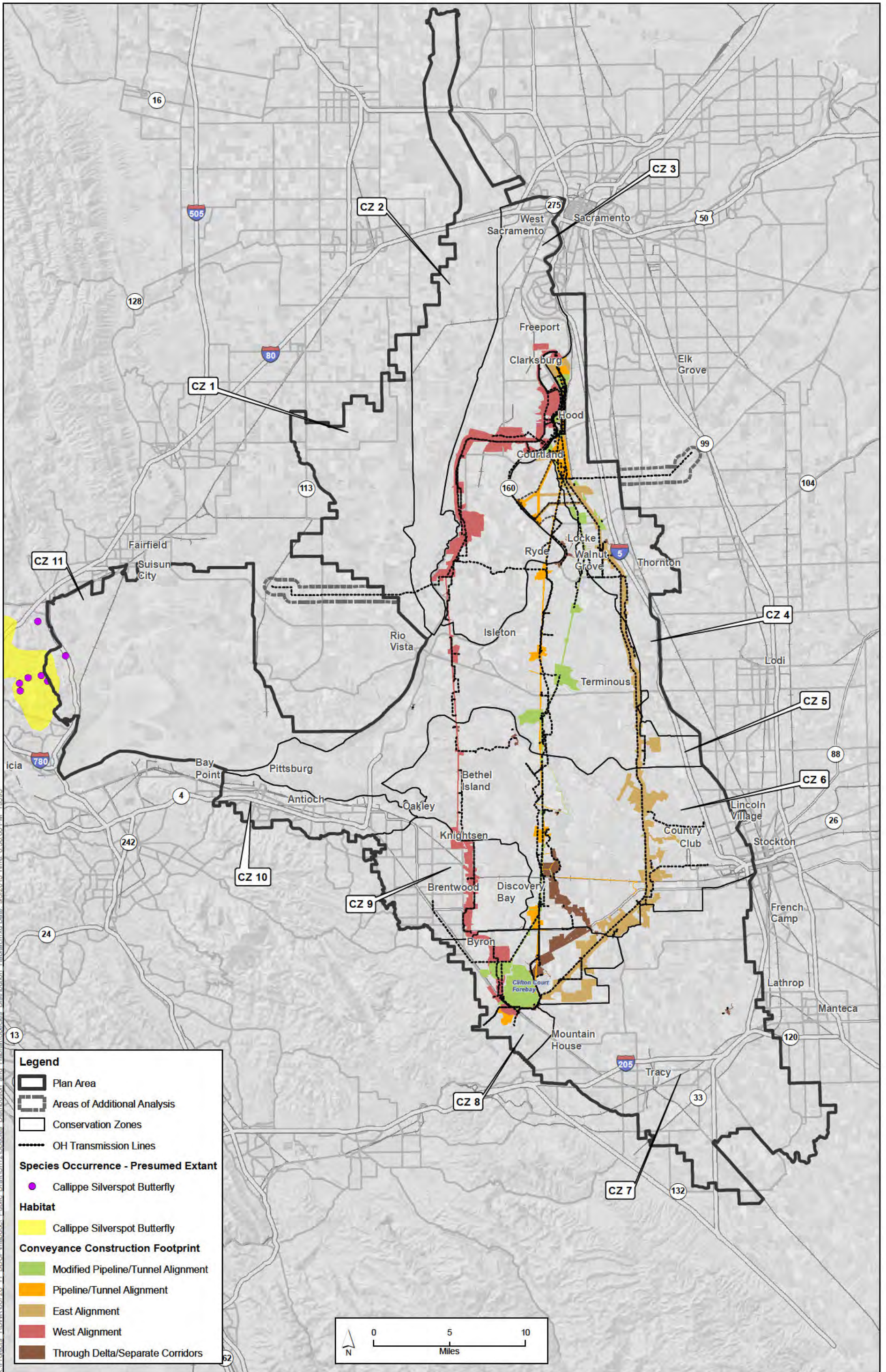
**Figure 12-10**  
**Inland Dune Scrub Invertebrate Species Distribution and Habitat in Study Area Vicinity**



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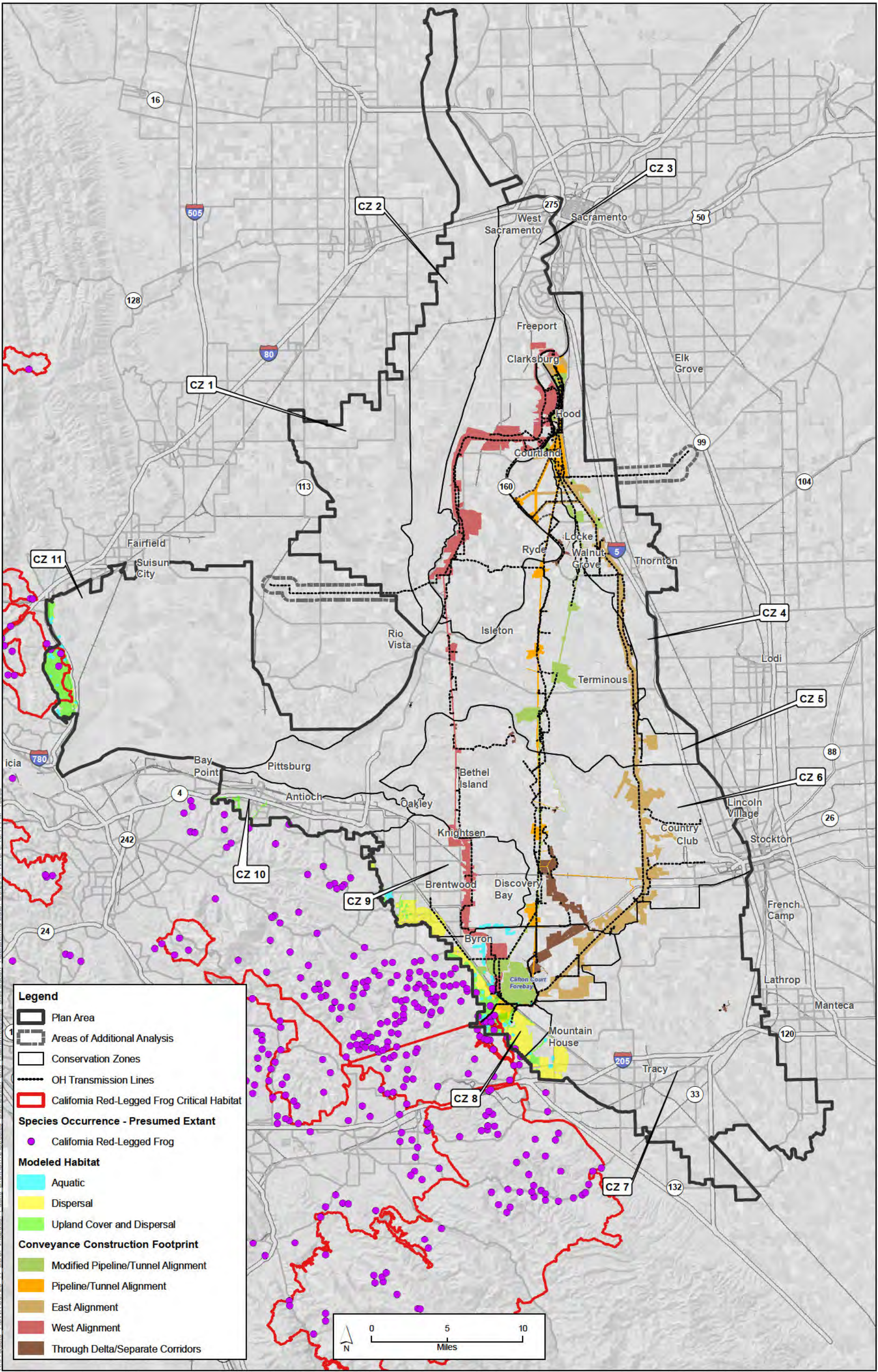
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Critical Habitat, U.S. Fish and Wildlife Service 2002; Species Occurrences, CNDDB 2013; Vernal Pool Core Recovery Area, SAIC 2011; Modeled Habitat, ICF 2012; Construction Zones, SAIC 2012.

**Figure 12-11**  
**Delta Green Ground Beetle Distribution and Habitat in Study Area Vicinity**



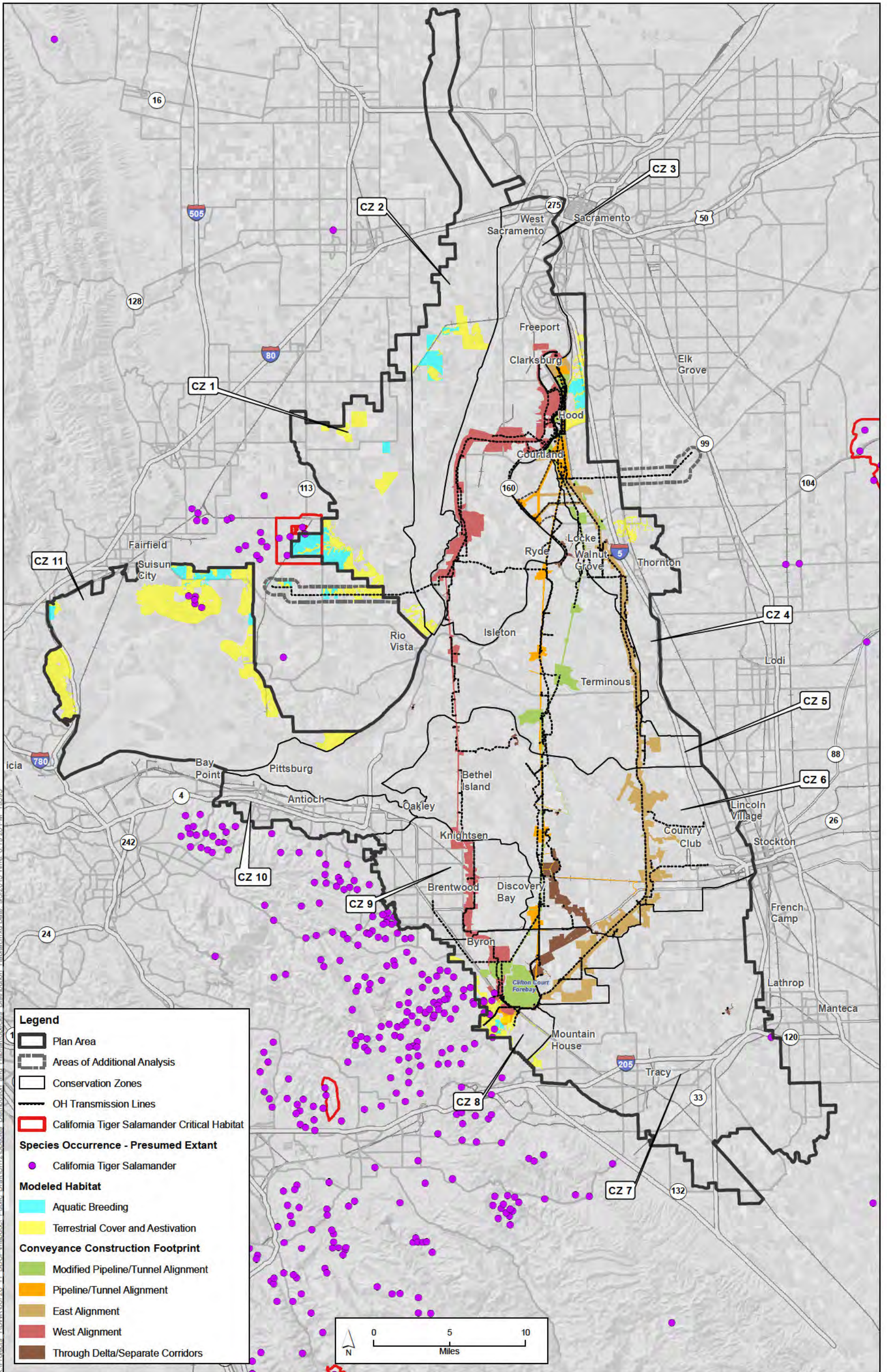
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, LSA 2009 and ICF 2011; Habitat, ICF 2011; Conservation Zones, SAIC 2012.

**Figure 12-12**  
**Callippe Silverspot Butterfly Distribution and Habitat in Study Area Vicinity**



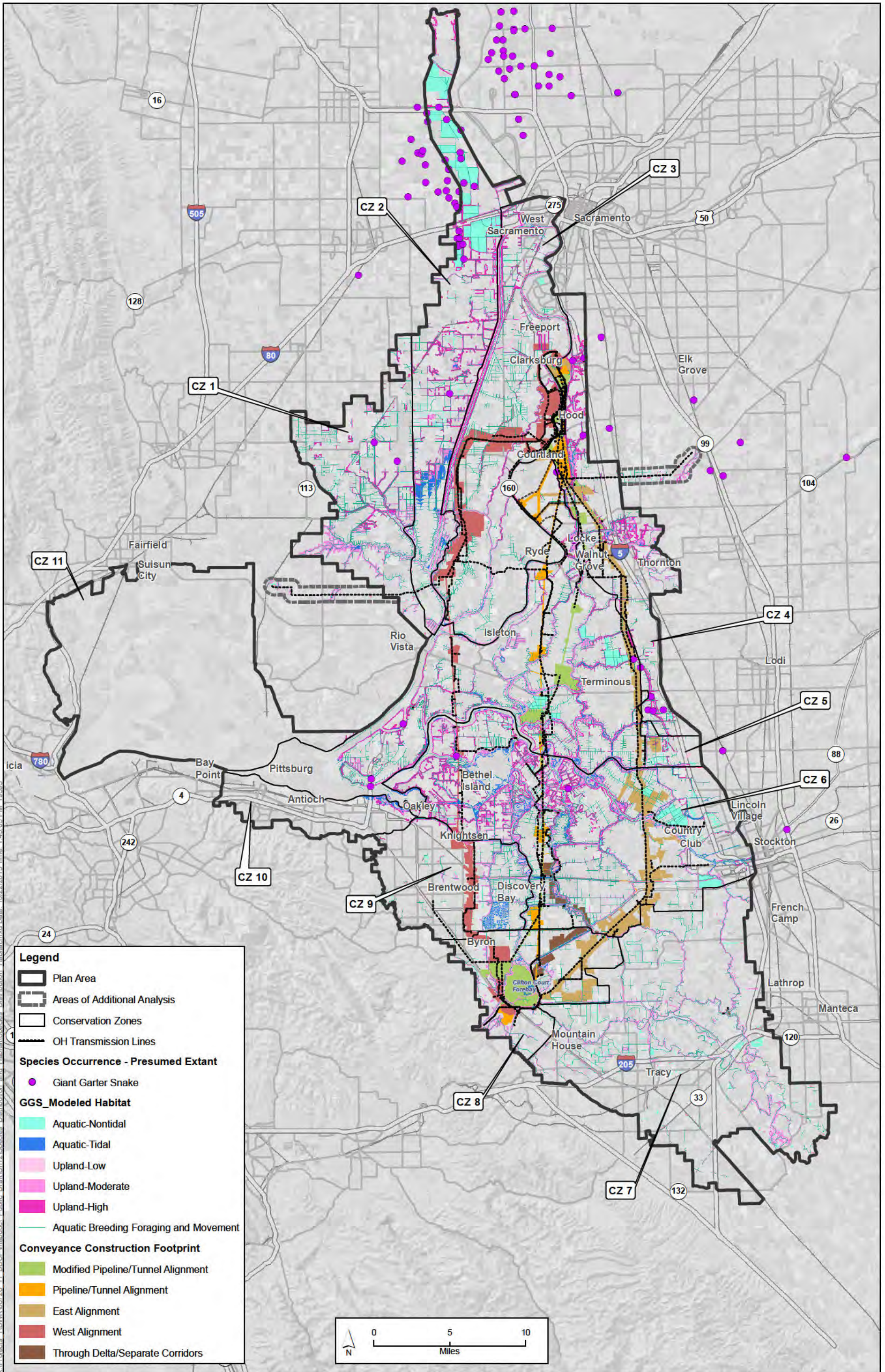
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Critical Habitat, U.S. Fish and Wildlife Service 2010; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-13**  
**California Red-Legged Frog Distribution and Habitat in Study Area Vicinity**



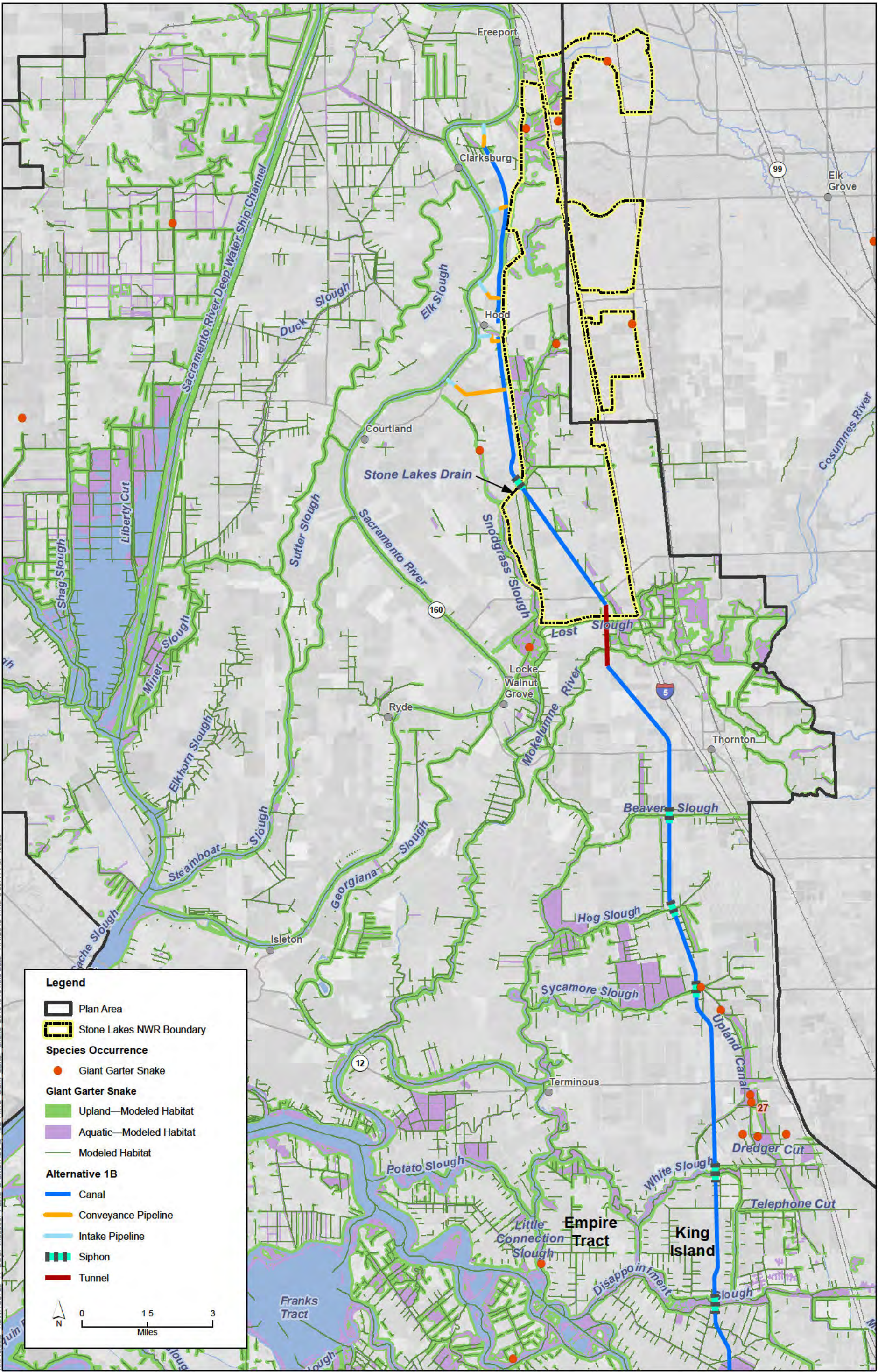
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Critical Habitat, U.S. Fish and Wildlife Service 2005; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-14**  
**California Tiger Salamander Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-15a**  
**Giant Garter Snake Distribution and Habitat in Study Area Vicinity**

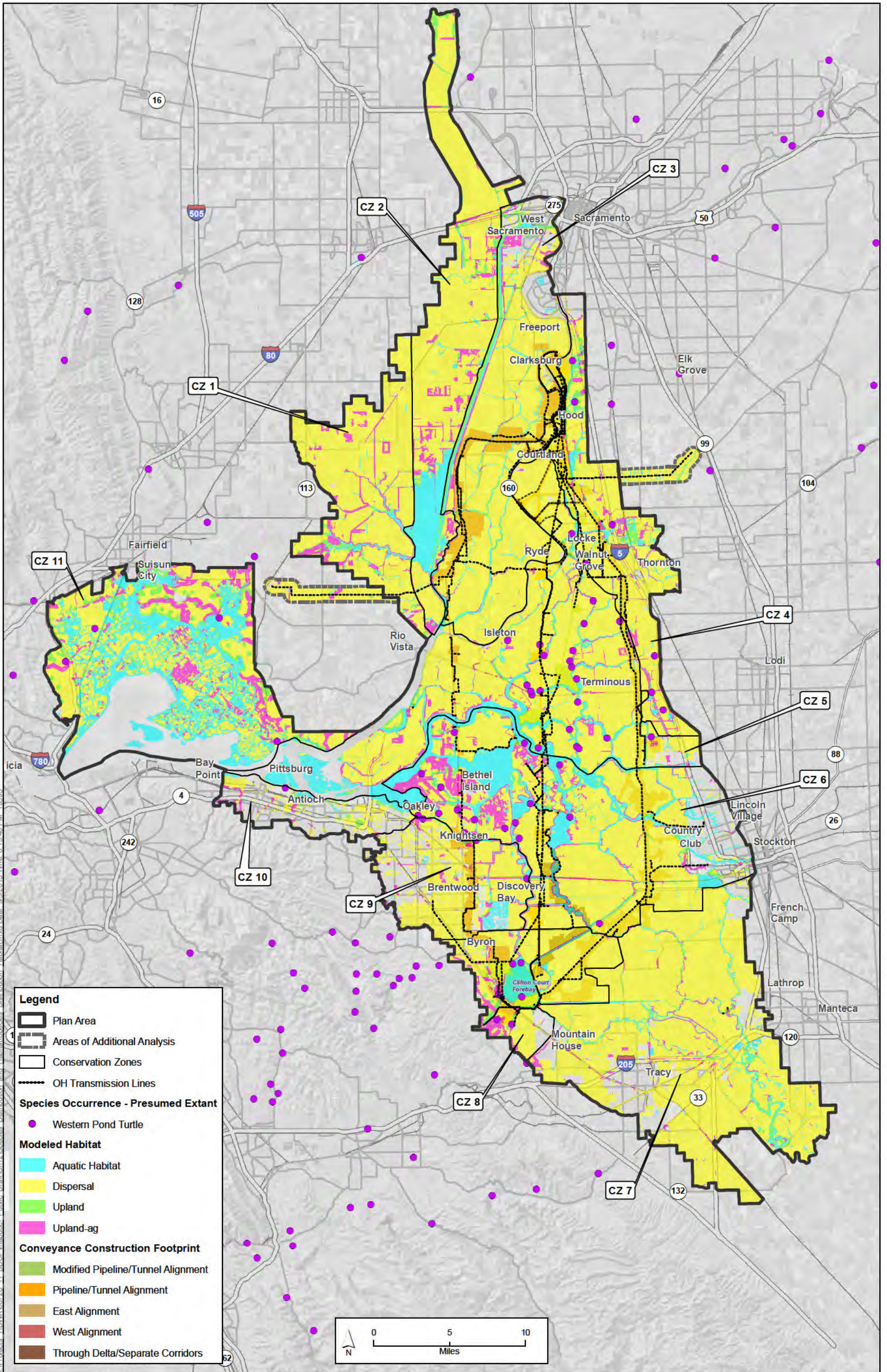


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Sources: Plan Area, ICF 2012; Option\_Linear\_Features (Rev 10b), DHCCP DWR 2012; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Species Occurrences, Eric Hansen 2011 and 2013.

