



ADVANCE MITIGATION PROGRAM
Coyote, San Francisco Bay, San Francisco
Coastal South, and Suisun Bay Sub-basins
Regional Advance Mitigation
Needs Assessment
Appendices

Version 1.0

Establishing Caltrans' Need for Advance Mitigation
for the Coyote, San Francisco Bay, San Francisco
Coastal South, and Suisun Bay Sub-basins
forecast fiscal years 2022/23 to 2031/32

California Department of Transportation – District 4

June 2024

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APPENDICES

Appendix A – GIS Sources

Appendix B – Transportation Projects Planned for the GAI during the Planning Period

Appendix C – Historical Ecology

Appendix D – Local Coastal Programs

Appendix E – Land Cover Types

Appendix F – Complete SAMNA Species Results

Appendix G – Hydrologic Units

Appendix H – List of 303(d) Impaired Waters

Appendix I – Aquatic Resource Locations

Appendix J – Conservation and Mitigation Bank Service Areas

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APPENDIX A: GIS SOURCES

This RAMNA relies on maps to convey information. At the bottom of each map figure is a citation that lists the GIS source identification numbers. These source identification numbers refer to Table A-1, where the metadata documentation is provided. When available, the source date and/or website address to access the data layer online are also provided.

Table A-1. District 4 RAMNA GIS Sources

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
1	State Highway Network	Caltrans	8/1/2018	10/11/2018	https://gisdata-caltrans.opendata.arcgis.com/datasets/77f2d7ba94e040a78bfbe36feb6279da_0/about
2	SHOPP	Caltrans	2022/2023 Quarter ("Q") 3	11/13/2023	Caltrans System Planning
3	STIP	California Transportation Commission	2022/2023 Q3	11/13/2023	Caltrans System Planning
4	Ecoregion Section	USFS	1/26/2021	1/26/2021	https://data.fs.usda.gov/geodata/edw/datasets.php?xmlKeyword=Ecomap
5	Watershed Boundary Dataset (GAI)	USGS	9/26/2014	10/19/2018	https://www.usgs.gov/core-science-systems/ngp/national-hydrography
6	County Boundaries	U.S. Census Bureau	10/26/2021	8/31/2023	https://gisdata-caltrans.opendata.arcgis.com/datasets/111030d0d67e49d789080c47d9e4e618_0/about
7	California Conservation Easements	California Protected Areas Database	6/30/2023	1/5/2024	https://www.calands.org/get-data/
8	California Protected Areas Holdings	California Protected Areas Database	6/30/2023	1/5/2024	https://www.calands.org/get-data/
9	Tribal Land Boundaries	Bureau of Indian Affairs	5/16/2017	10/11/2018	https://hub.arcgis.com/items/2e915ef3df48422283e5b2c7d89dfcba
10	U.S. Military Installations	U.S. Census Bureau	11/22/2023	1/12/2024	https://www2.census.gov/geo/tiger/TIGER2023/MIL/
11	Farmland Mapping & Monitoring Program (2018)	California Department of Conservation	9/22/2023	1/12/2024	https://gis.conservation.ca.gov/portal/home/group.html?id=b1494c705cb34d01acf78f4927a75b8f#overview

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
12	ACE Climate Resilience – ACE [ds2738]	CDFW	2/22/2018	10/17/2018	https://map.dfg.ca.gov/metadata/ds2738.html?5.66.18
13	Vegetation D04/D05 in Caltrans District 4 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of Fiscal Year (“FY”) 2022/2023	SAMNA	1/1/2017	11/13/2023	https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation
14	Waters and Wetlands D04/D05 in Caltrans District 4 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2022/2023	SAMNA	1/1/2017	11/13/2023	https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation
15	FWS Critical Habitat	FWS	12/9/2022	1/5/2023	https://ecos.fws.gov/ecp/report/table/critical-habitat.html
16	Essential Connectivity Areas – CEHC	CDFW	1/1/2014	10/17/2018	https://map.dfg.ca.gov/metadata/ds0620.html?5.66.18
17	Natural Landscape Blocks – CEHC	CDFW	10/1/2017	10/17/2018	https://map.dfg.ca.gov/metadata/ds0621.html?5.66.18
18	Potential Riparian Connections – CEHC	CDFW	3/1/2010	10/17/2018	https://map.dfg.ca.gov/metadata/ds0622.html?5.66.18
19	National Flood Hazard Layer	Federal Emergency Management Agency	12/7/2021	12/7/2021	https://www.fema.gov/national-flood-hazard-layer-nfhl
20	CalWater Hydrologic Areas	California Department of Forestry and Fire Protection	11/1/2016	10/19/2018	https://frap.fire.ca.gov/mapping/gis-data/
21	Coastal Zone, Local Coastal Program	CCC	12/15/2021	12/12/2023	https://www.coastal.ca.gov/maps/czb/ ; https://www.coastal.ca.gov/maps/lcp/