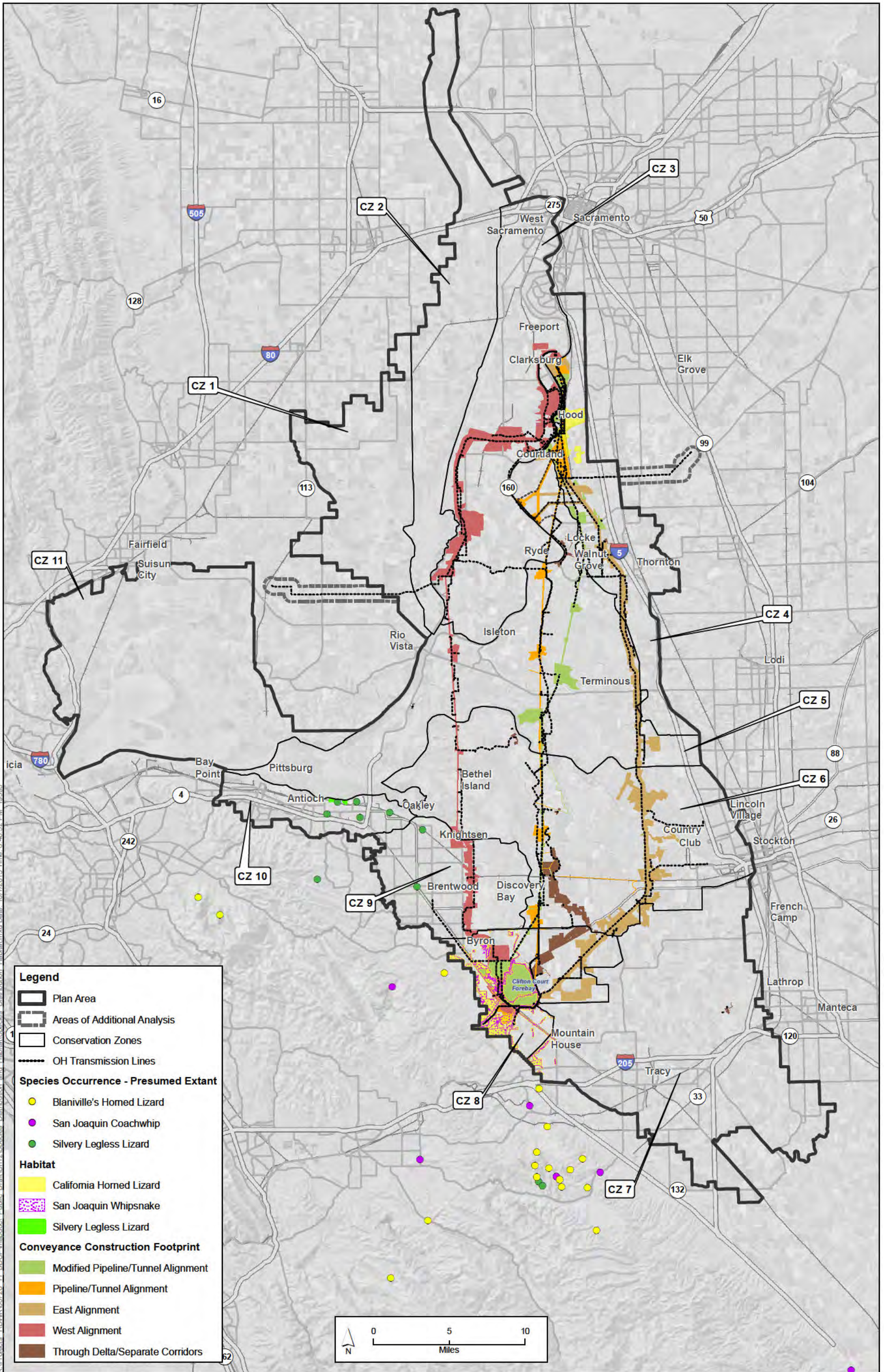
**Figure 12-15b**  
**Alternative 1B Effects on Giant Garter Snake Movements and Connectivity**





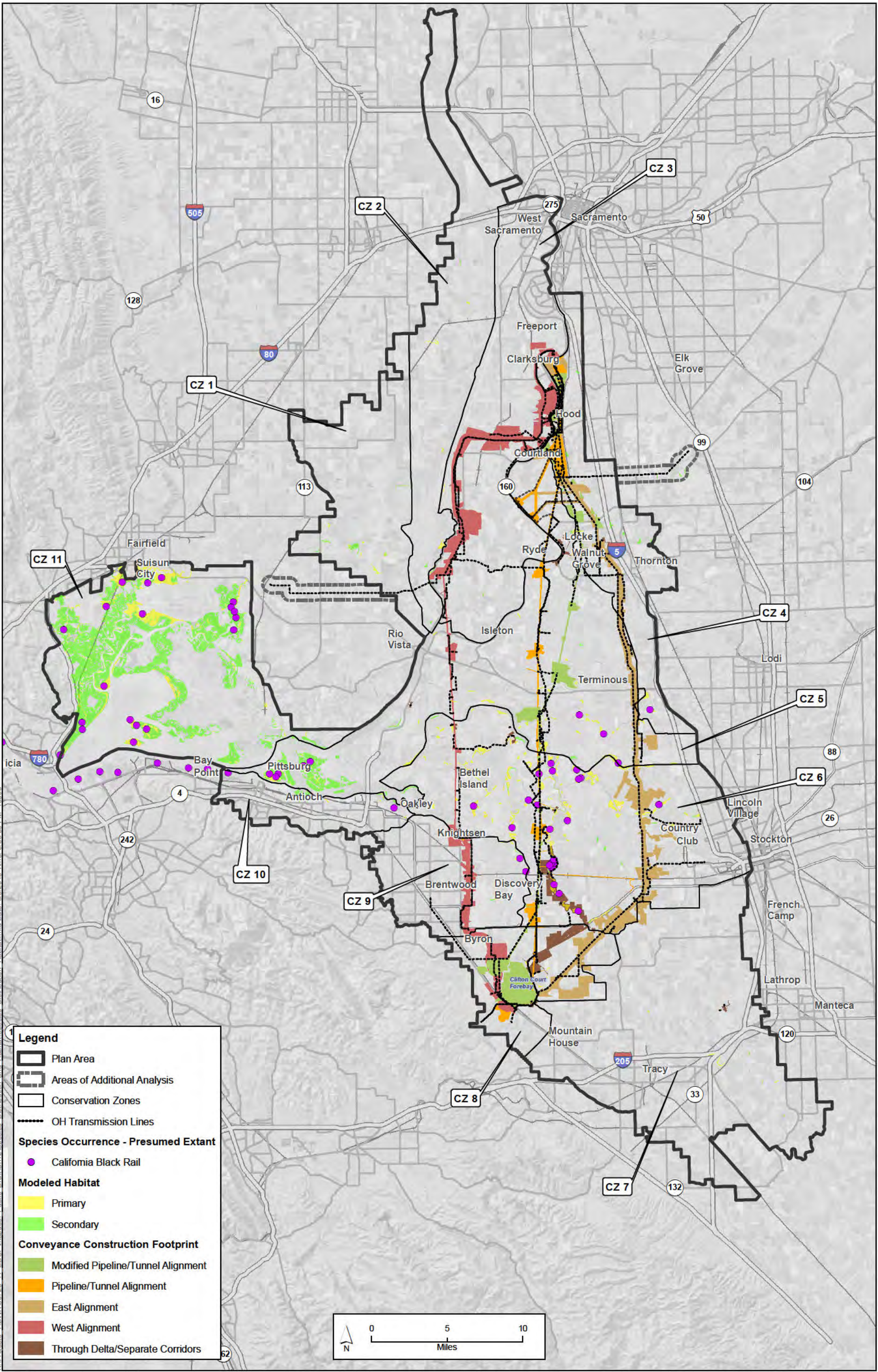
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-16**  
**Western Pond Turtle Distribution and Habitat in Study Area Vicinity**



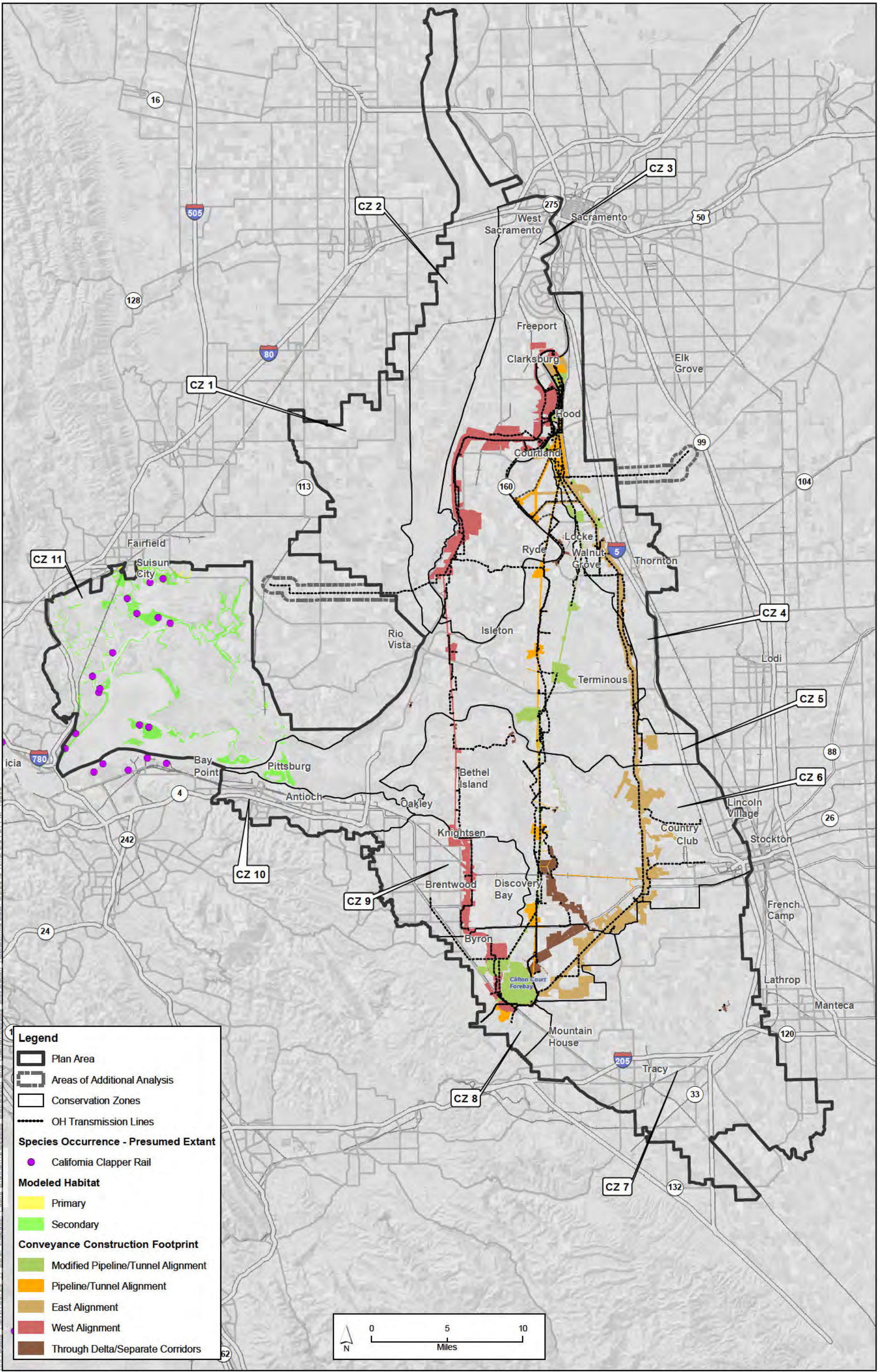
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-17**  
**California Horned Lizard, San Joaquin Whipsnake, and Silvery Legless Lizard**  
**Distribution and Habitat in Study Area Vicinity**



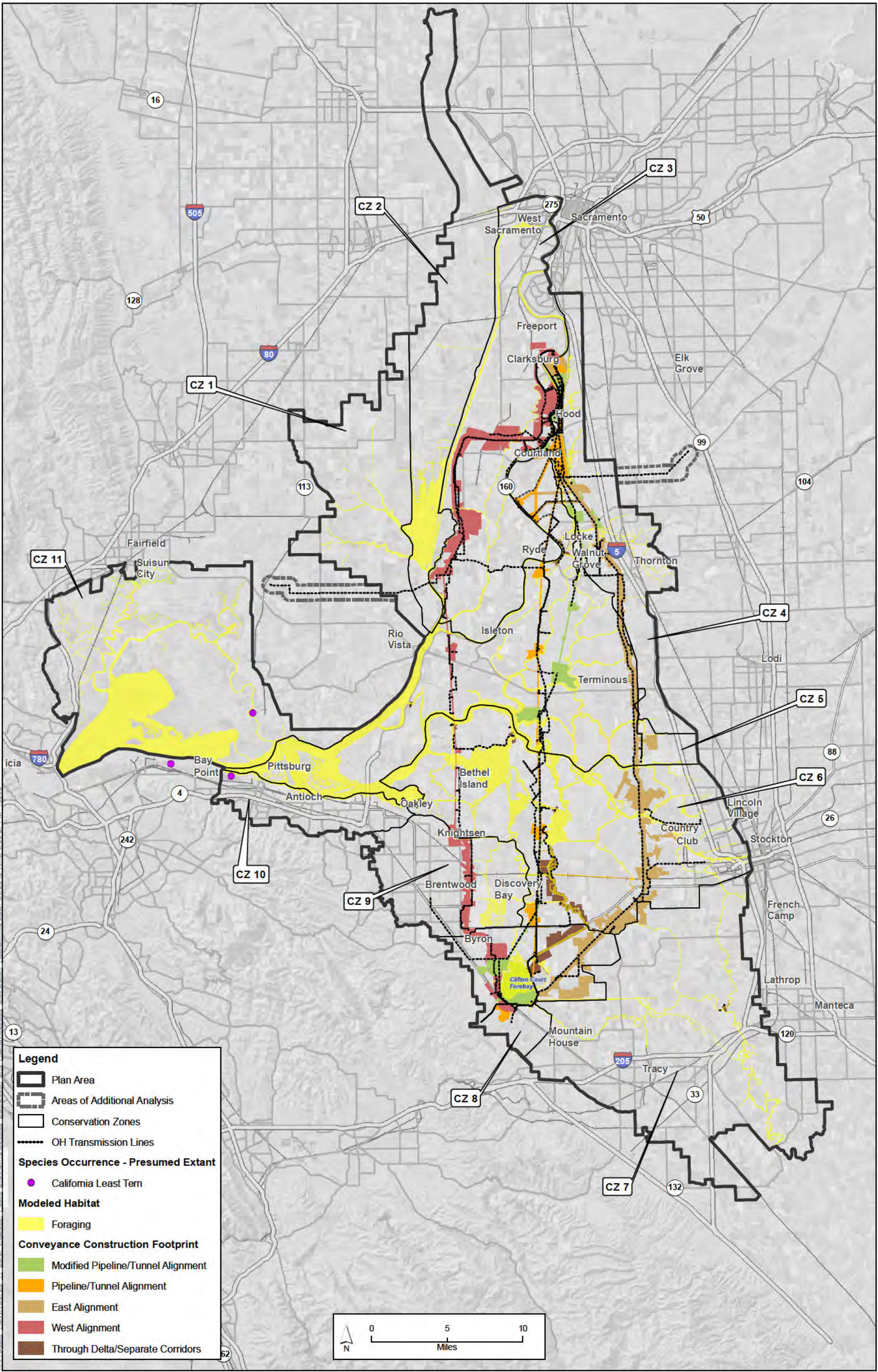
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-18**  
**California Black Rail Distribution and Habitat in Study Area Vicinity**



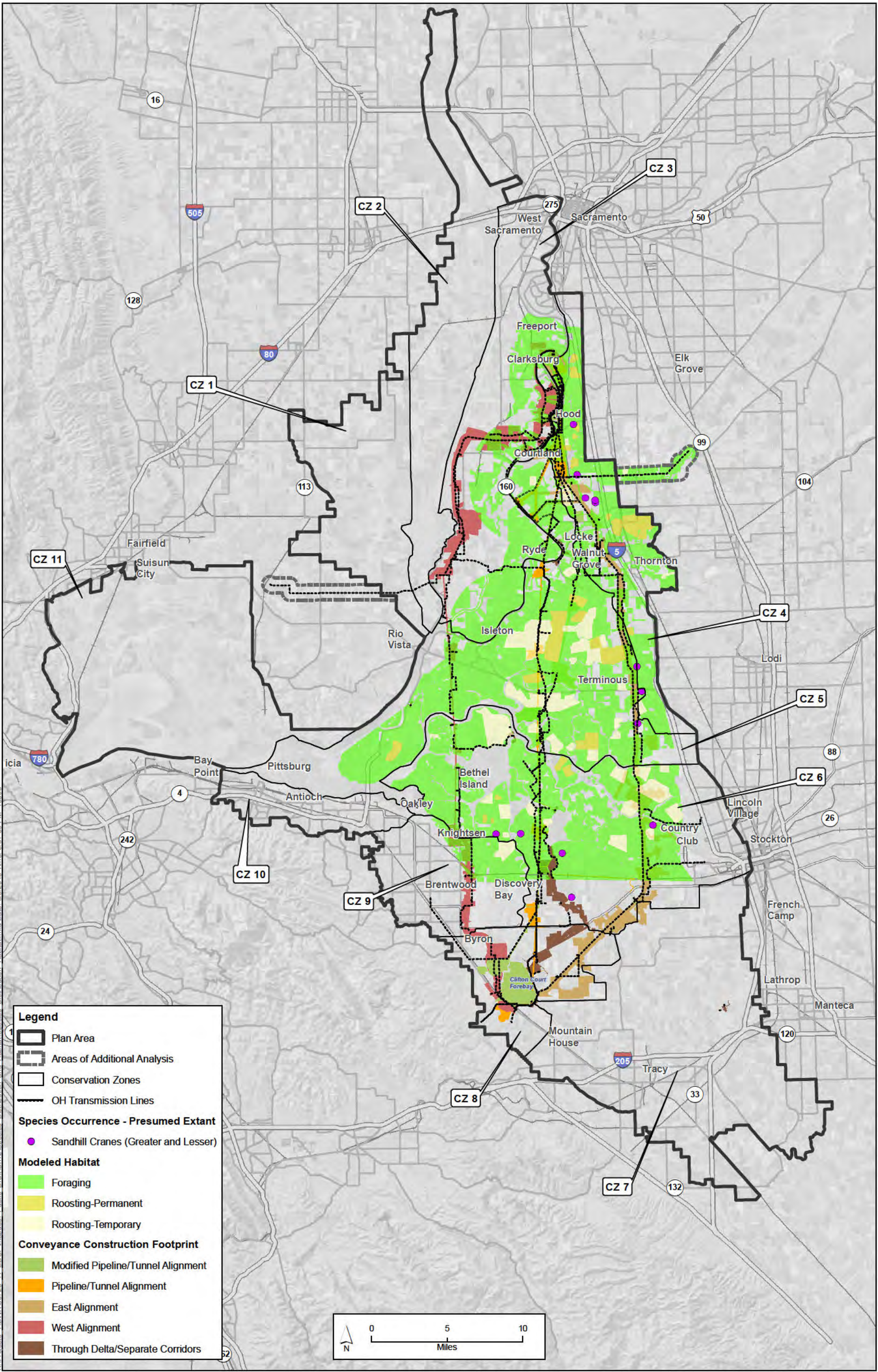
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-19**  
**California Clapper Rail Distribution and Habitat in Study Area Vicinity**



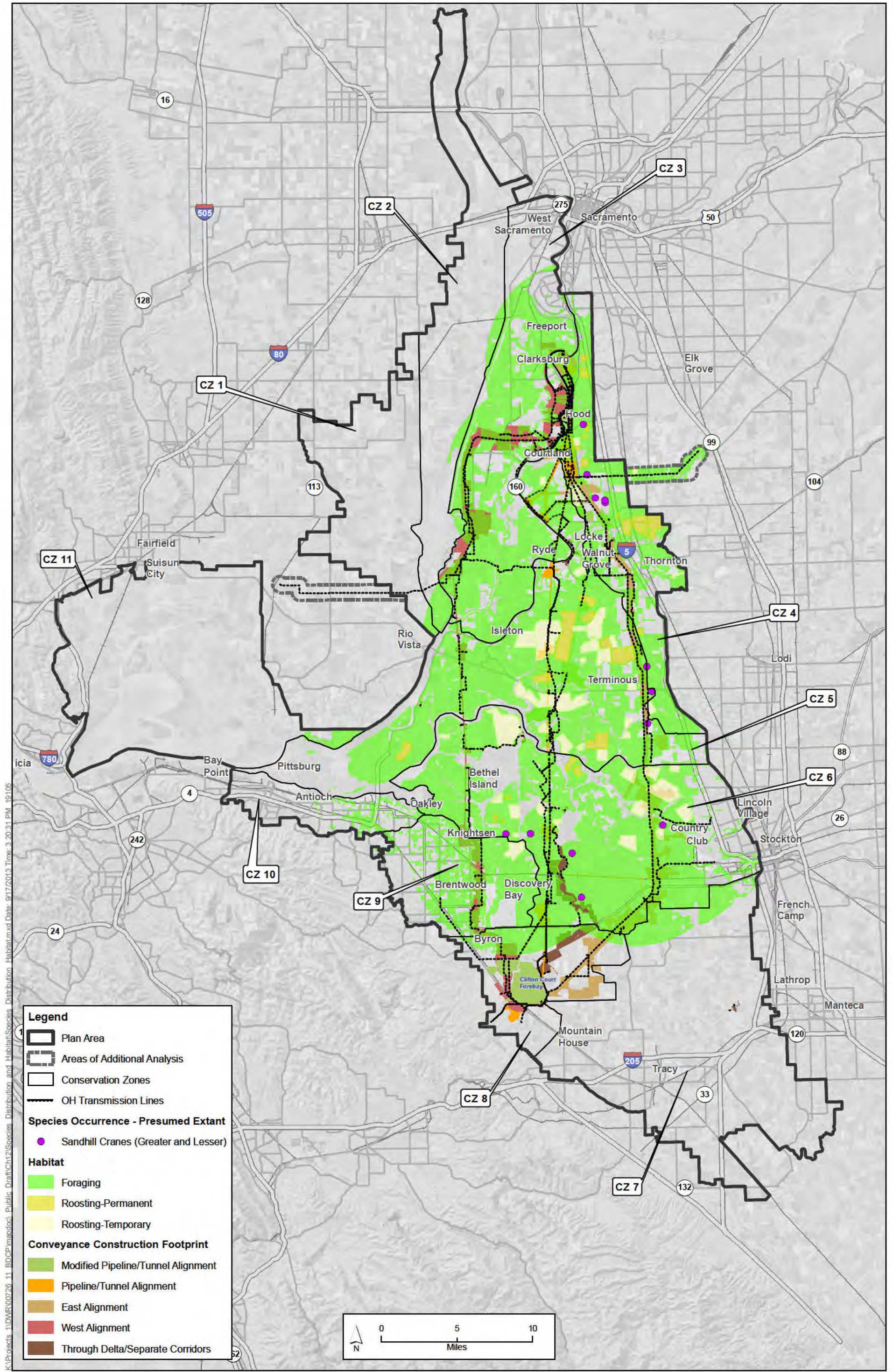
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-20**  
**California Least Tern Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, DHCCP DWR 2011; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

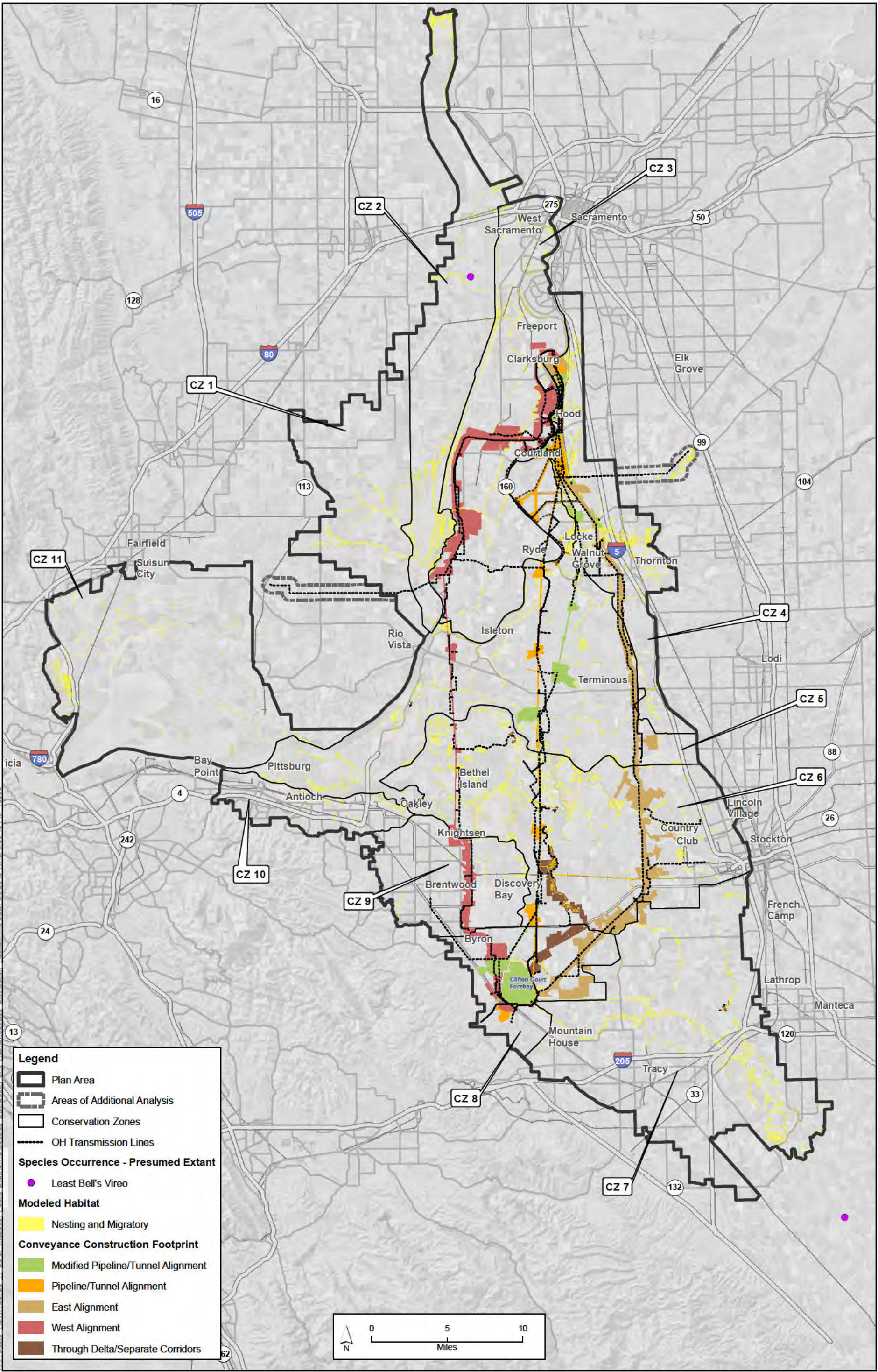
**Figure 12-21**  
**Greater Sandhill Crane Distribution and Habitat in Study Area Vicinity**



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Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, DHCCP DWR 2011; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

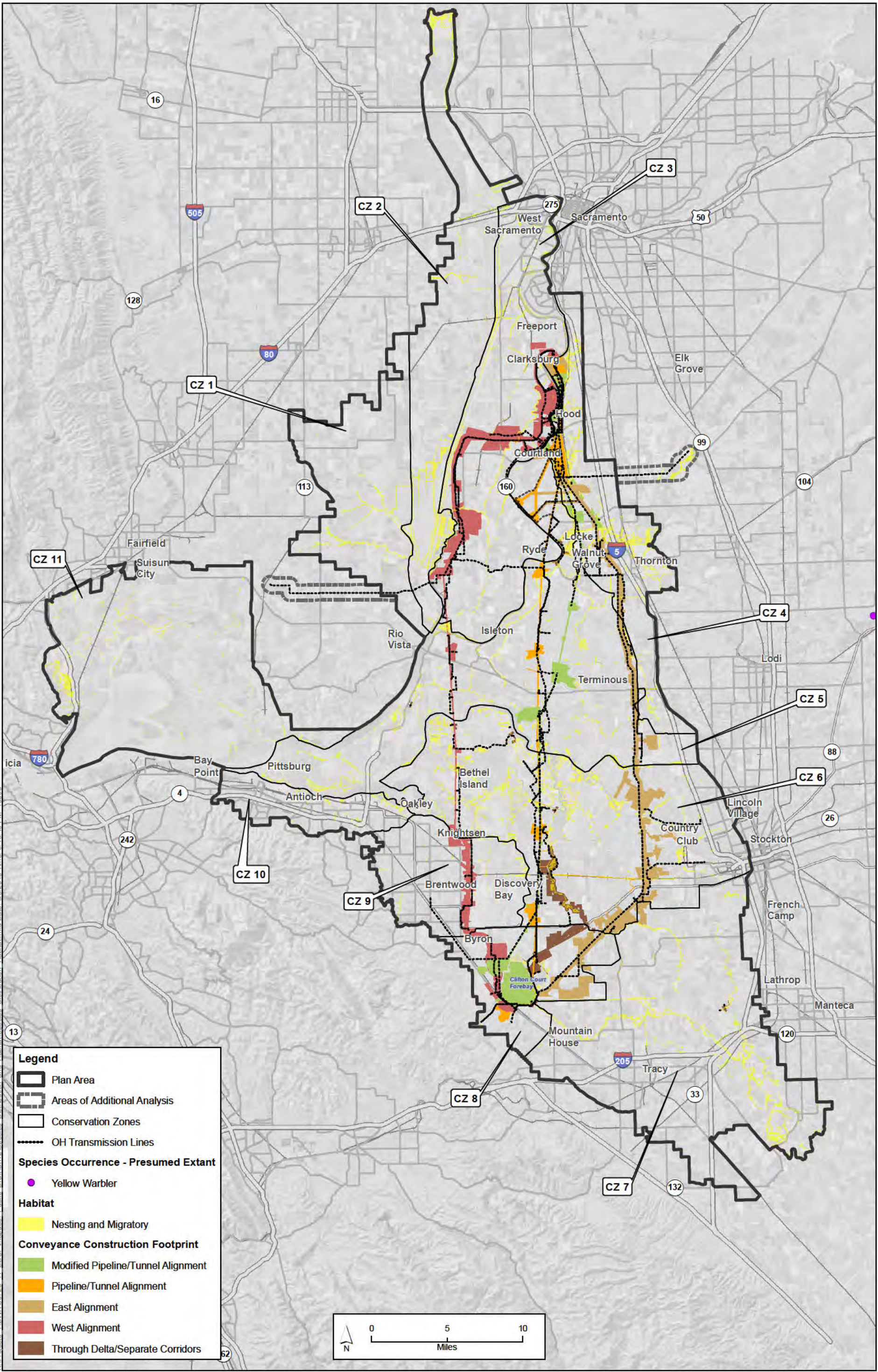
**Figure 12-22**  
**Lesser Sandhill Crane Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

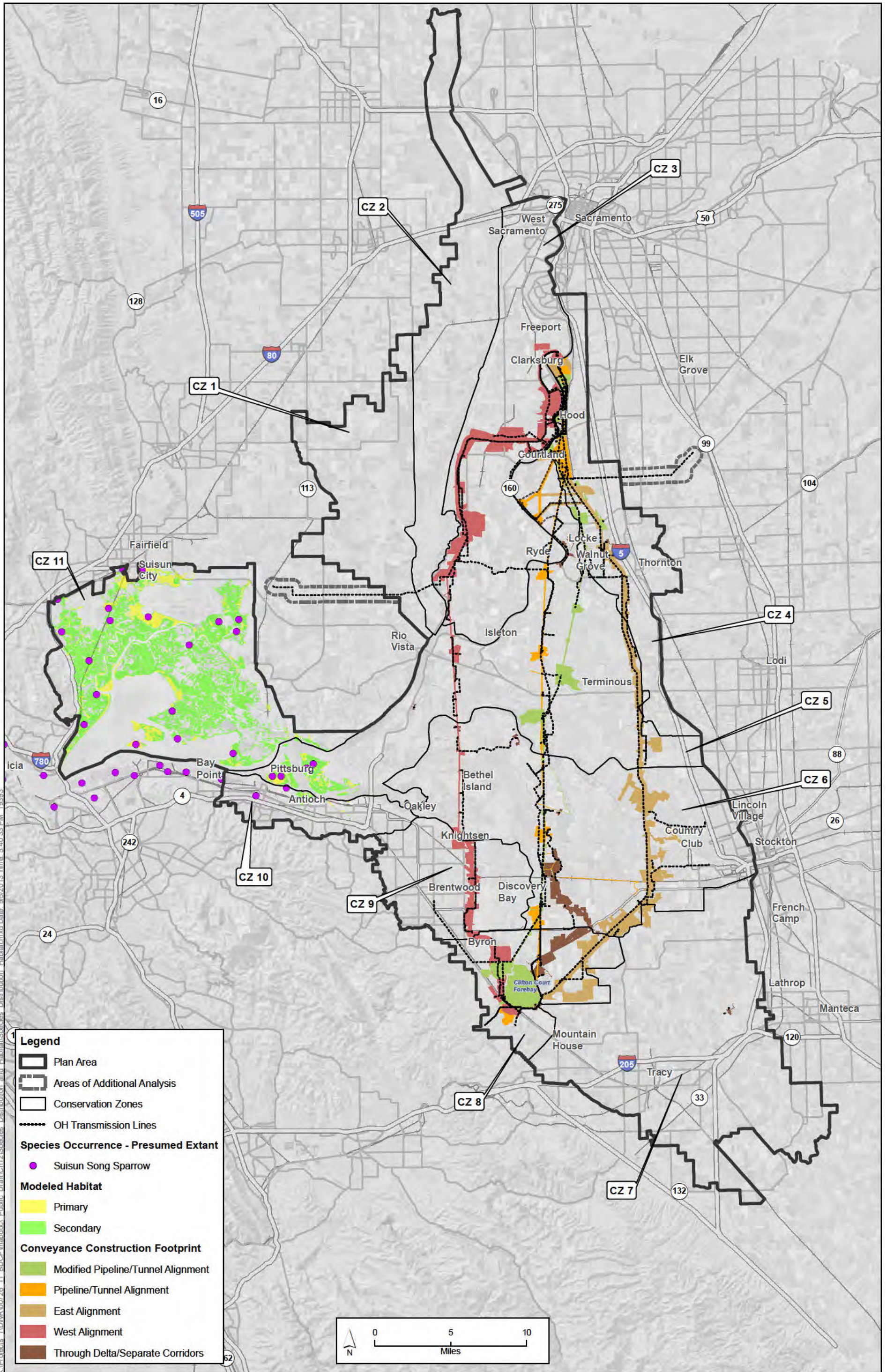
**Figure 12-23**  
**Least Bell's Vireo Distribution and Habitat in Study Area Vicinity**





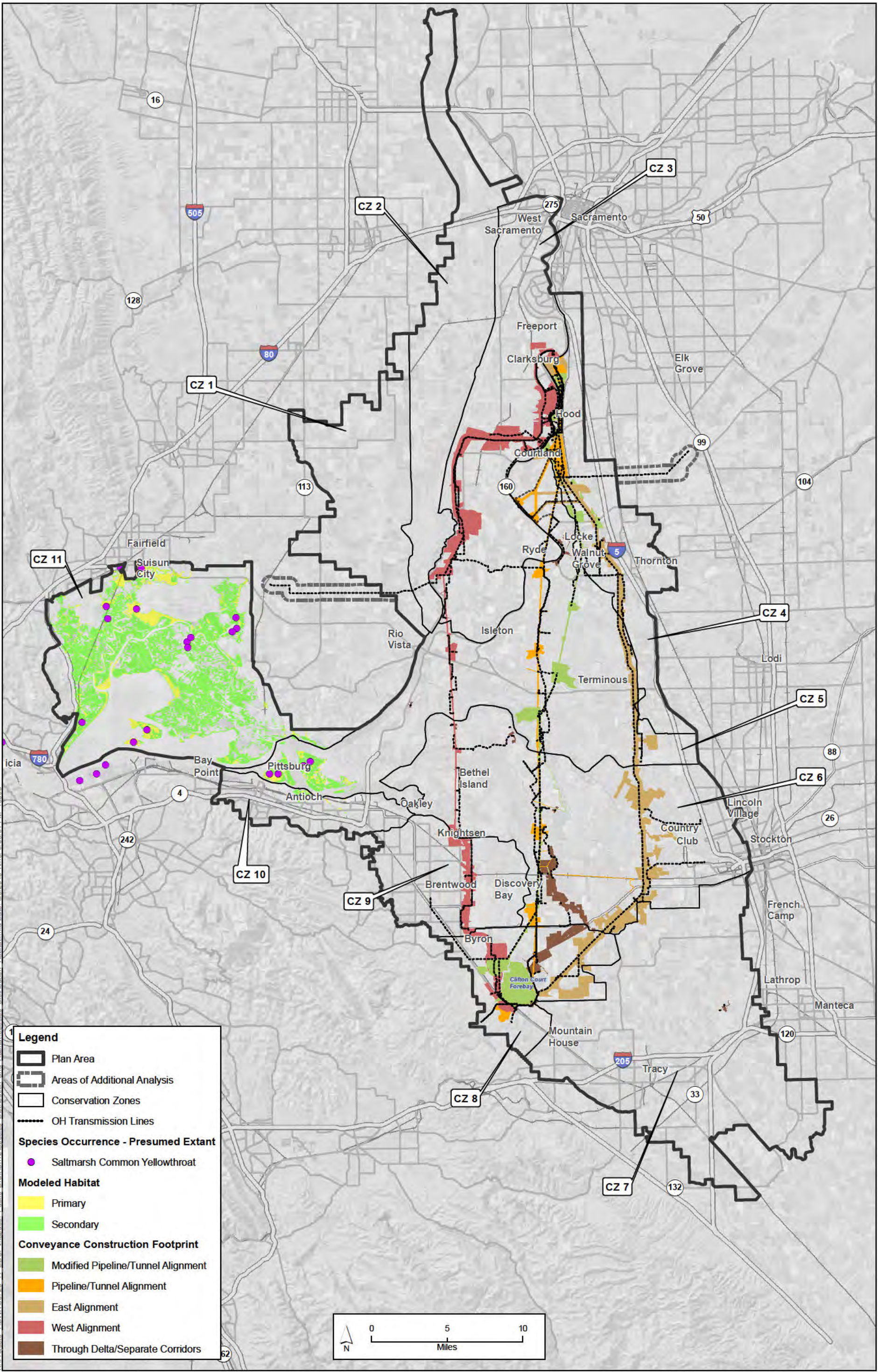
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDDB 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-24**  
**Yellow Warbler Distribution and Habitat in Study Area Vicinity**



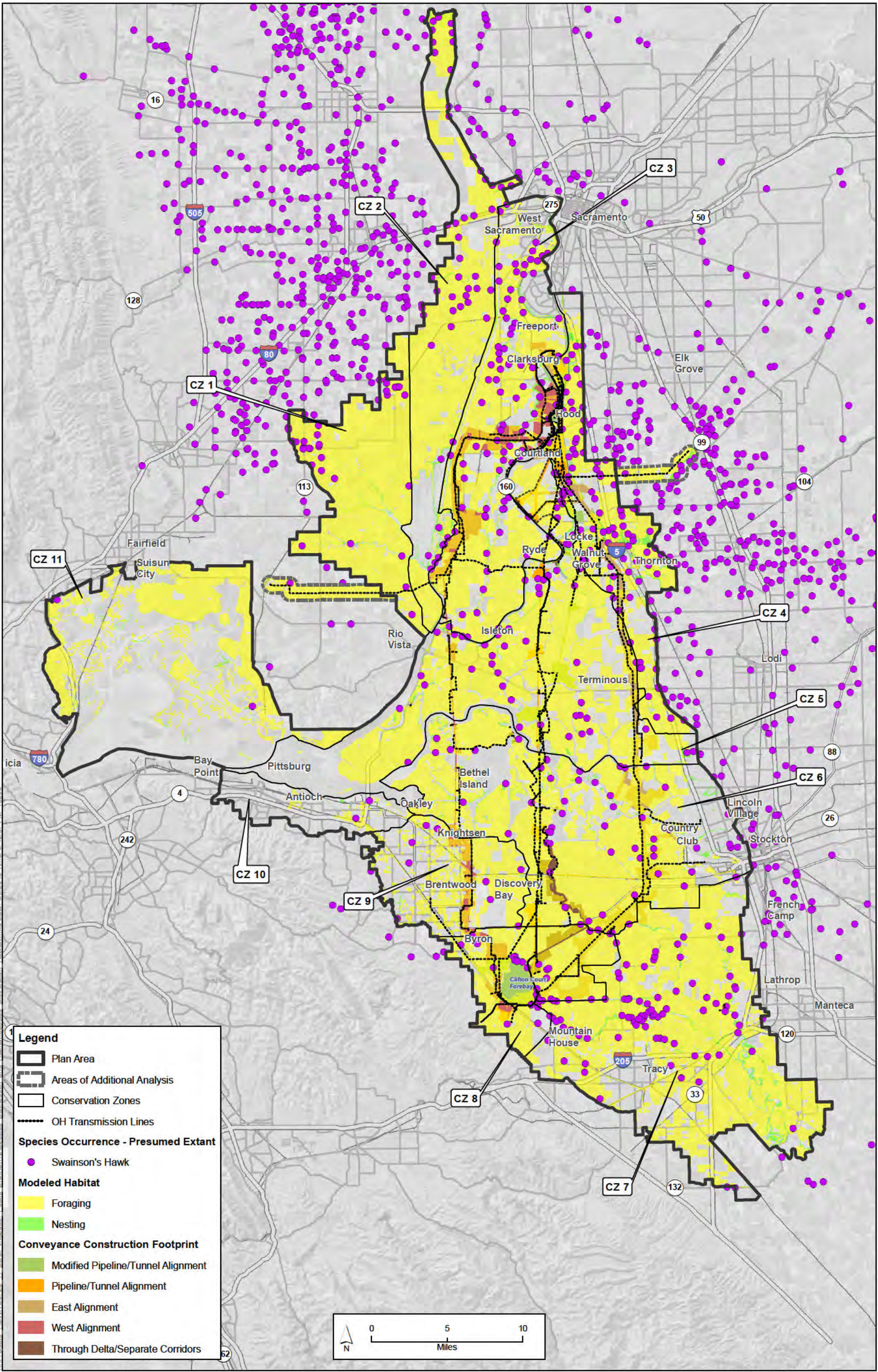
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-25**  
**Suisun Song Sparrow Distribution and Habitat in Study Area Vicinity**



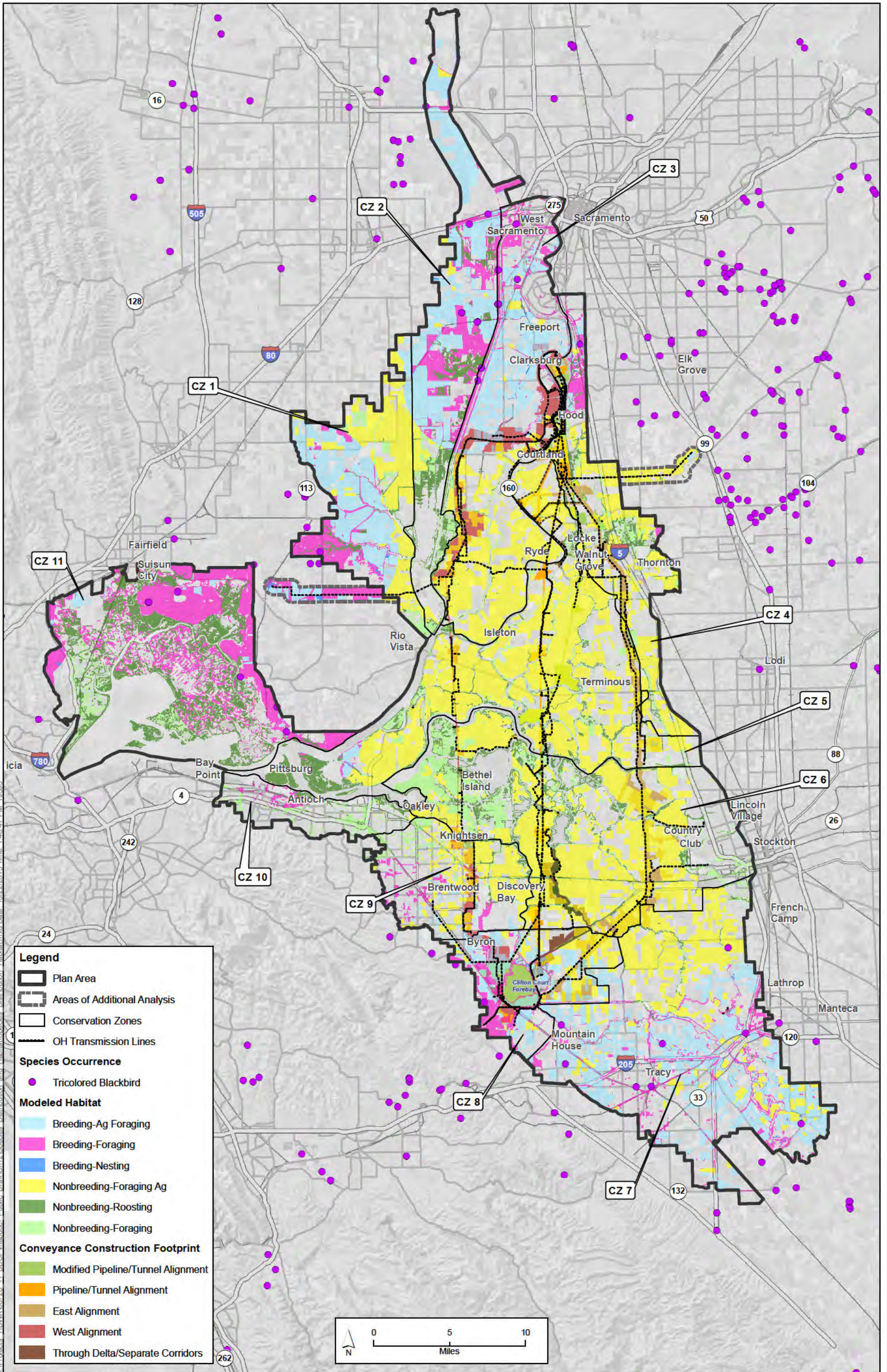
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDDB 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-26**  
**Saltmarsh Common Yellowthroat Distribution and Habitat in Study Area Vicinity**



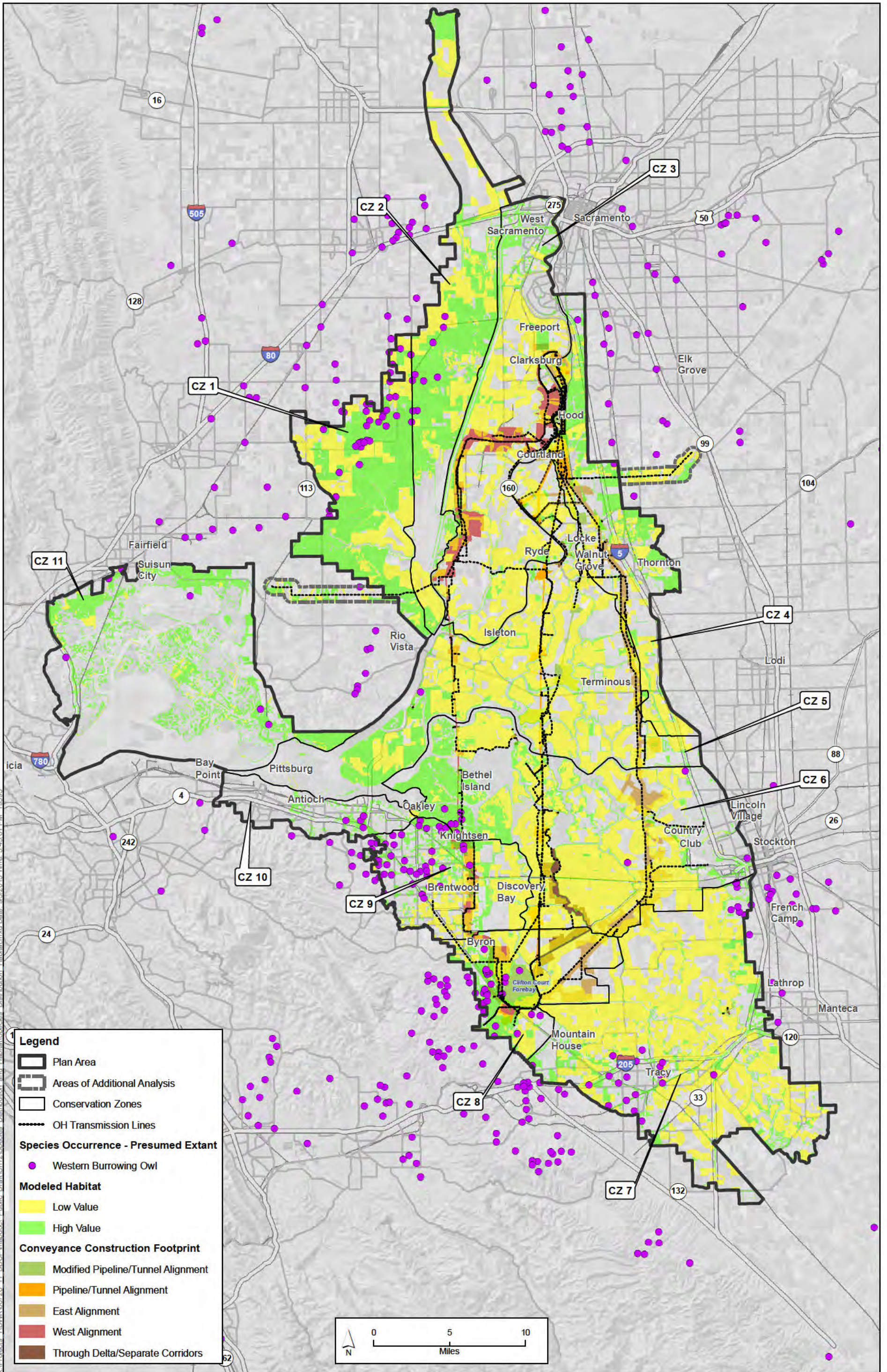
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-27**  
**Swainson's Hawk Distribution and Habitat in Study Area Vicinity**