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
22	Terrestrial Connectivity – ACE [ds2734]	CDFW	8/28/2019	9/25/2019	https://map.dfg.ca.gov/metadata/ds2734.html?5.80.28l
23	SWAP Terrestrial Targets – 2015	CDFW	2/1/2018	10/29/2018	https://map.dfg.ca.gov/metadata/ds1966.html?5.66.18
24	Aquatic Biodiversity Summary – ACE [ds2768]	CDFW	2/22/2018	7/3/2019	https://map.dfg.ca.gov/metadata/ds2768.html?5.80.28l
25	CalFish Passage Assessment Database (“PAD”)	CalFish	10/3/2019	12/15/2019	https://map.dfg.ca.gov/metadata/ds0069.html?5.84.18vo
26	Terrestrial Biodiversity Summary – ACE [ds2739]	CDFW	2/24/2020	7/3/2019	https://map.dfg.ca.gov/metadata/ds2739.html?5.80.28l
27	Corps Regulatory In-lieu Fee & Bank Information Tracking System	Mitigation Service Banks	Not available	1/28/2019	https://ribits.ops.usace.army.mil/ords/f?p=107:2.....
28	CDFW Approved Mitigation Service Areas	Mitigation Service Banks	7/23/2018	1/28/2019	https://map.dfg.ca.gov/metadata/ds2782.html?5.76.22
29	National Hydrology Dataset Plus (“NHDPlus”)	EPA	3/13/2019	4/29/2021	https://www.epa.gov/waterdata/get-nhdplus-national-hydrography-dataset-plus-data
30	Fire Hazard Severity Zones in State Responsibility Area	California Department of Forestry and Fire Protection	11/1/2007	6/1/2022	https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/
31	Vernal Pools – ACE [ds2732]	CDFW	2/13/2020	1/29/2021	https://map.dfg.ca.gov/metadata/ds2732.html?5.94.01
32	Regional Conservation Investment Strategies Draft Boundaries	CDFW	6/21/2022	6/21/2022	https://wildlife.ca.gov/Conservation/Planning/Regional-Conservation/RCIS
33	Conservation Plan Boundaries, HCP and NCCP	CDFW	8/27/2021	9/1/2023	https://map.dfg.ca.gov/metadata/ds0760.html?5.80.28l

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
34	Critical Habitat – Maps and GIS Data (West Coast Region)	NOAA Fisheries	12/21/2021	4/4/2022	https://www.fisheries.noaa.gov/resource/map/critical-habitat-maps-and-gis-data-west-coast-region
35	Essential Fish Habitat – Habitat Areas of Particular Concern (HAPCs)	NOAA Fisheries	3/10/2021	5/25/2022	https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper
36	Areas of Special Biological Significance	SWRCB	1/1/2005	10/15/2020	https://www.waterboards.ca.gov/water_issues/programs/ocean/asbs_map.shtml
37	Linkage Design for the California Bay Area Linkage Network [ds852]	Science & Collaboration for Connected Wildlands	4/23/2014	1/25/2022	https://map.dfg.ca.gov/metadata/ds0852.html
38	Landscape Blocks for the California Bay Area Linkage Network [ds853]	Science & Collaboration for Connected Wildlands	4/23/2014	1/25/2022	https://map.dfg.ca.gov/metadata/ds0853.html
39	Key Riparian Corridors for the California Bay Area Linkage Network	Science & Collaboration for Connected Wildlands	4/23/2014	2/18/2019	https://www.bayarealands.org/maps-data/
40	Critical Coastal Areas	CCC	11/27/2023	12/12/2023	https://www.coastal.ca.gov/water-quality/critical-coastal-areas/
41	Wildlife Movement Barriers [ds2867]	CDFW	10/5/2022	2/27/2024	https://map.dfg.ca.gov/metadata/DS2867.html
42	303(d) List of Impaired Waterbodies	SWRCB	6/9/2021	5/13/2022	https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html
43	ZIP Codes	U.S. Postal Service	2/11/2020	3/11/2020	https://www.arcgis.com/home/item.html?id=8d2012a2016e484dafaac0451f9aea24