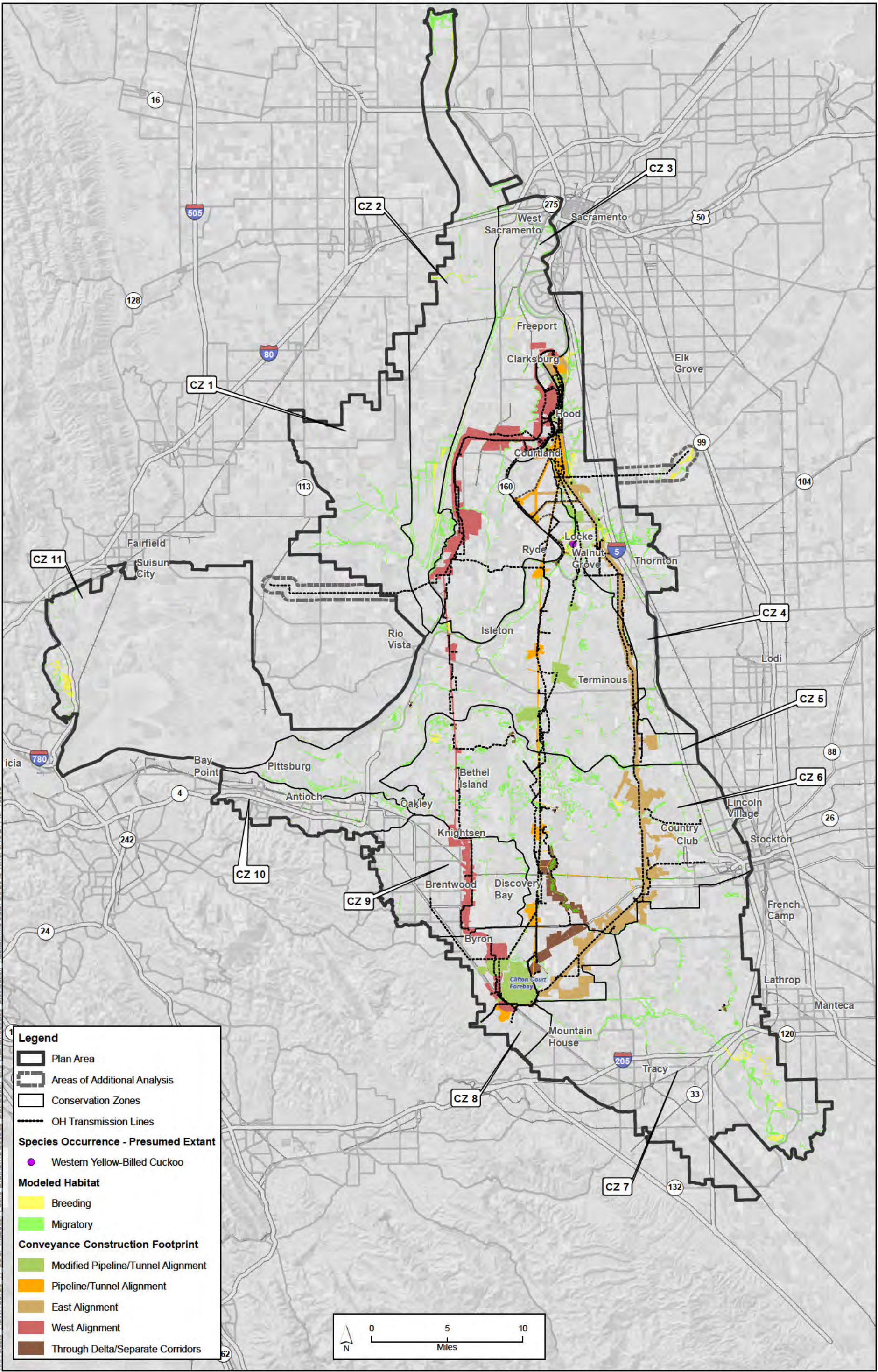
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-28**  
**Tricolored Blackbird Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

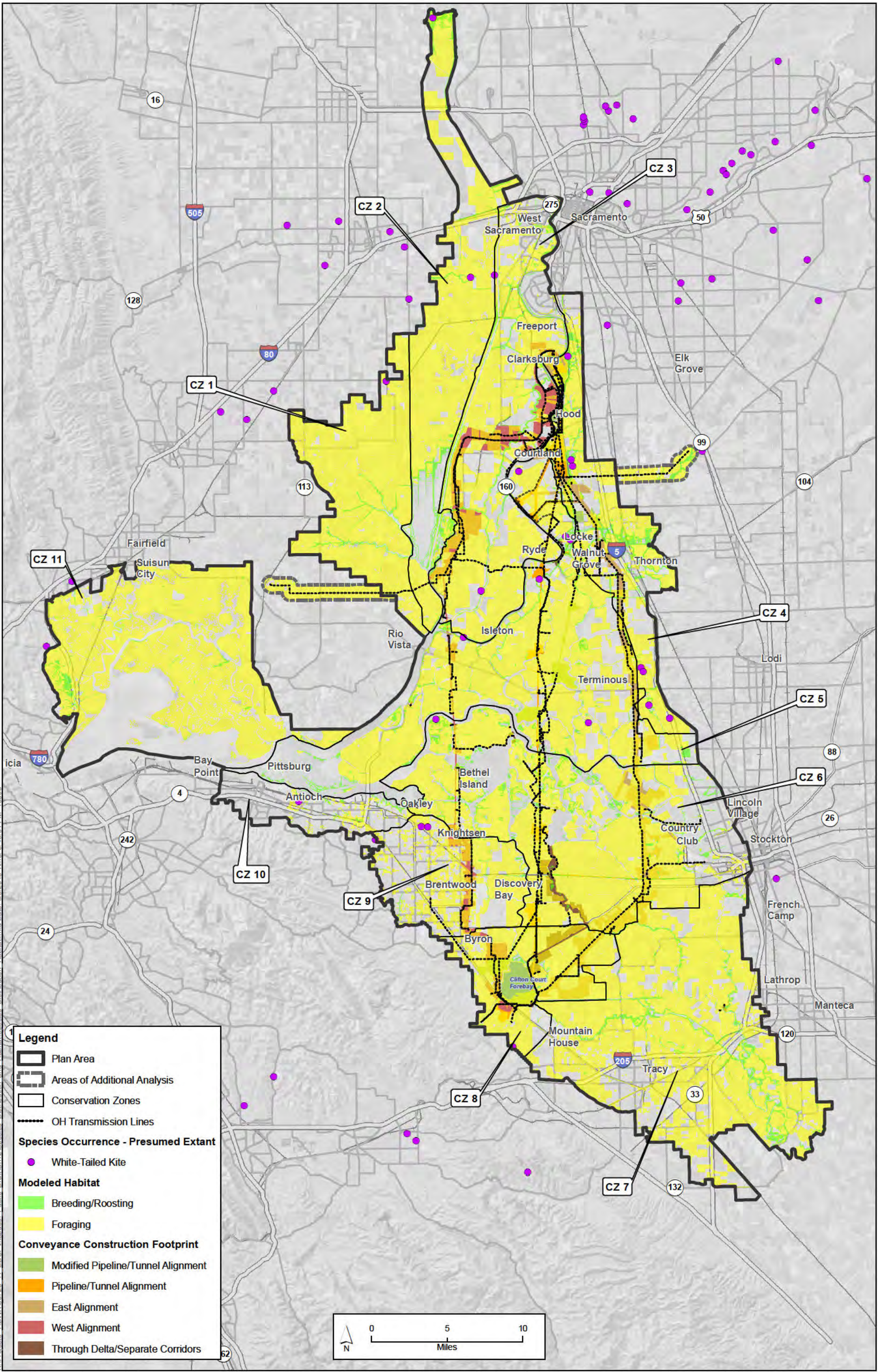
**Figure 12-29**  
Western Burrowing Owl Distribution and Habitat in Study Area Vicinity



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Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

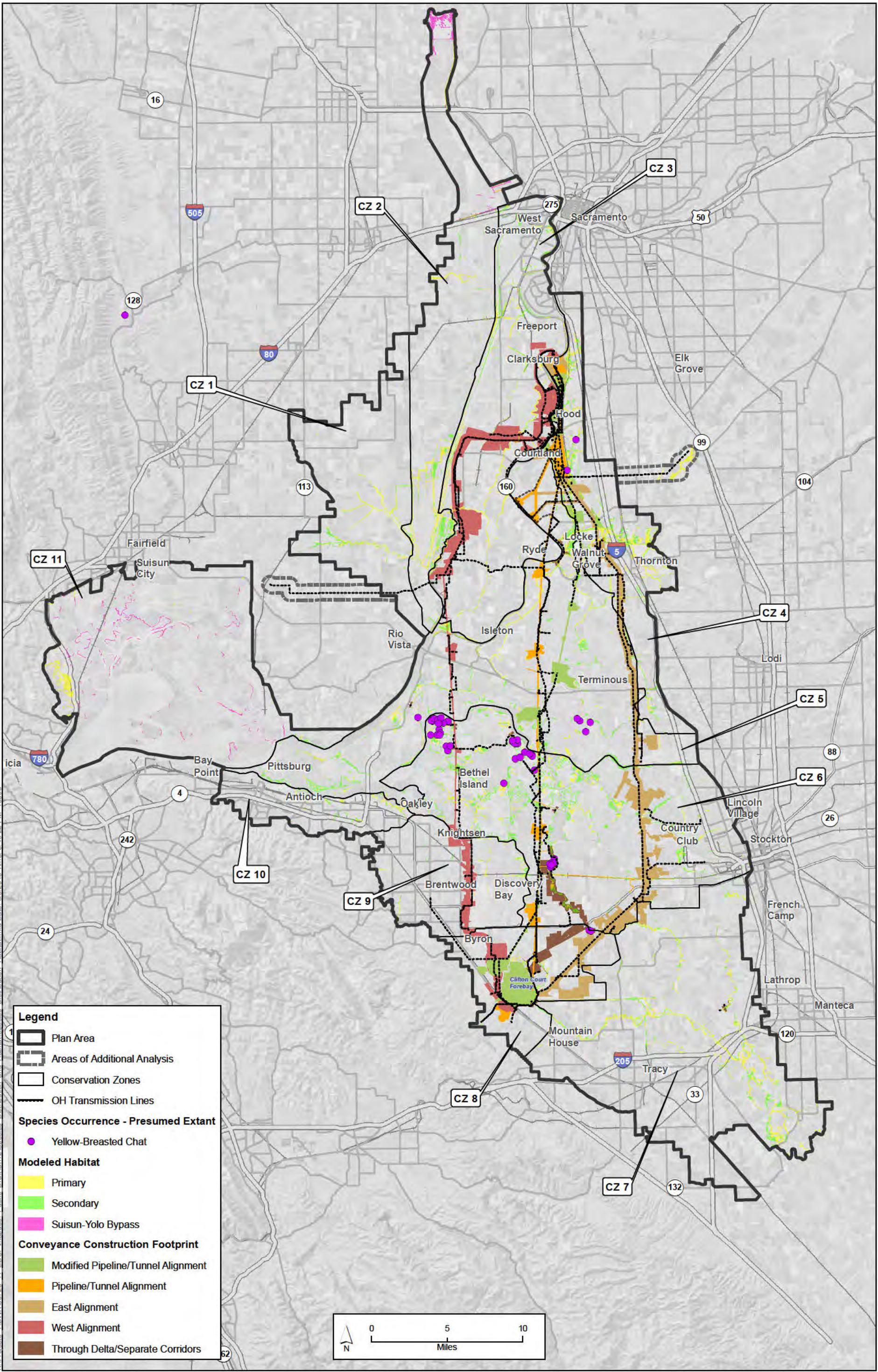
**Figure 12-30**  
**Western Yellow-Billed Cuckoo Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

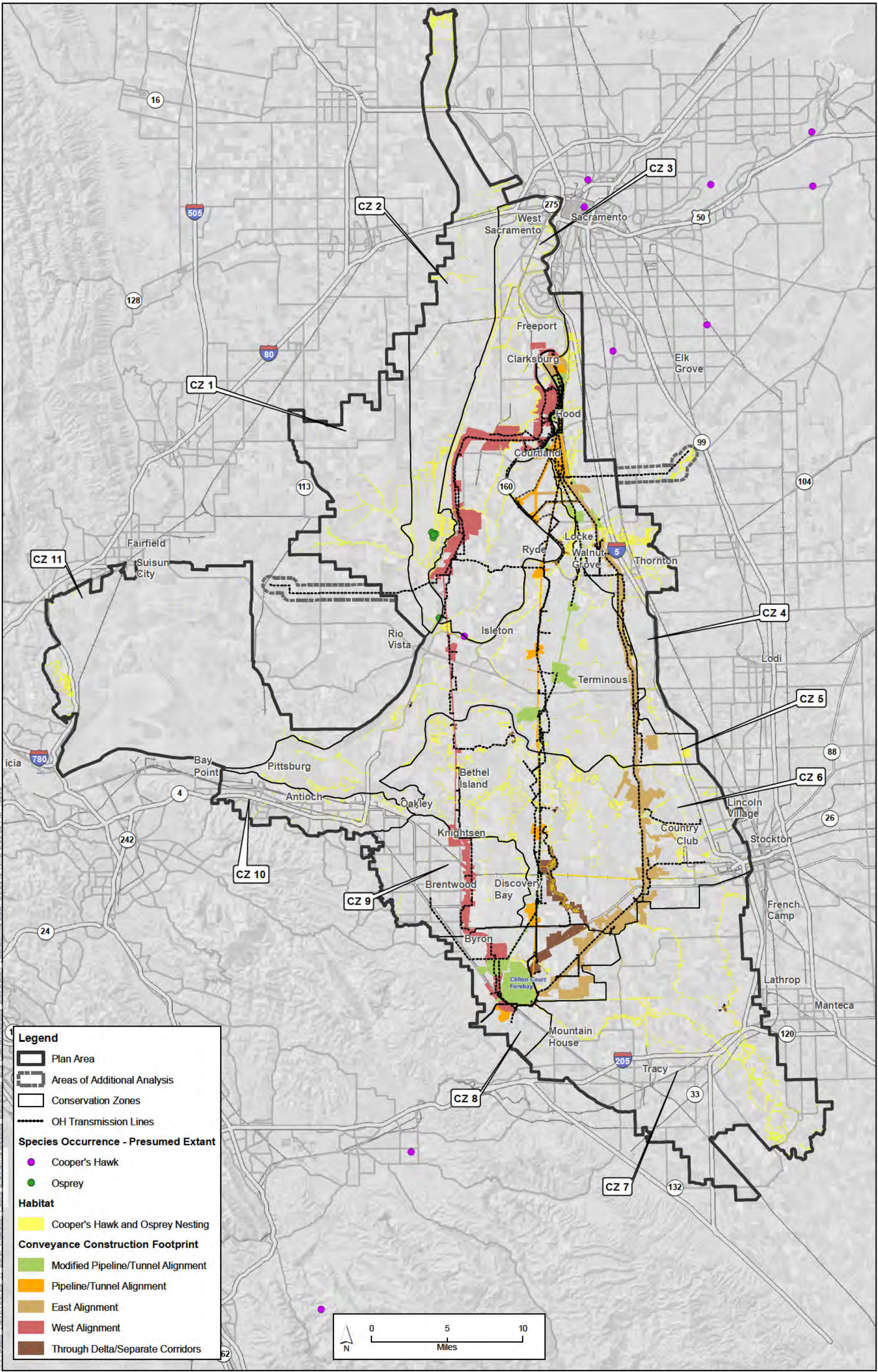
**Figure 12-31**  
**White-Tailed Kite Distribution and Habitat in Study Area Vicinity**





Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

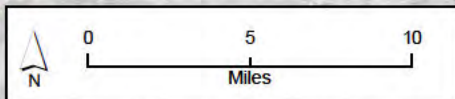
**Figure 12-32**  
**Yellow-Breasted Chat Distribution and Habitat in Study Area Vicinity**



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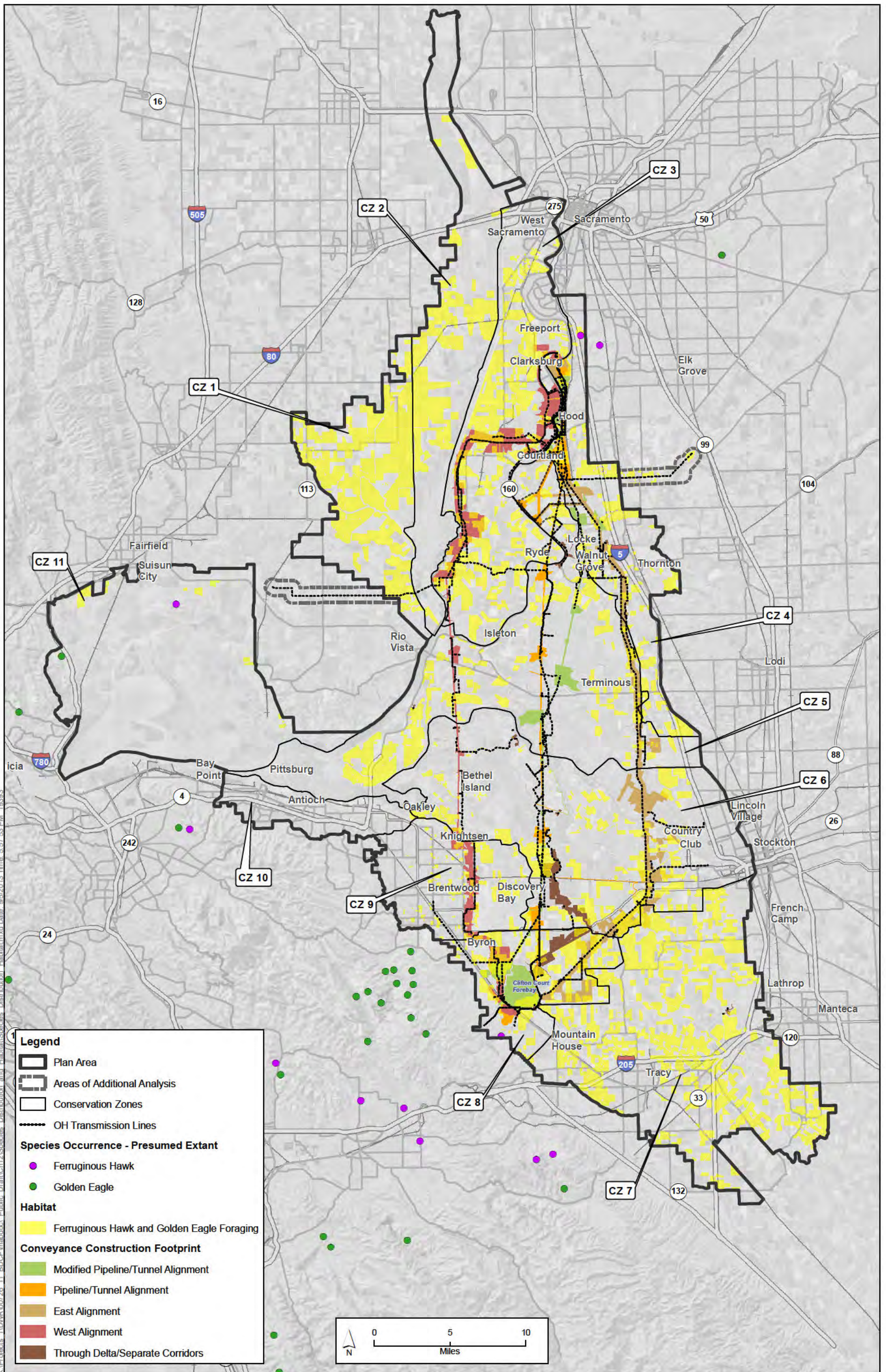
**Legend**

- Plan Area
- Areas of Additional Analysis
- Conservation Zones
- OH Transmission Lines
- Species Occurrence - Presumed Extant**
- Cooper's Hawk
- Osprey
- Habitat**
- Cooper's Hawk and Osprey Nesting
- Conveyance Construction Footprint**
- Modified Pipeline/Tunnel Alignment
- Pipeline/Tunnel Alignment
- East Alignment
- West Alignment
- Through Delta/Separate Corridors



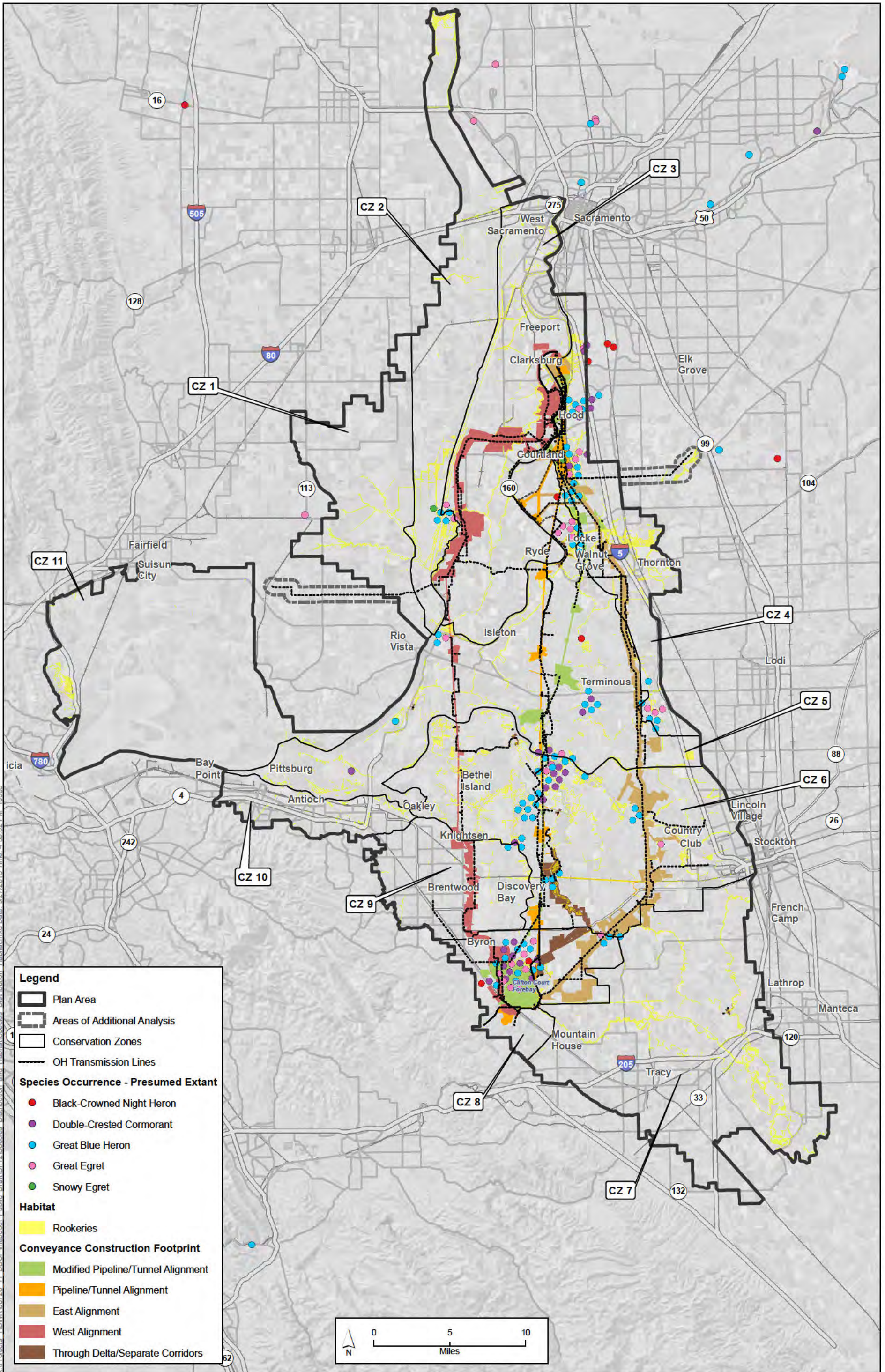
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, DHCCP DWR 2011 and CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-33**  
**Cooper's Hawk and Osprey Distribution and Habitat in Study Area Vicinity**