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APPENDIX B: TRANSPORTATION PROJECTS PLANNED FOR THE GAI DURING THE PLANNING PERIOD

To identify the list of SHOPP projects planned for the GAI, Caltrans consulted the SHOPP Ten-Year Book for fiscal years 2022/23 to 2031/32 (Caltrans 2023). The intent of the SHOPP Ten-Year Book is to raise awareness of planned future transportation projects, and detailed transportation project information is not provided. The SHOPP Ten-Year Book includes 27 SHOPP transportation projects within the GAI that are currently in the planning and conceptual phases (Table B-1).

Each transportation project's potential impact was defined using a buffer from the edge of pavement. Different buffer widths were used depending on the transportation project's activity or activities, since many transportation projects consist of multiple activities. Most of the planned activities are to replace/install culverts. See Table 1 of Caltrans (2023) for the range of buffers relevant to the transportation projects listed in the SHOPP Ten-Year Book. Many transportation projects include multiple activities.

The subset of the Caltrans District 4 transportation projects that are planned within the GAI during the planning period covered by this RAMNA, as well as the HUC-8 and ecoregion section, advertised year, and planned activities for each planned transportation project, are listed in Table B-1.

References

Caltrans (California Department of Transportation). 2023. *State Highway Operation and Protection Program Ten-Year Project Book Fiscal Years 2022/23–2031/32*. State Highway Operation and Protection Program Fiscal Year 2022/2023 (Quarter 2). In process. Sacramento, California.

Table B-1. SHOPP Transportation Projects Planned within the GAI and Planning Period

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route ^a	Begin Mile ^a	End Mile ^a	Activity
13827	San Francisco Bay	Central California Coast	2025/26	4	Alameda	84	13.09	13.5	Protective Betterments
17369	San Francisco Bay	Central California Coast	2022/23	4	Alameda	880	27.1	27.3	Reactive Safety
18505	San Francisco Bay	Central California Coast	2023/24	4	Alameda	580	R41.4	44.5	Bridge
18510	San Francisco Bay	Central California Coast	2023/24	4	Alameda	13	7.9	7.91	Bridge
21089	San Francisco Bay	Central California Coast	2022/23	4	Alameda	238	0.74	M0.125	Mobility – Americans with Disabilities Act (“ADA”)
22655	San Francisco Bay	Central California Coast	2026/27	4	Alameda	13	7.4	9.1	Bridge
9239	San Francisco Bay	Central Valley Coast Ranges	2023/24	4	Alameda	84	17	17.4	Bridge
22035	Suisun Bay	Northern California Coast	2029/30	4	Napa	121	13.2	22	Drainage
17844	San Francisco Bay	Central California Coast	2023/24	4	San Francisco	280	R0.0	T7.5	Pavement
19051	San Francisco Bay	Central California Coast	2023/24	4	San Francisco	101	3.37	3.37	Proactive Safety
9356	Coyote	Central California Coast	2022/23	4	San Mateo	82	11.38	26.36	Proactive Safety
11358	Coyote	Central California Coast	2028/29	4	San Mateo	84	19.89	19.89	Bridge
22029	Coyote	Central California Coast	2028/29	4	San Mateo	35	2.2	29	Drainage