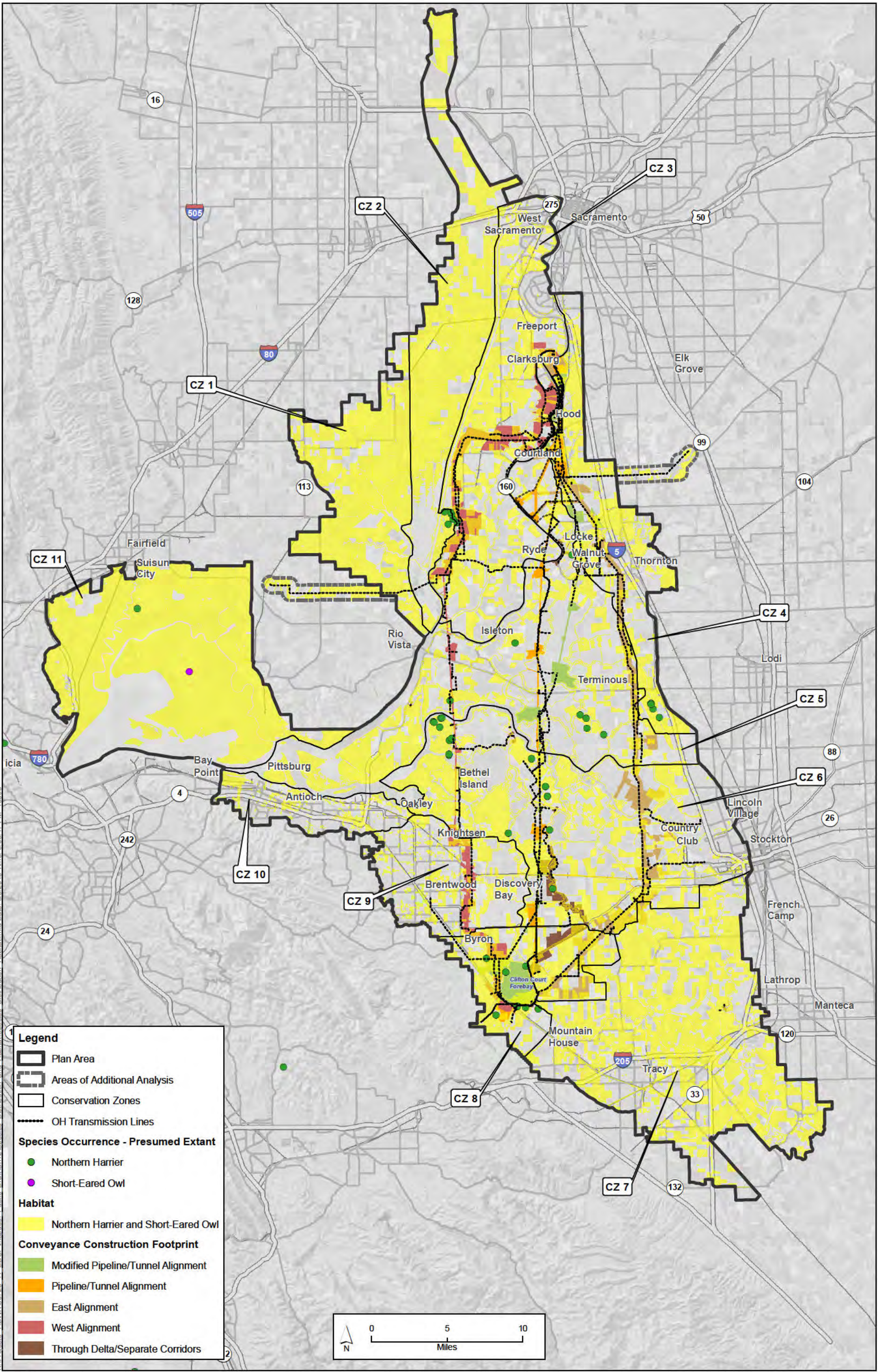
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-34**  
**Ferruginous Hawk and Golden Eagle Distribution and Habitat in Study Area Vicinity**



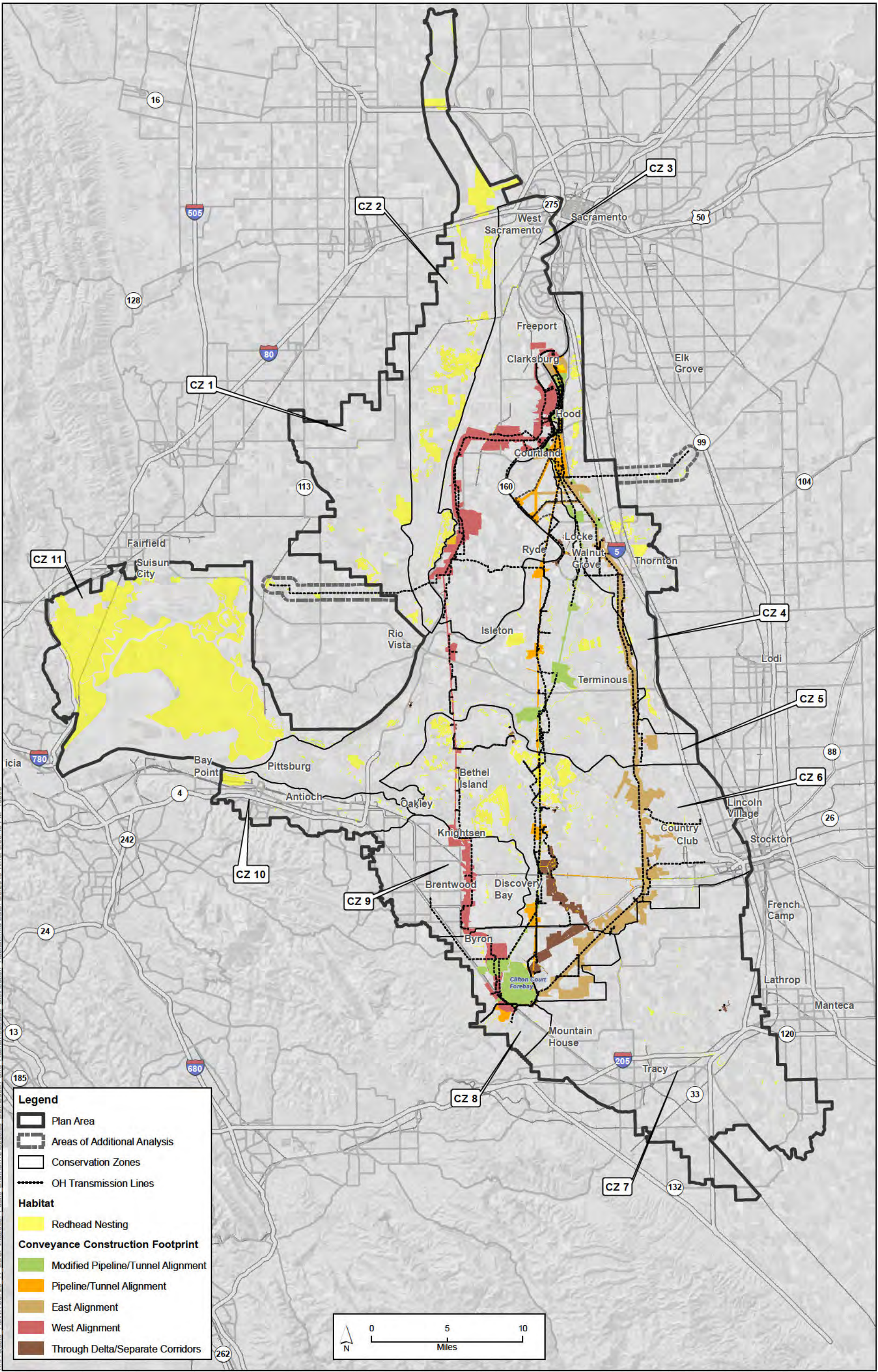
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, DHCCP DWR 2011 and CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-35**  
**Rookeries Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, DHCCP DWR 2011 and CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

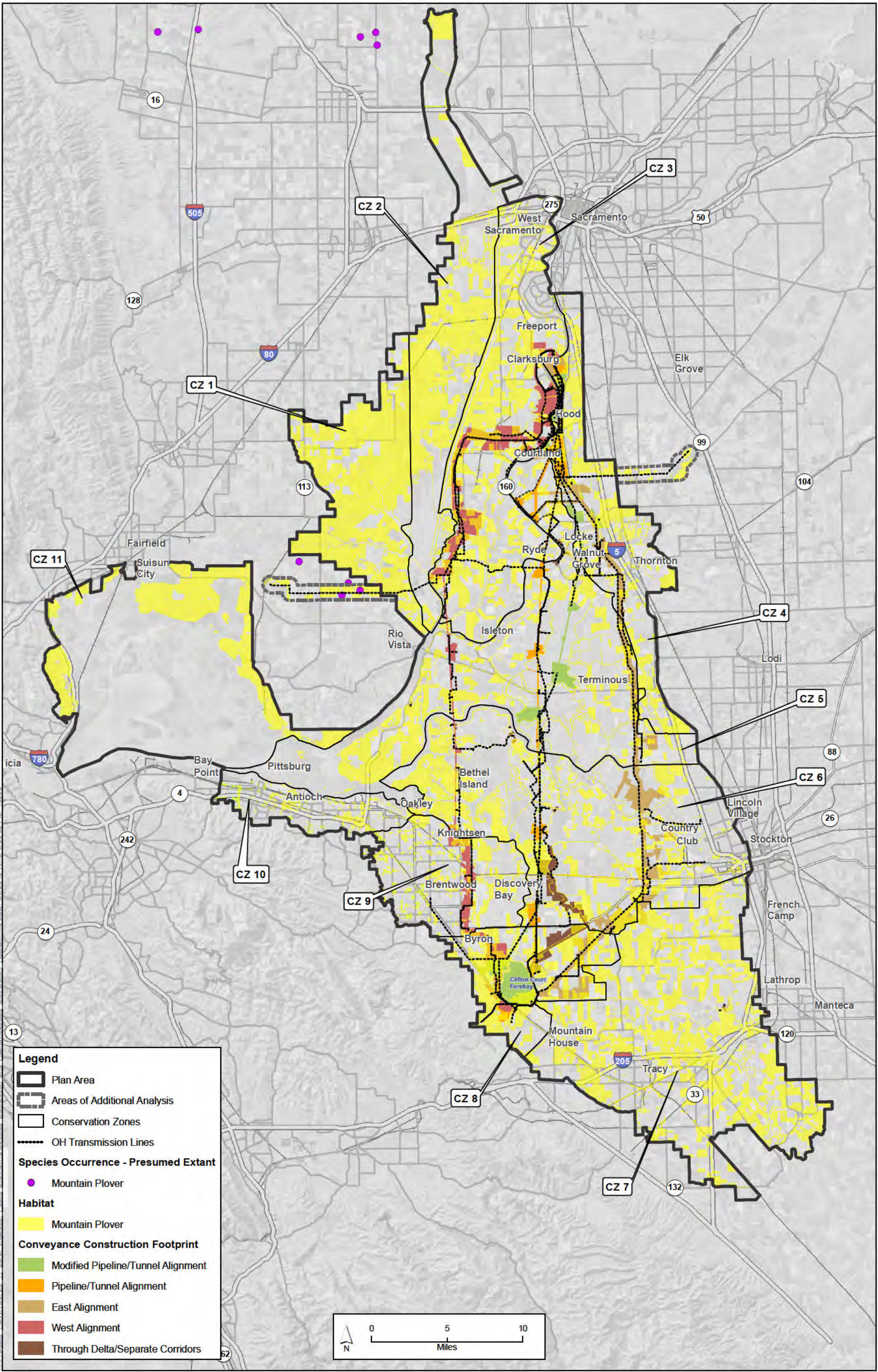
**Figure 12-36**  
**Northern Harrier and Short-Eared Owl Distribution and Habitat in Study Area Vicinity**



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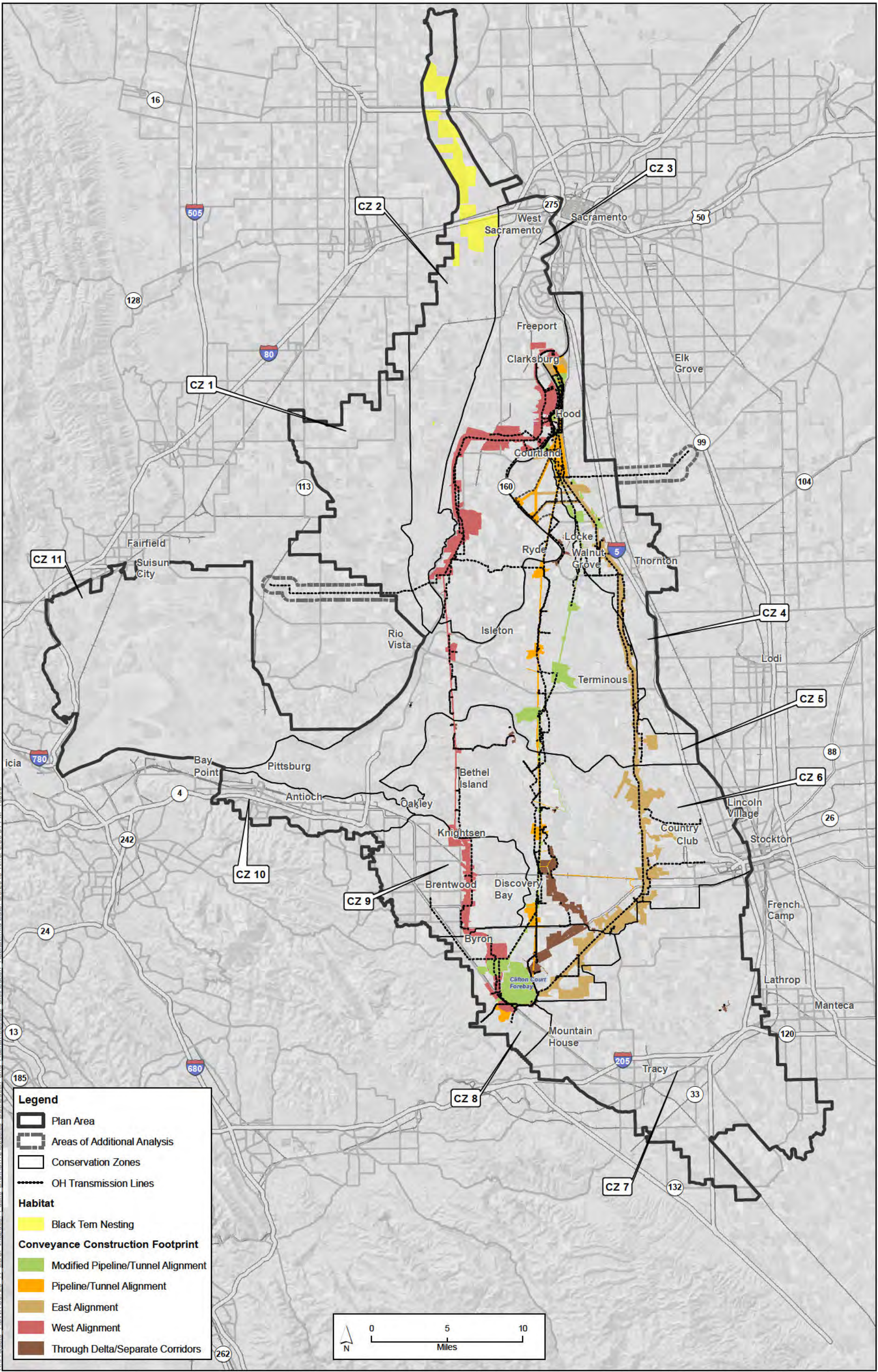
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-37**  
**Redhead Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

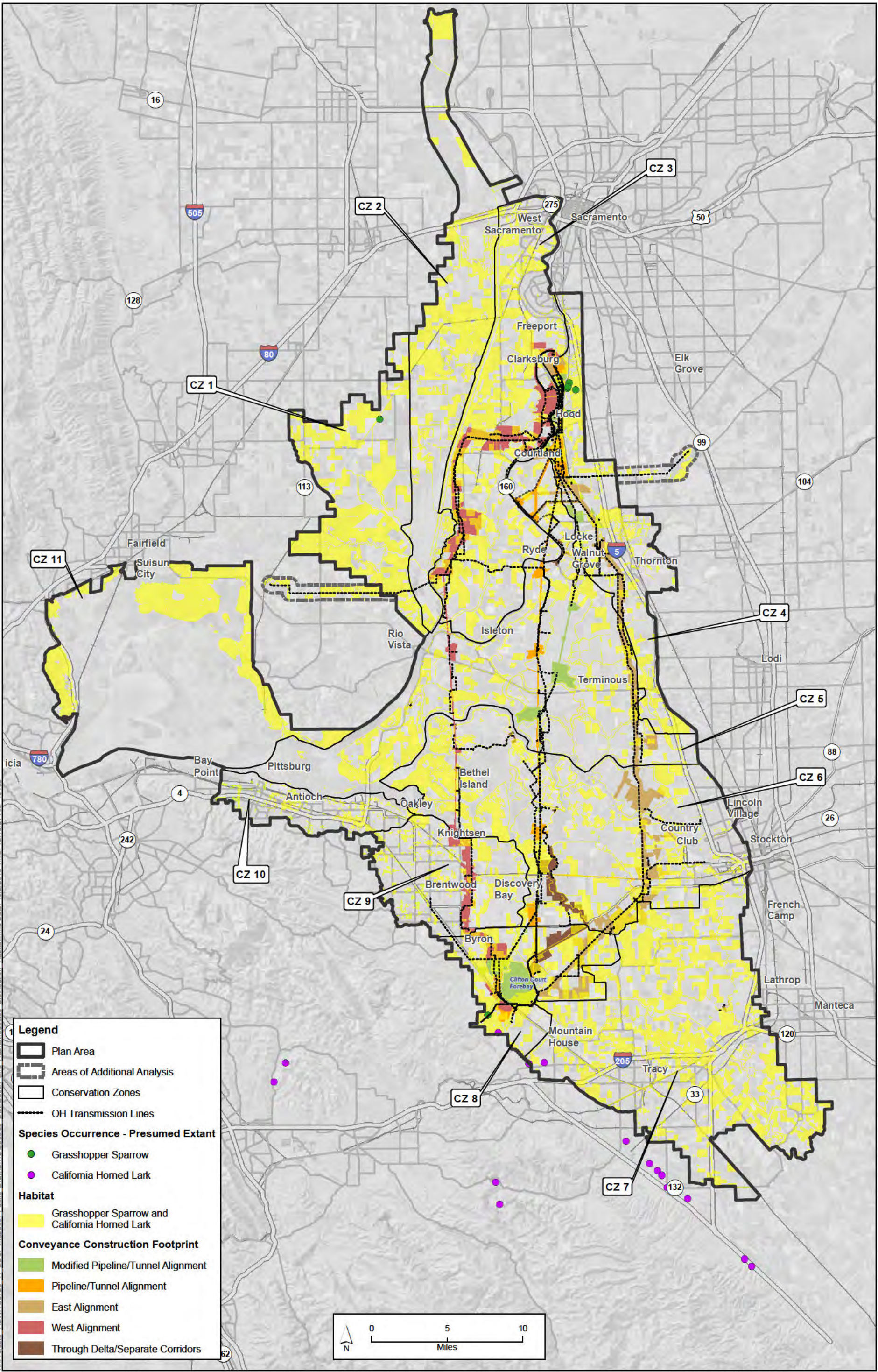
**Figure 12-38**  
**Mountain Plover Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

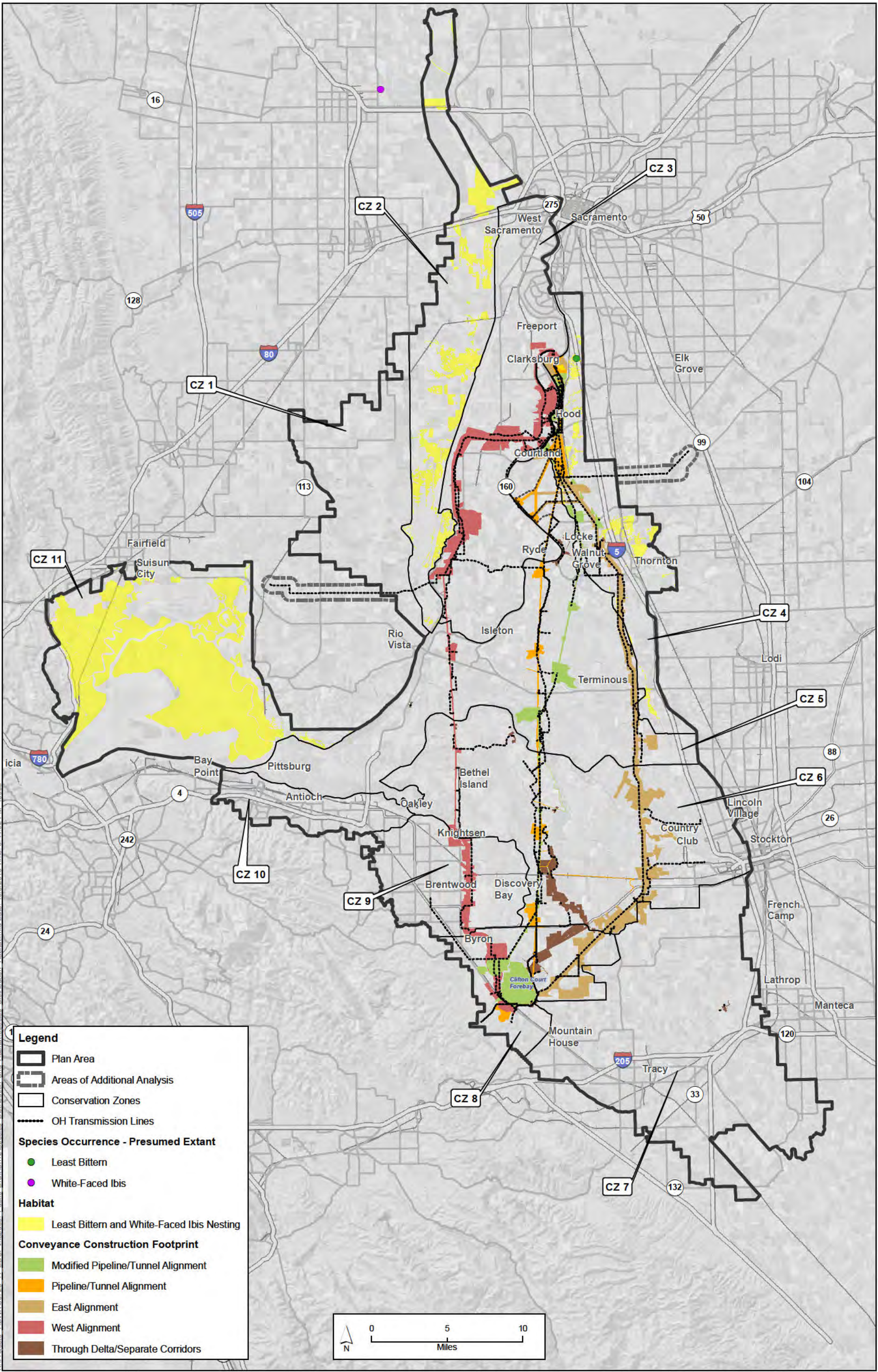
**Figure 12-39**  
**Black Tern Distribution and Habitat in Study Area Vicinity**





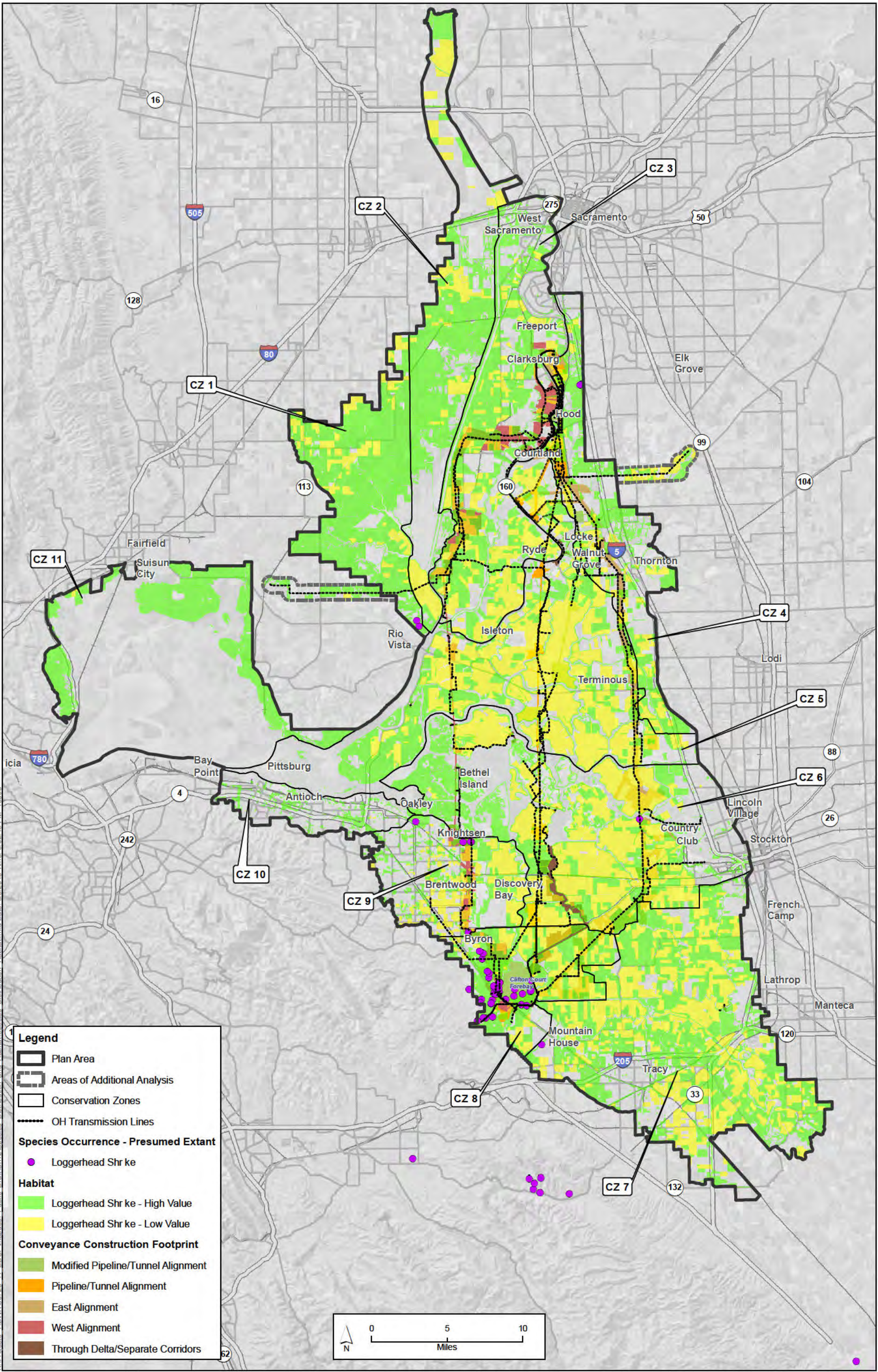
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, DHCCP DWR 2011 and CNDDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-40**  
**Grasshopper Sparrow and California Horned Lark**  
**Distribution and Habitat in Study Area Vicinity**



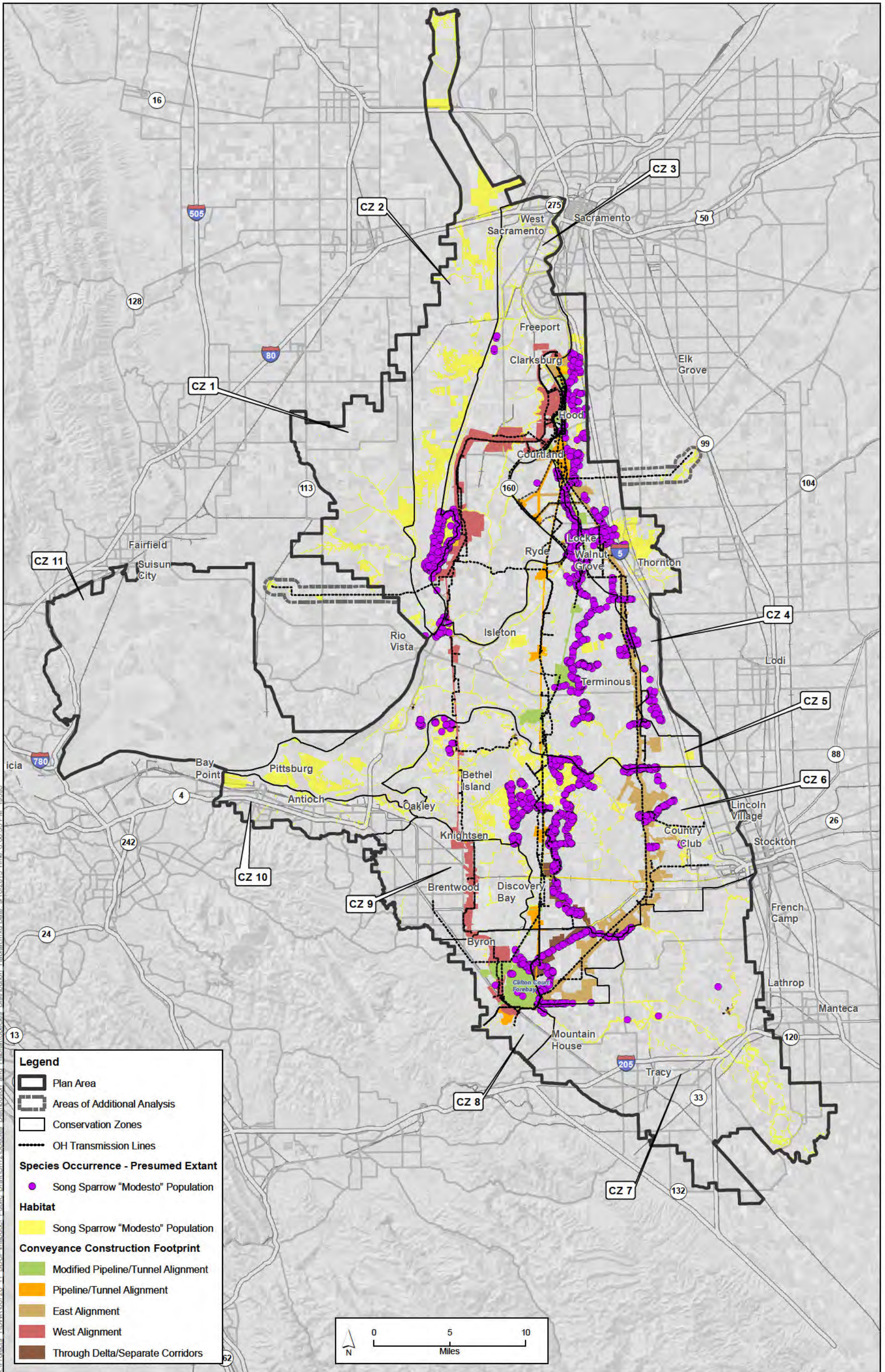
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, DHCCP DWR 2011 and CNDDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-41**  
**Least Bittern and White-Faced Ibis Distribution and Habitat in Study Area Vicinity**



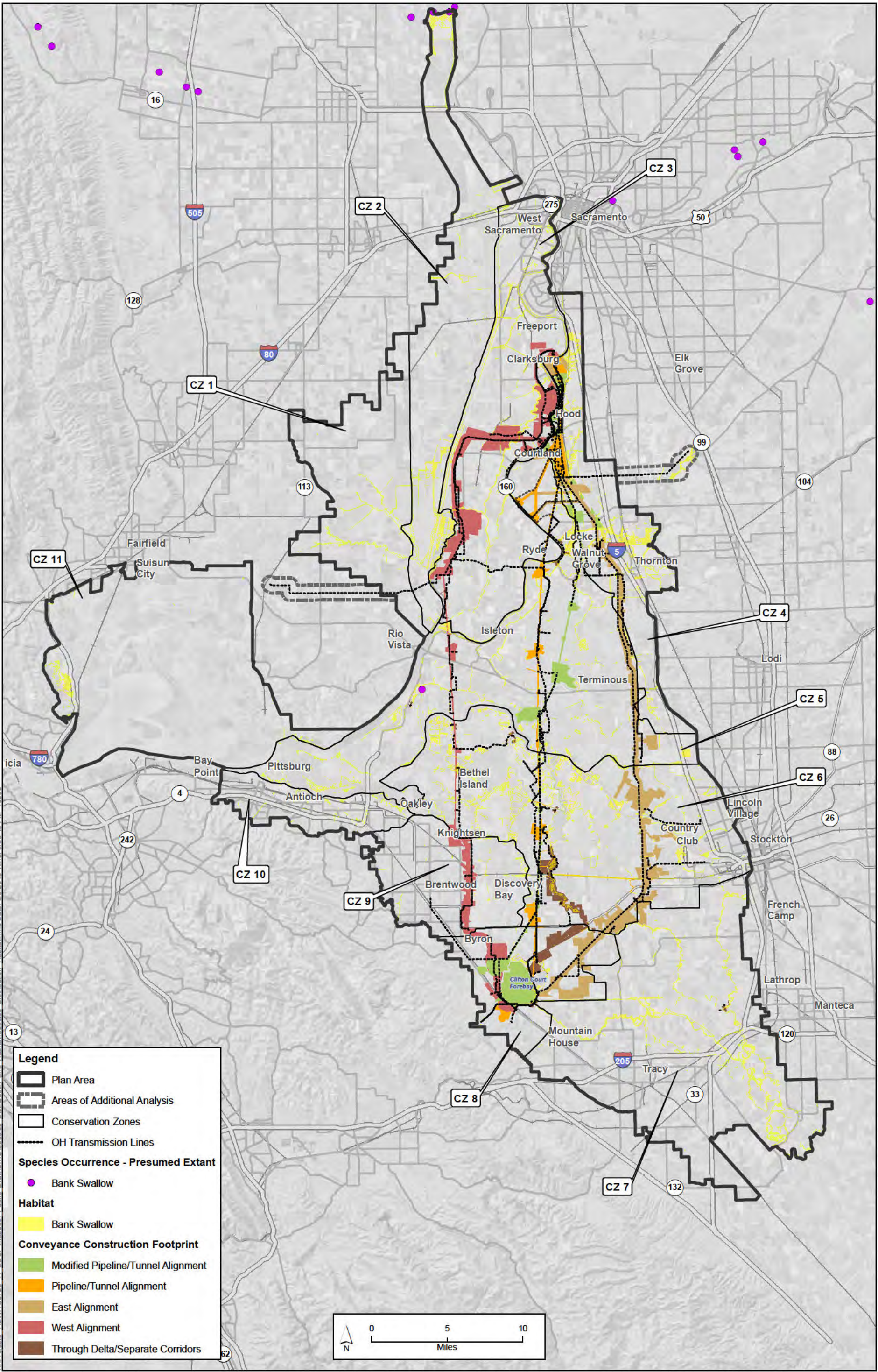
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, DHCCP DWR 2011 and CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-42**  
**Loggerhead Shrike Distribution and Habitat in Study Area Vicinity**



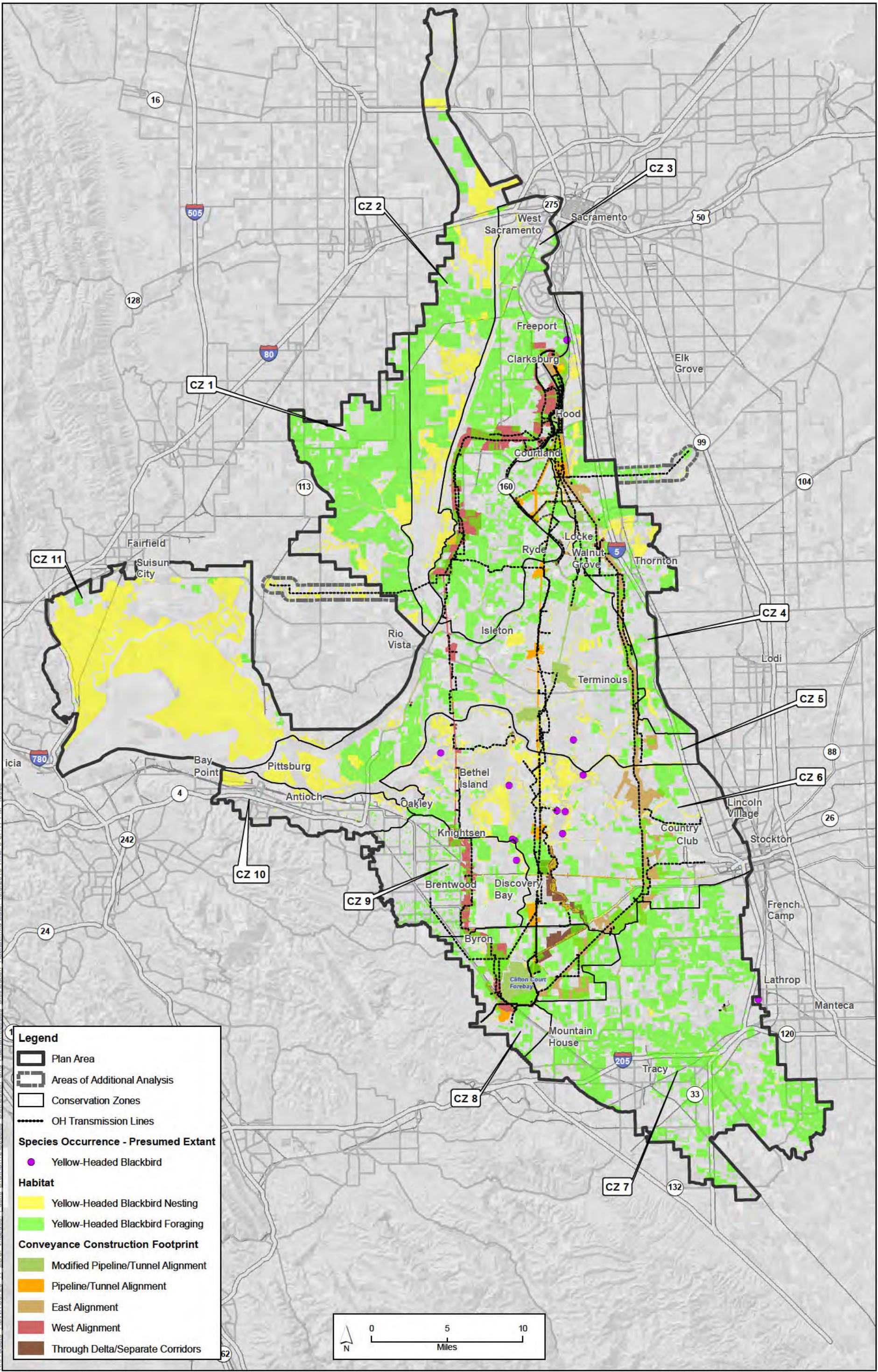
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-43**  
**Song Sparrow "Modesto" Population Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

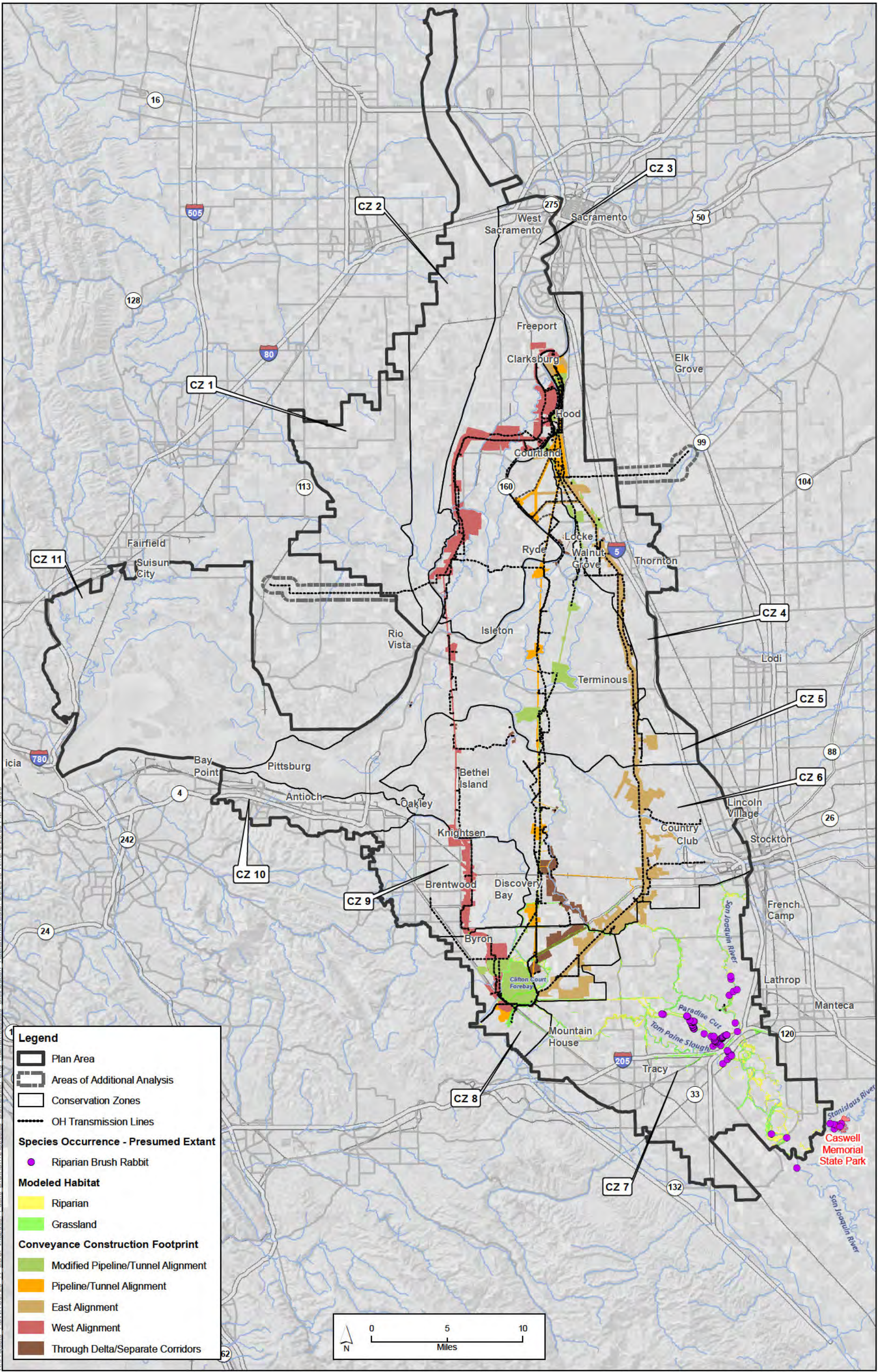
**Figure 12-44**  
**Bank Swallow Distribution and Habitat in Study Area Vicinity**



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Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, DHCCP DWR 2011 and CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

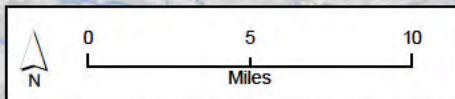
**Figure 12-45**  
**Yellow-Headed Blackbird Distribution and Habitat in Study Area Vicinity**



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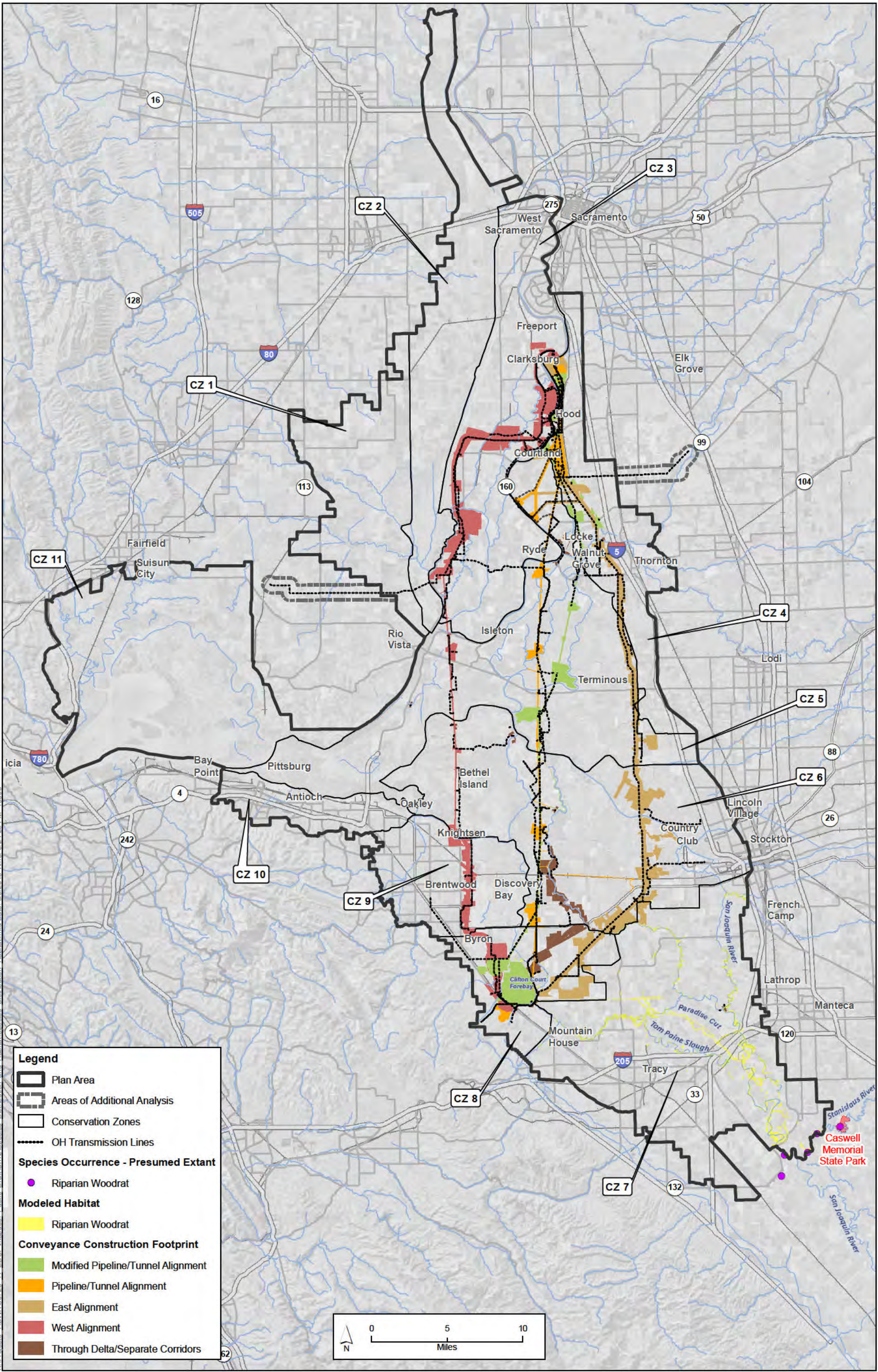
**Legend**

- Plan Area
- Areas of Additional Analysis
- Conservation Zones
- OH Transmission Lines
- Species Occurrence - Presumed Extant**
- Riparian Brush Rabbit
- Modeled Habitat**
- Riparian
- Grassland
- Conveyance Construction Footprint**
- Modified Pipeline/Tunnel Alignment
- Pipeline/Tunnel Alignment
- East Alignment
- West Alignment
- Through Delta/Separate Corridors



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

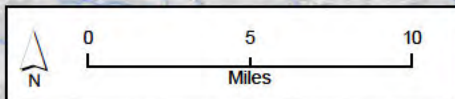
**Figure 12-46**  
Riparian Brush Rabbit Distribution and Habitat in Study Area Vicinity