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route ^a	Begin Mile ^a	End Mile ^a	Activity
9356	San Francisco Bay	Central California Coast	2022/23	4	San Mateo	82	11.38	26.36	Proactive Safety
13297	San Francisco Bay	Central California Coast	2023/24	4	San Mateo	82	9.35	9.35	Proactive Safety
22029	San Francisco Bay	Central California Coast	2028/29	4	San Mateo	35	2.2	29	Drainage
22033	San Francisco Bay	Central California Coast	2028/29	4	San Mateo	84	4.1	R29.3	Drainage
11357	San Francisco Coastal South	Central California Coast	2025/26	4	San Mateo	1	17.9	18	Bridge
13752	San Francisco Coastal South	Central California Coast	2022/23	4	San Mateo	9	8.5	25.5	Sustainability/ Climate Change
18669	San Francisco Coastal South	Central California Coast	2023/24	4	San Mateo	1	27.5	34.8	Pavement
19077	San Francisco Coastal South	Central California Coast	2029/30	4	San Mateo	1	R43.46	R45.12	Proactive Safety
22027	San Francisco Coastal South	Central California Coast	2029/30	4	San Mateo	1	3.8	4.8	Drainage
22029	San Francisco Coastal South	Central California Coast	2028/29	4	San Mateo	35	2.2	29	Drainage
22033	San Francisco Coastal South	Central California Coast	2028/29	4	San Mateo	84	4.1	R29.3	Drainage
23462	San Francisco Coastal South	Central California Coast	2029/30	4	San Mateo	1	0	30	Drainage
9356	Coyote	Central California Coast	2022/23	4	Santa Clara	82	11.38	26.36	Proactive Safety

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route ^a	Begin Mile ^a	End Mile ^a	Activity
14169	Coyote	Central California Coast	2023/24	4	Santa Clara	17	6.16	6.55	Proactive Safety
18584	Coyote	Central California Coast	2022/23	4	Santa Clara	880	1.73	1.8	Proactive Safety
22046	Coyote	Central California Coast	2028/29	4, 5	Santa Clara	35	8	17	Drainage
22050	Coyote	Central California Coast	2030/31	4	Santa Clara	280	12.1	20.6	Drainage
22481	Coyote	Central California Coast	2029/30	4	Santa Clara	9	3.6	6.73	Proactive Safety
22046	Coyote	Central California Coast	2028/29	5	Santa Cruz	35	8	17	Drainage
13752	San Francisco Coastal South	Central California Coast	2022/23	5	Santa Cruz	9	8.5	25.5	Sustainability/ Climate Change
22046	San Francisco Coastal South	Central California Coast	2028/29	5	Santa Cruz	35	8	17	Drainage
23034	Suisun Bay	Central California Coast, Great Valley	2027/28	4	Solano	680	R0.0R	13.126	Pavement

Source: Caltrans 2023

^a Routes and begin and end postmiles are representative of the project and are not necessarily associated with the county, ecoregion, or HUC-8 specified in the table row.

APPENDIX C: HISTORICAL ECOLOGY

A practical understanding of terrestrial, fluvial, riparian, and wetland resources prior to significant Euro-American modification can improve restoration outcomes associated with mitigation actions. For example, when restoring habitat, it can be beneficial to determine whether a particular habitat type is underrepresented and to prioritize its restoration. This can be facilitated by estimating the historic habitat distribution in the area.

In the GAI, the San Francisco Estuary Institute has prepared historical ecological datasets for four areas (Figure C-1). Zoomed-in maps of historical springs, creeks, fluvial channels, intertidal channels, and habitat types within each of these datasets are provided in Figure C-2 (Alameda Creek), Figure C-3 (East Contra Costa County), Figure C-4 (Lower Walnut Creek), and Figure C-5 (Santa Clara Valley).

References

- Salomon, M., R. M. Grossinger, R. Askevold, E. E. Beller, and A. Whipple. 2011. Santa Clara Valley Historical Ecology GIS Data. San Francisco Estuary Institute: Richmond, California.
- San Francisco Estuary Institute. 2016. Lower Walnut Creek Historical Ecology GIS Data. San Francisco Estuary Institute: Richmond, California.
- Stanford, Bronwen, Robin Grossinger, R.A. Askevold, Alison Whipple, Robert Leidy, Erin Beller, Micha Salomon, and C.J. Striplen. 2011. *East Contra Costa County Historical Ecology Study*. San Francisco Estuary Institute: Richmond, California.
- Stanford, B., R. M. Grossinger, J. Beagle, R. A. Askevold, R. A. Leidy, E. Beller, M. Salomon, C.J. Striplen, A. Whipple. 2013. *Alameda Creek Watershed Historical Ecology Study*. San Francisco Estuary Institute: Richmond, California.