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**Legend**

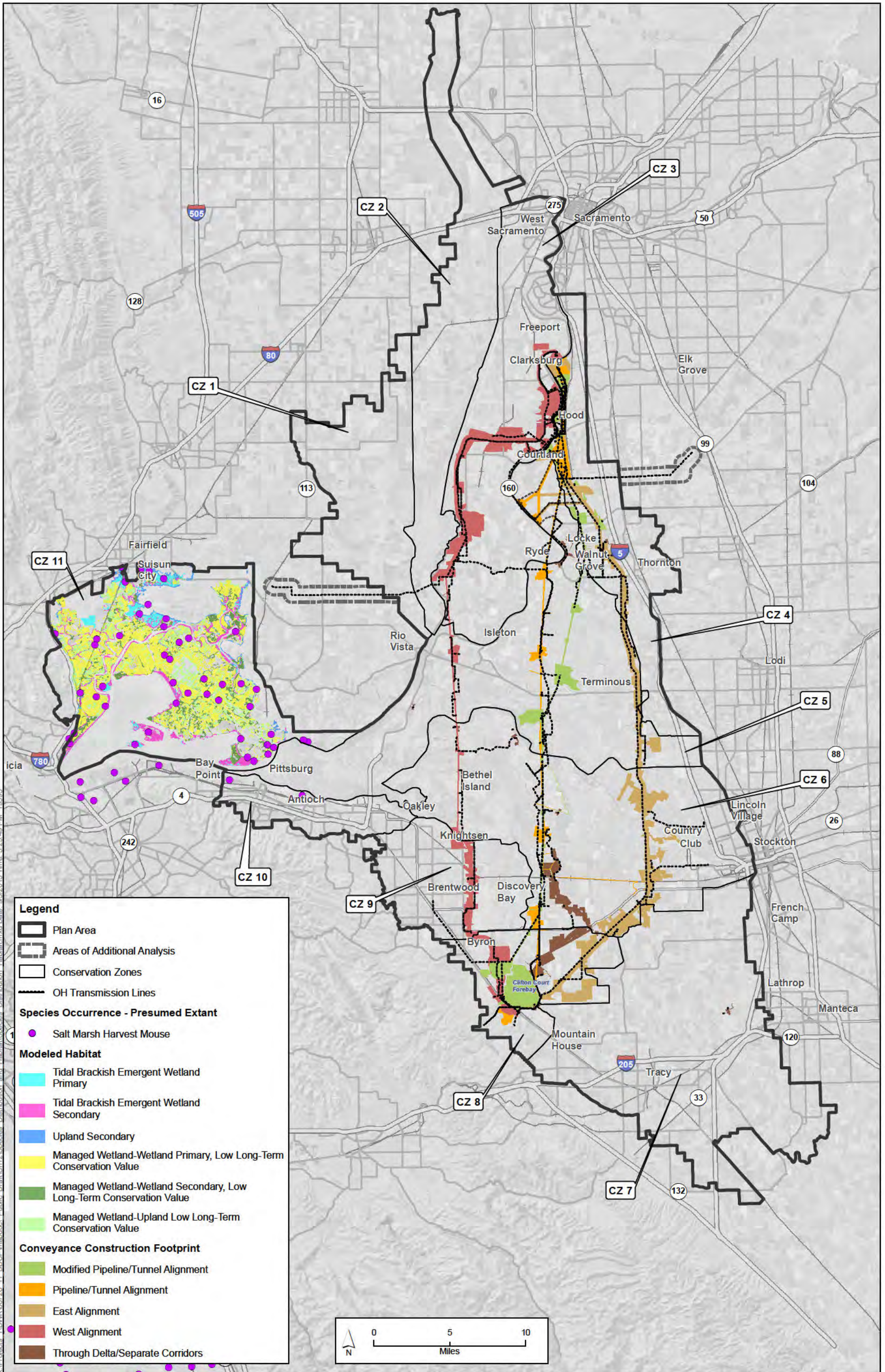
- Plan Area
- Areas of Additional Analysis
- Conservation Zones
- OH Transmission Lines
- Species Occurrence - Presumed Extant**
- Riparian Woodrat
- Modeled Habitat**
- Riparian Woodrat
- Conveyance Construction Footprint**
- Modified Pipeline/Tunnel Alignment
- Pipeline/Tunnel Alignment
- East Alignment
- West Alignment
- Through Delta/Separate Corridors



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

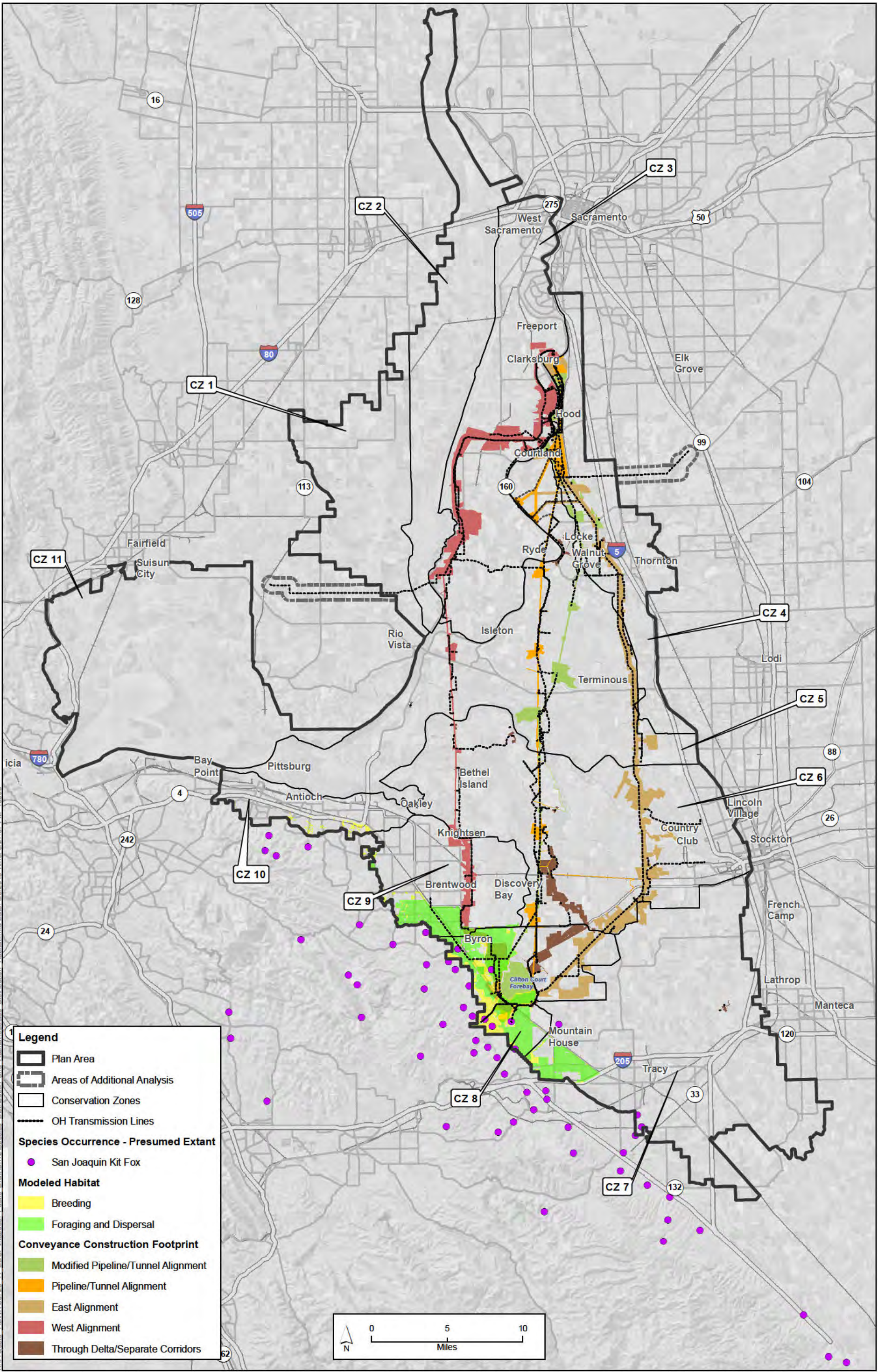
**Figure 12-47**  
Riparian Woodrat Distribution and Habitat in Study Area Vicinity





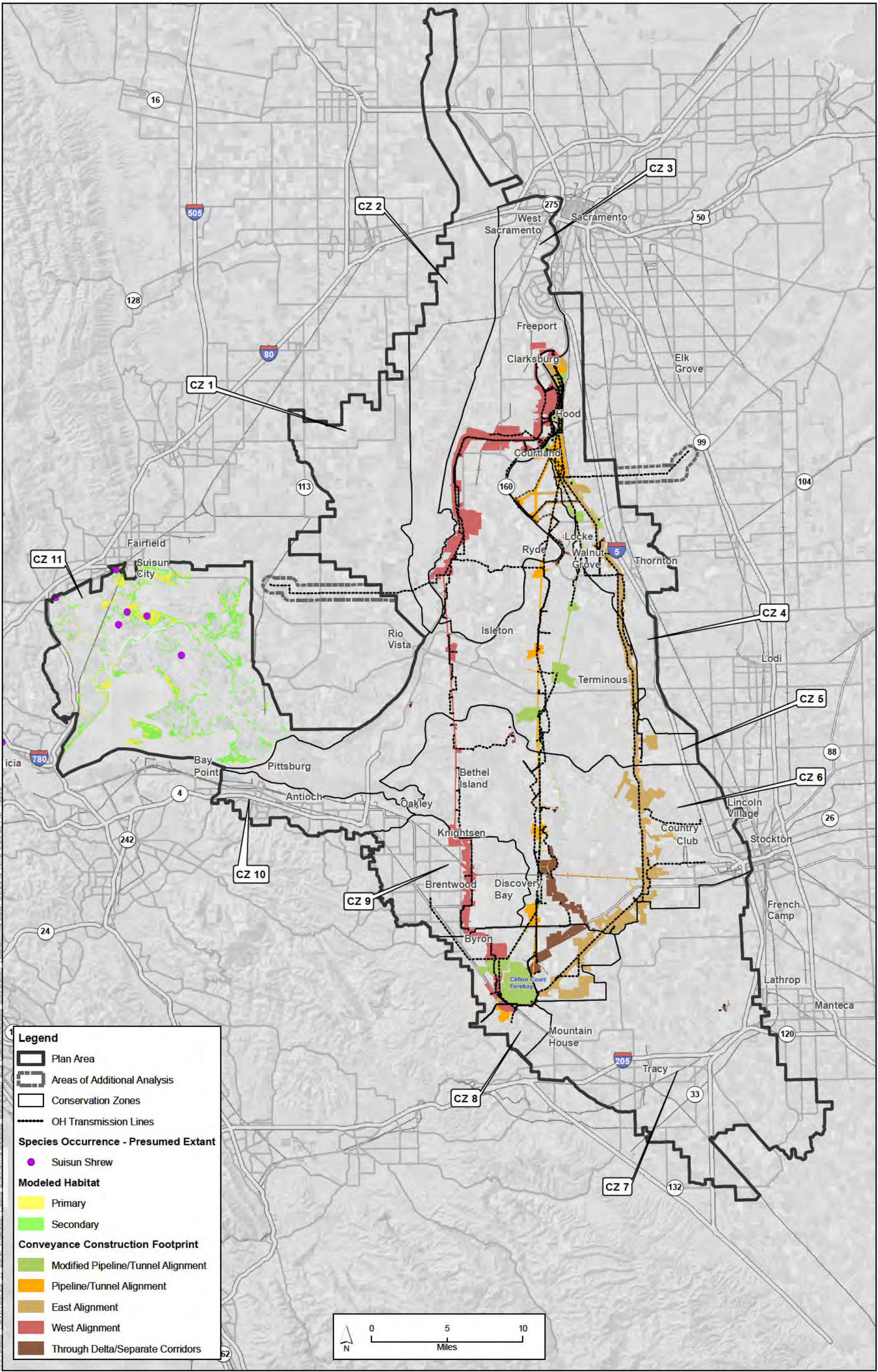
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**Figure 12-48**  
**Salt Marsh Harvest Mouse Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

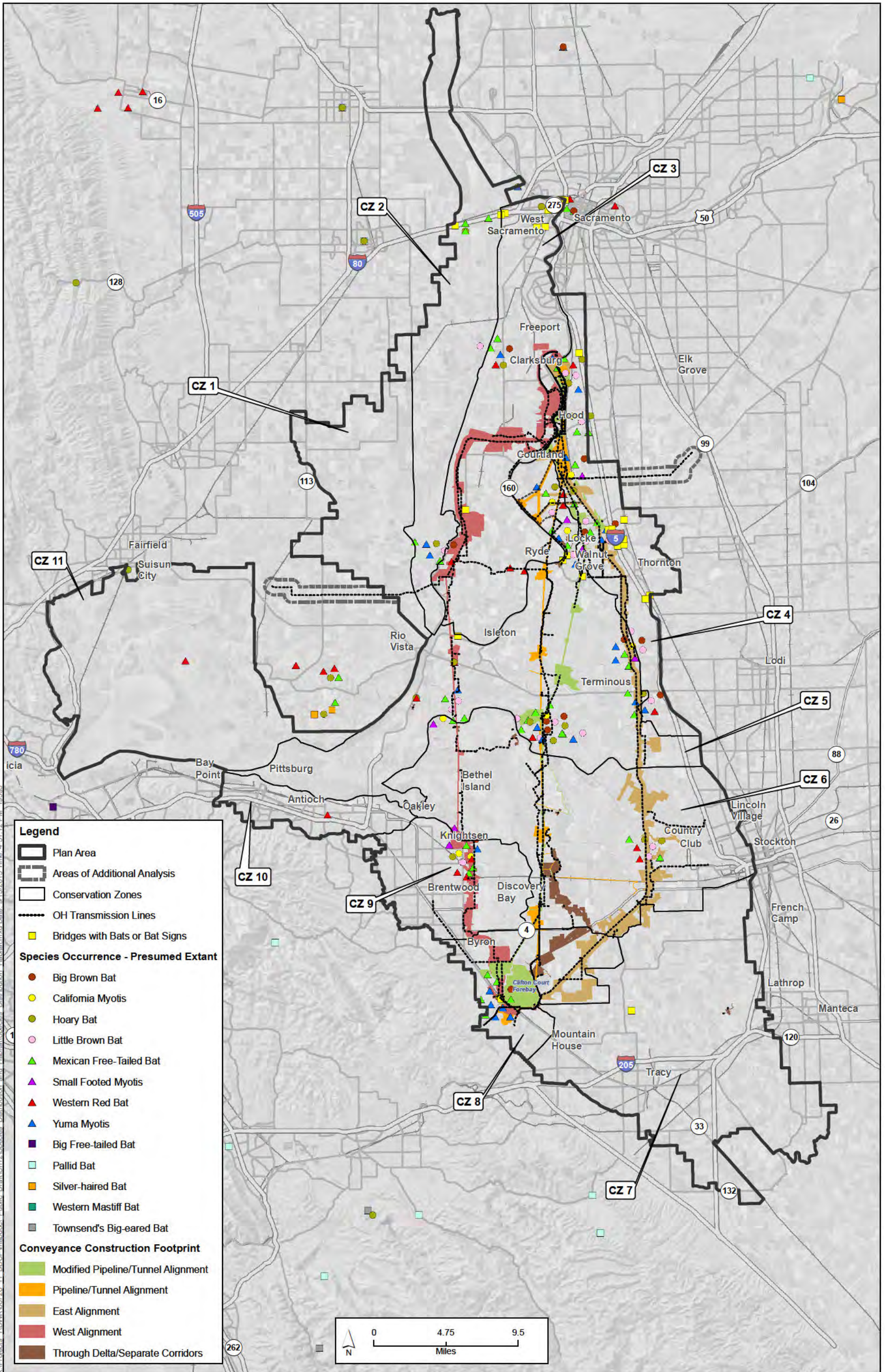
**Figure 12-49**  
**San Joaquin Kit Fox Distribution and Habitat in Study Area Vicinity**



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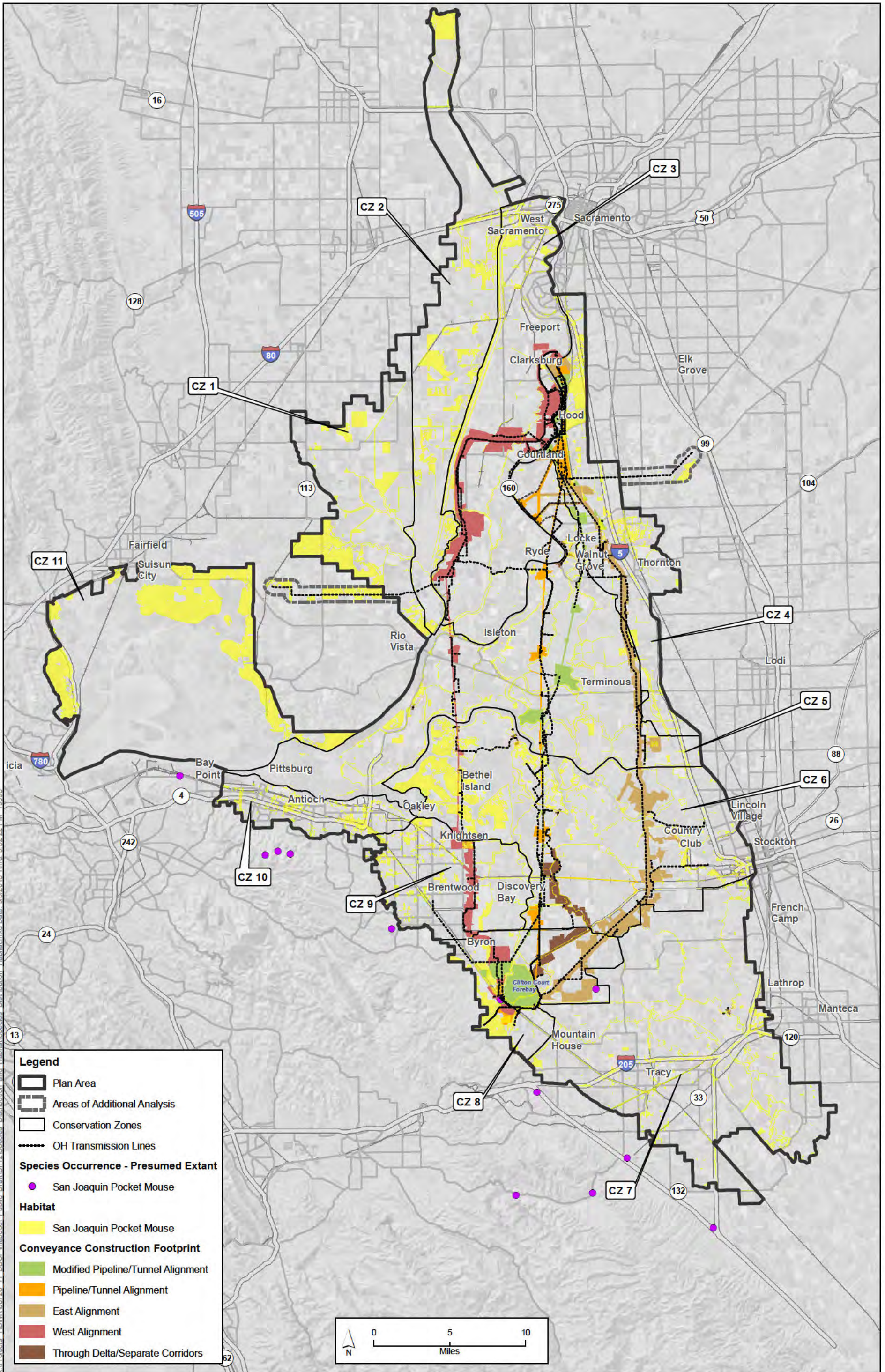
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-50**  
**Suisun Shrew Distribution and Habitat in Study Area Vicinity**



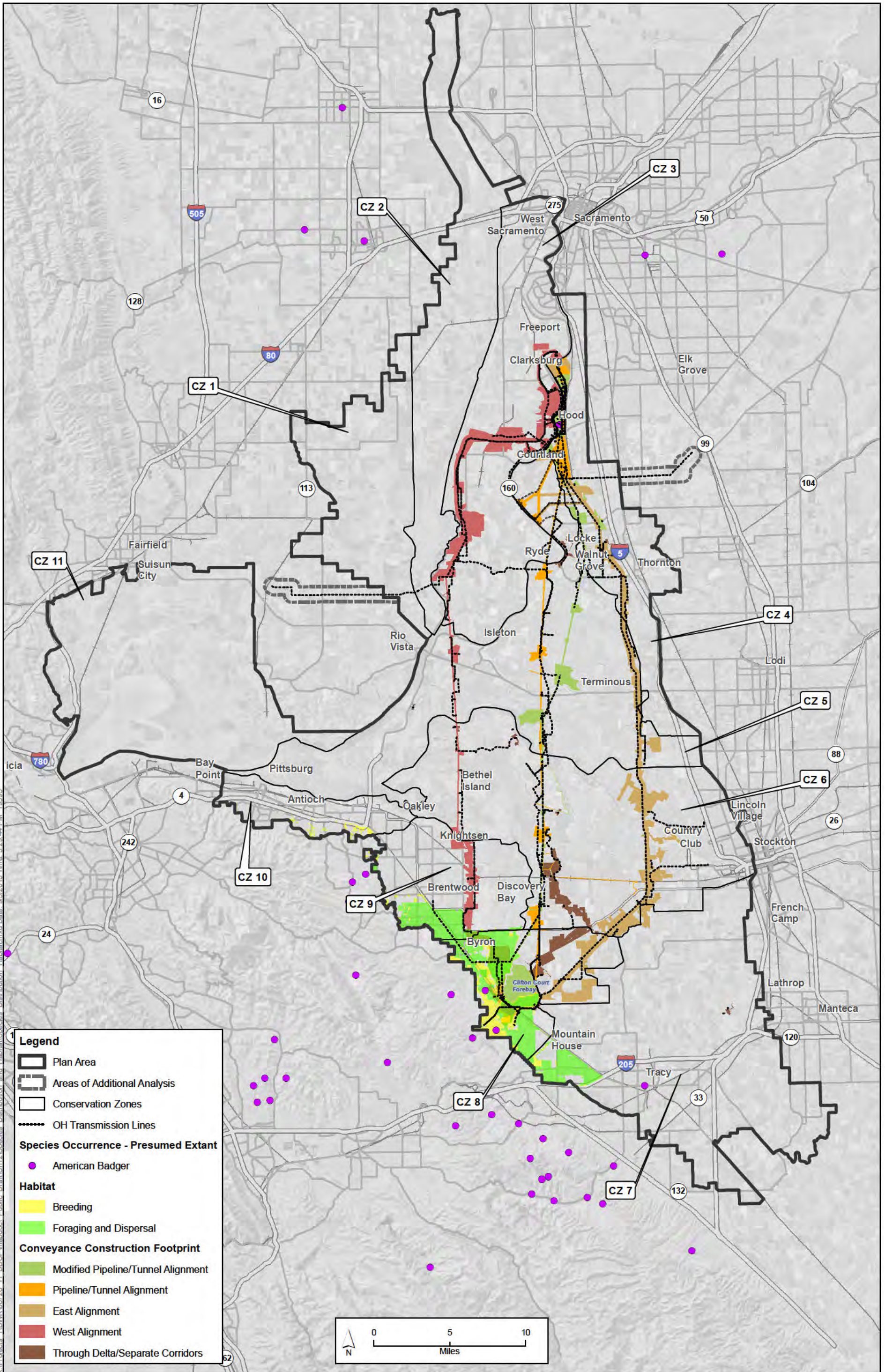
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDB 2013, DHCCP DWR 2011, and ICF 2012; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-51**  
**Special-Status Bat Species Occurrences in Study Area Vicinity**



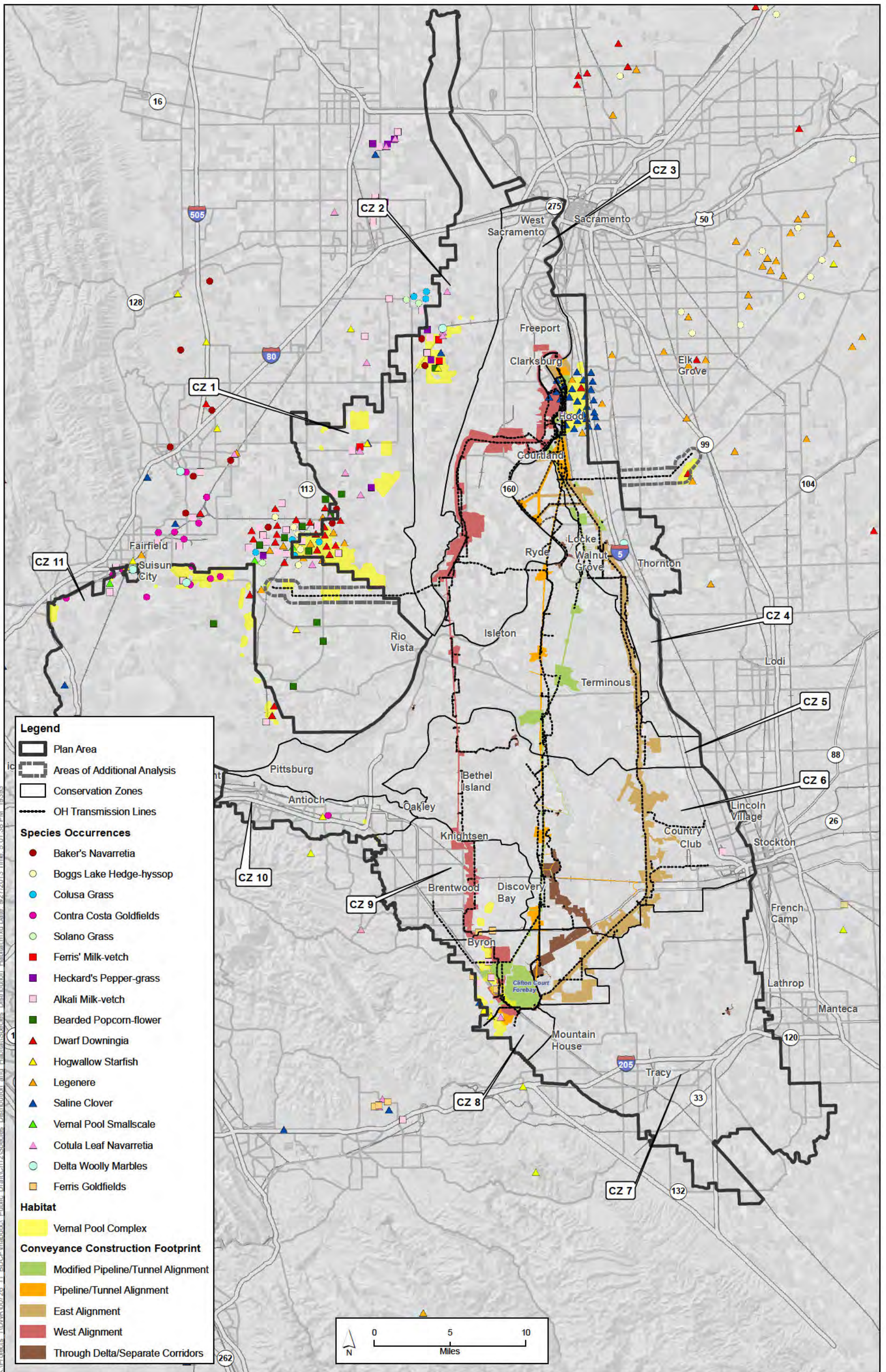
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-52**  
**San Joaquin Pocket Mouse Distribution and Habitat in Study Area Vicinity**