Figure C-1. Historical Ecology Datasets within the GAI

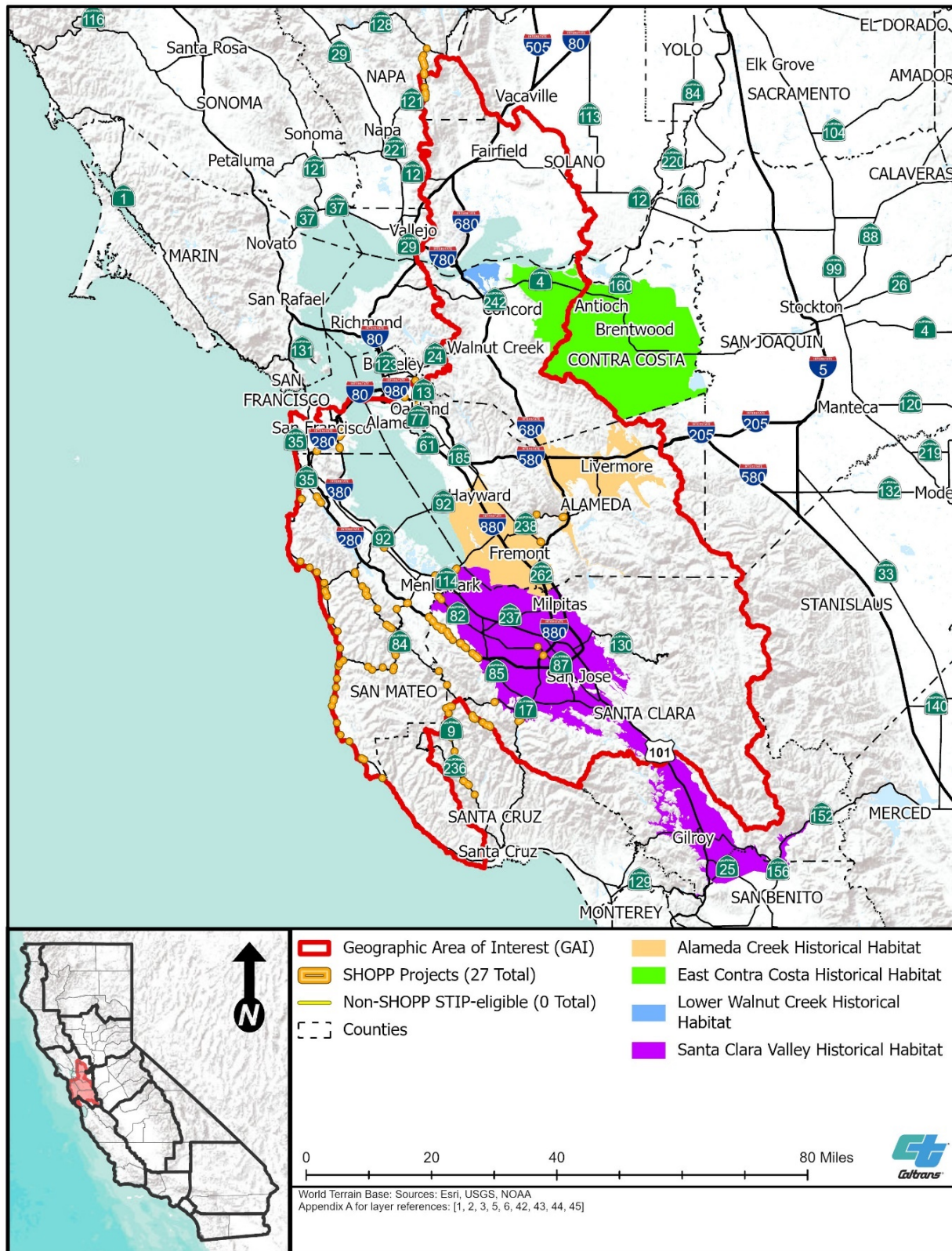


Figure C-2. Alameda