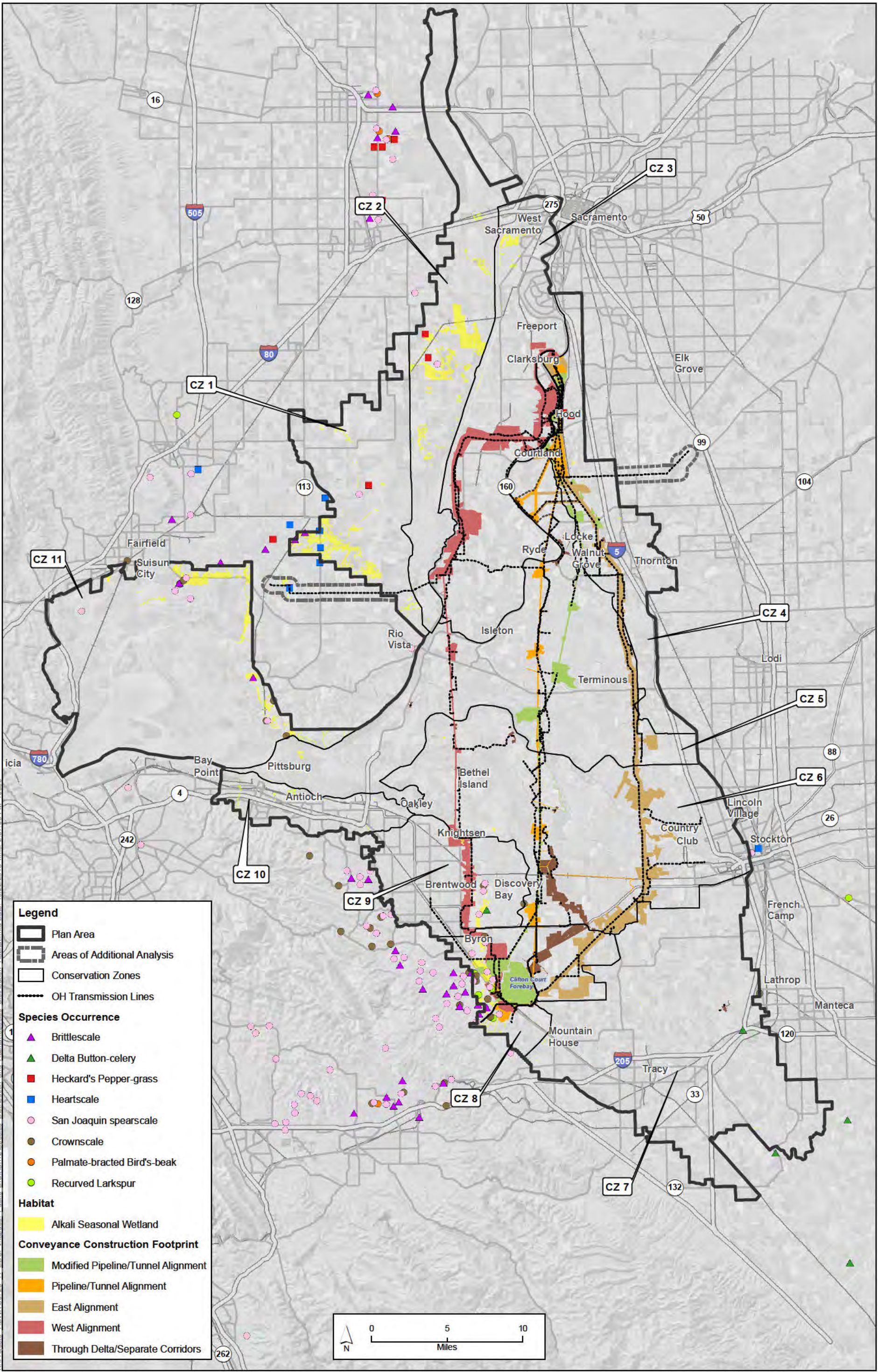
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-53**  
**American Badger Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

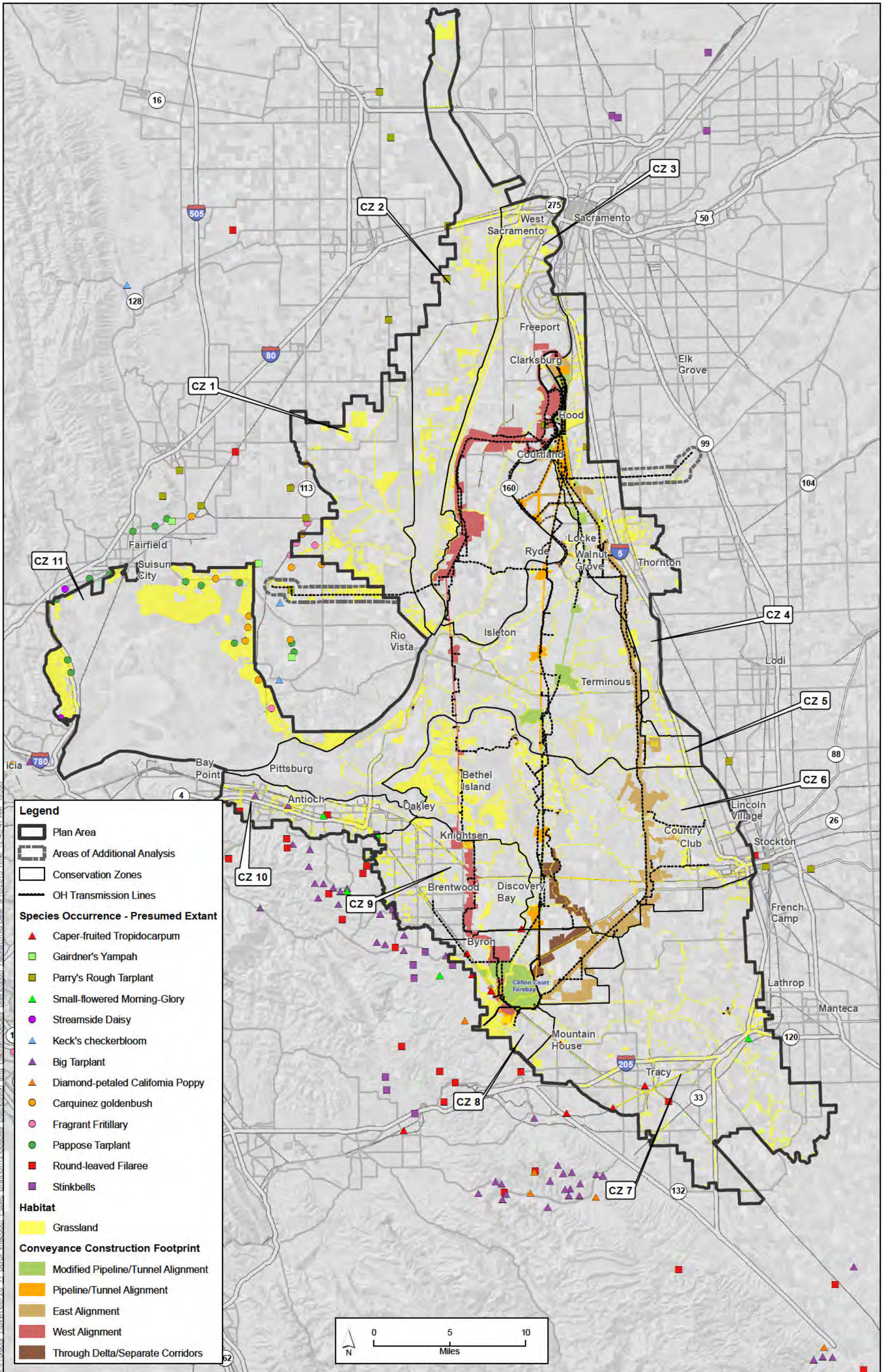
**Figure 12-54**  
**Vernal Pool Complex Botany Species Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-55**  
**Alkali Seasonal Wetland Botany Species Distribution and Habitat in Study Area Vicinity**

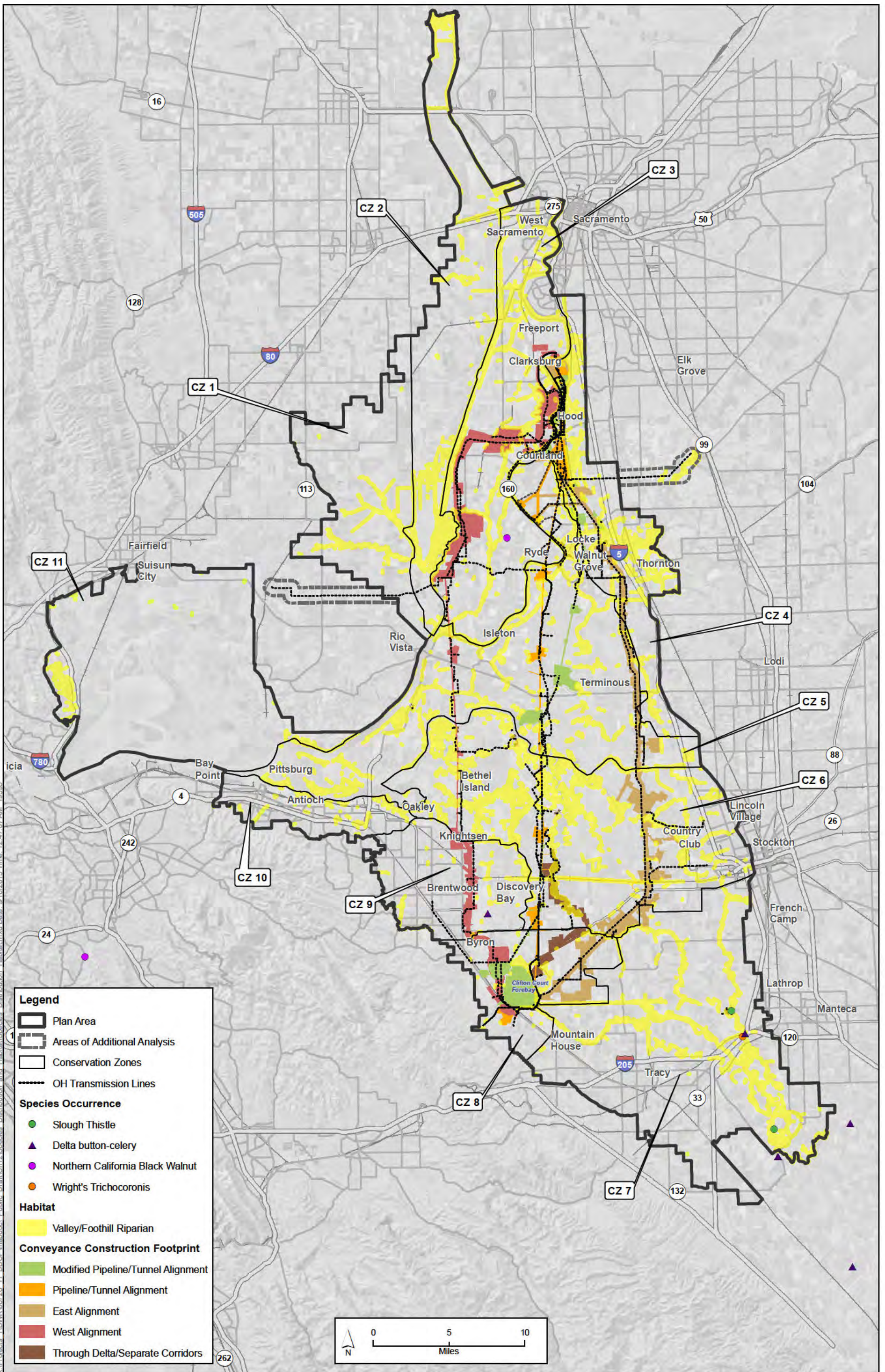




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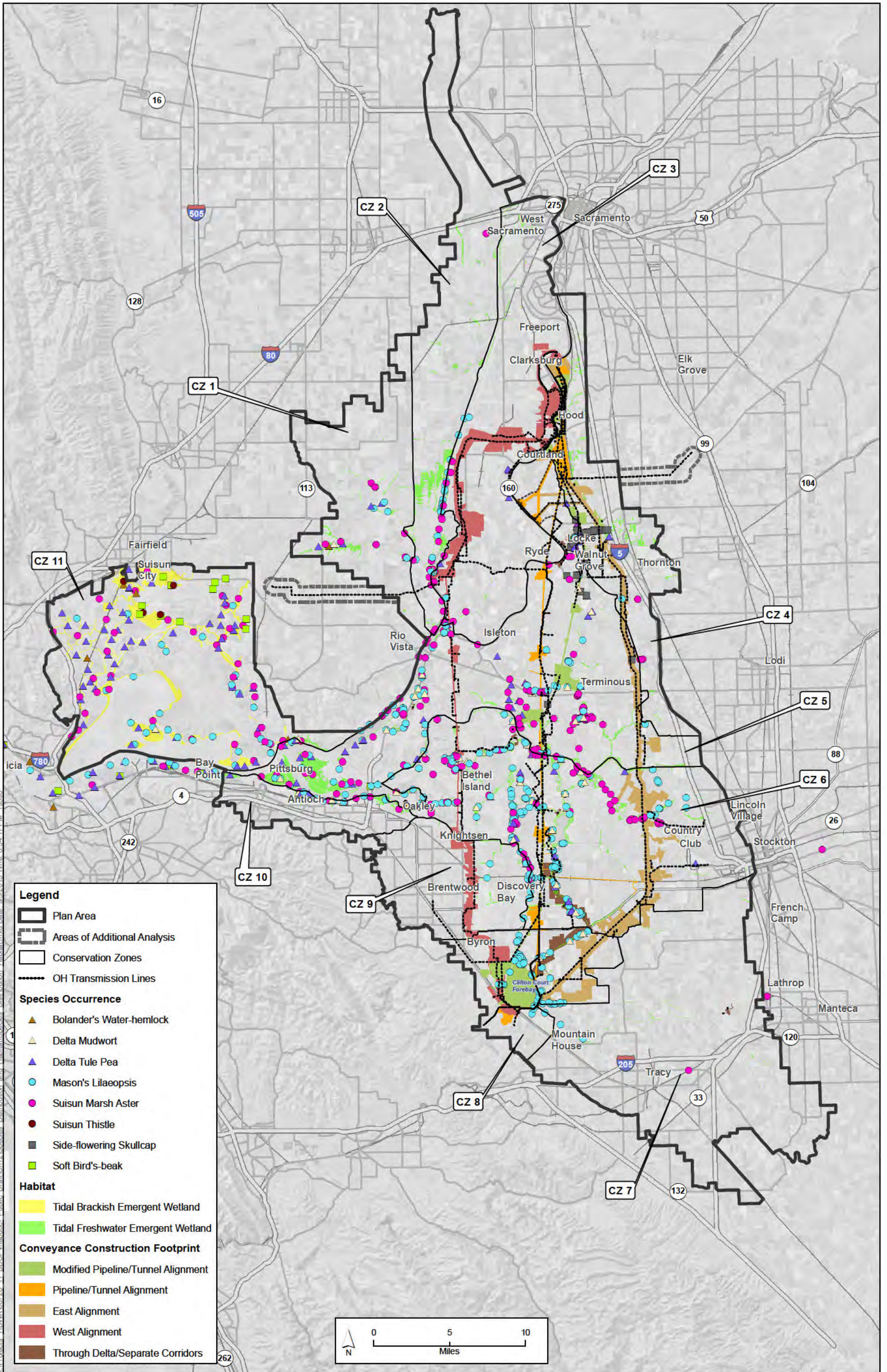
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Modeled Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-56**  
**Grassland Botany Species Distribution and Habitat in Study Area Vicinity**



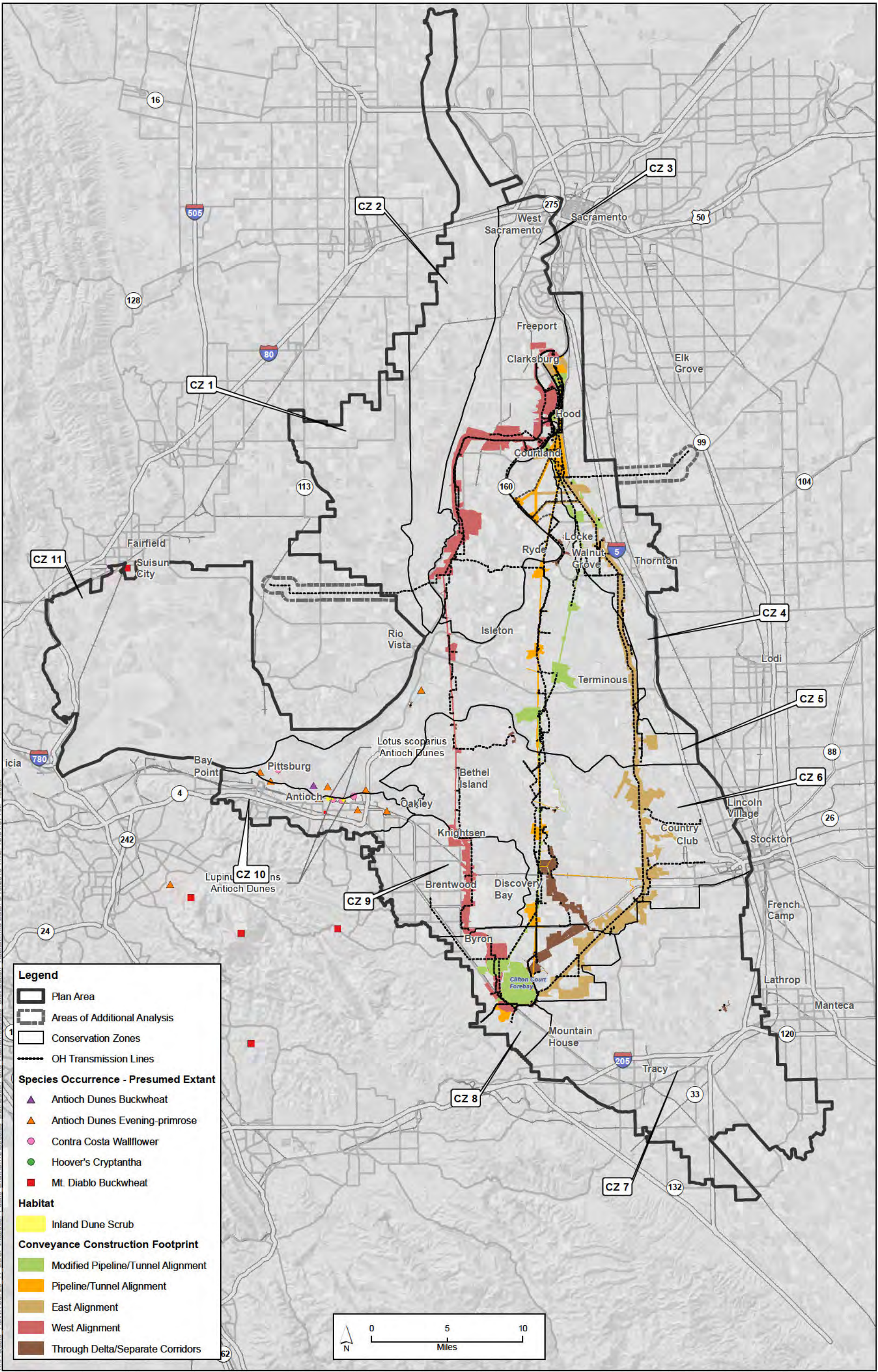
Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-57**  
**Valley/Foothill Riparian Botany Species Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDDB 2013 and DHCCP DWR 2011; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

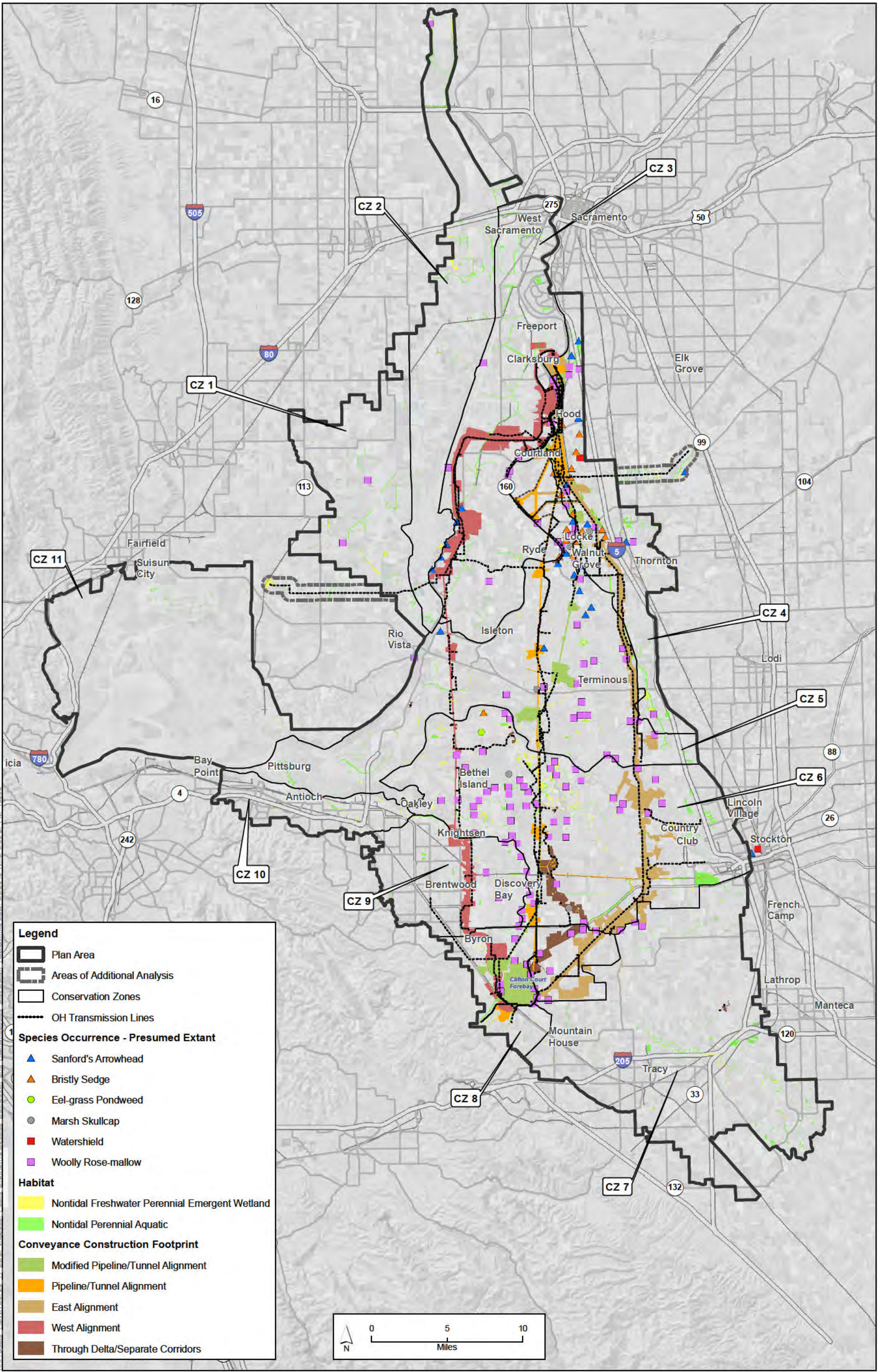
**Figure 12-58**  
**Tidal Wetland Botany Species Distribution and Habitat in Study Area Vicinity**



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Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, CNDDB 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-59**  
**Inland Dune Scrub Botany Species Distribution and Habitat in Study Area Vicinity**



Sources: Plan Area, ICF 2012; Constructability (Rev 10b), DHCCP DWR 2012; Constructability (Rev 3b), DHCCP DWR 2012; Constructability (Rev 2b), DHCCP DWR 2013; Species Occurrences, ICF 2013; Habitat, ICF 2013; Conservation Zones, SAIC 2012.

**Figure 12-60**  
**Nontidal Wetland Botany Species Distribution and Habitat in Study Area Vicinity**