Creek Historical Habitat

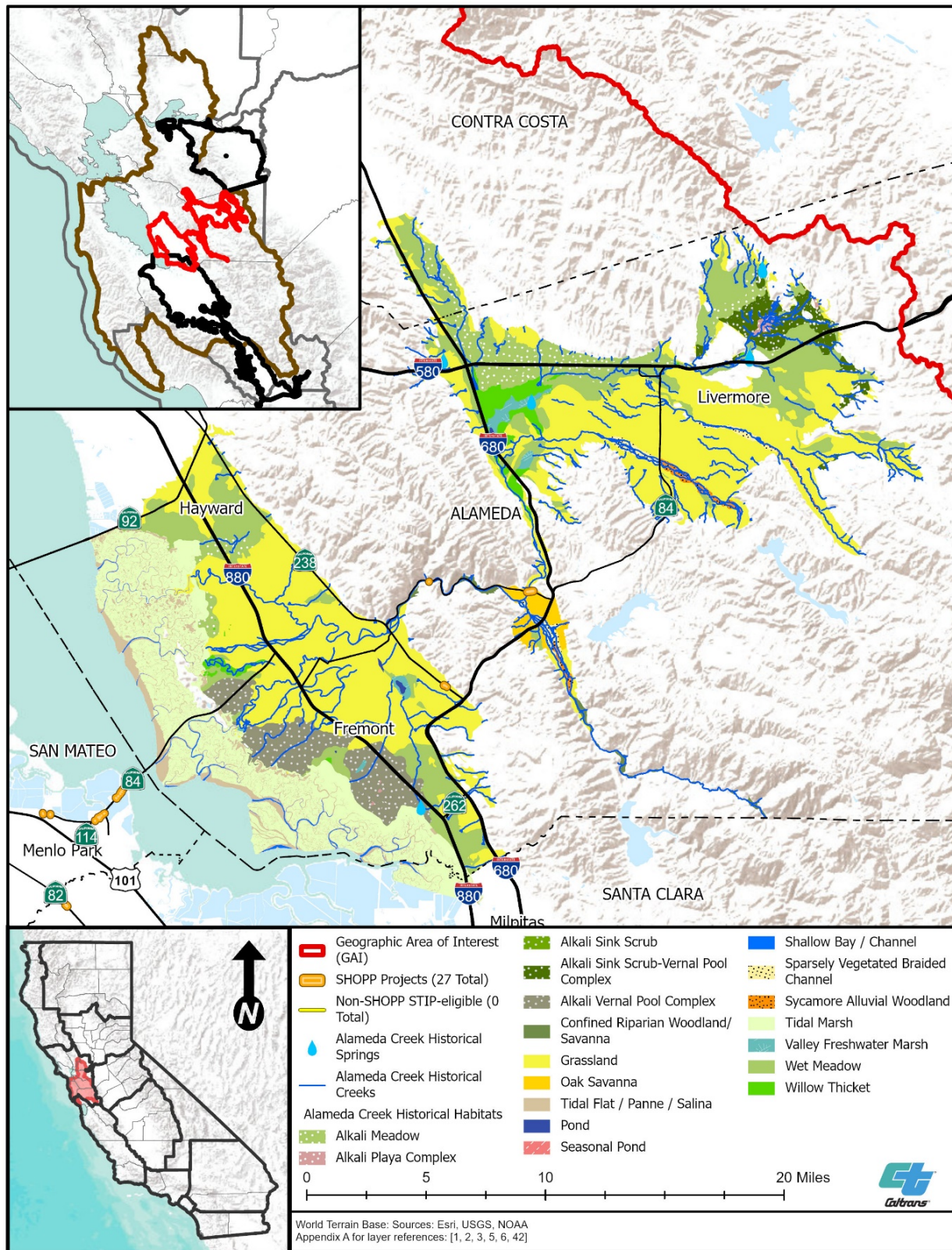


Figure C-3. East Contra Costa Historical Habitat

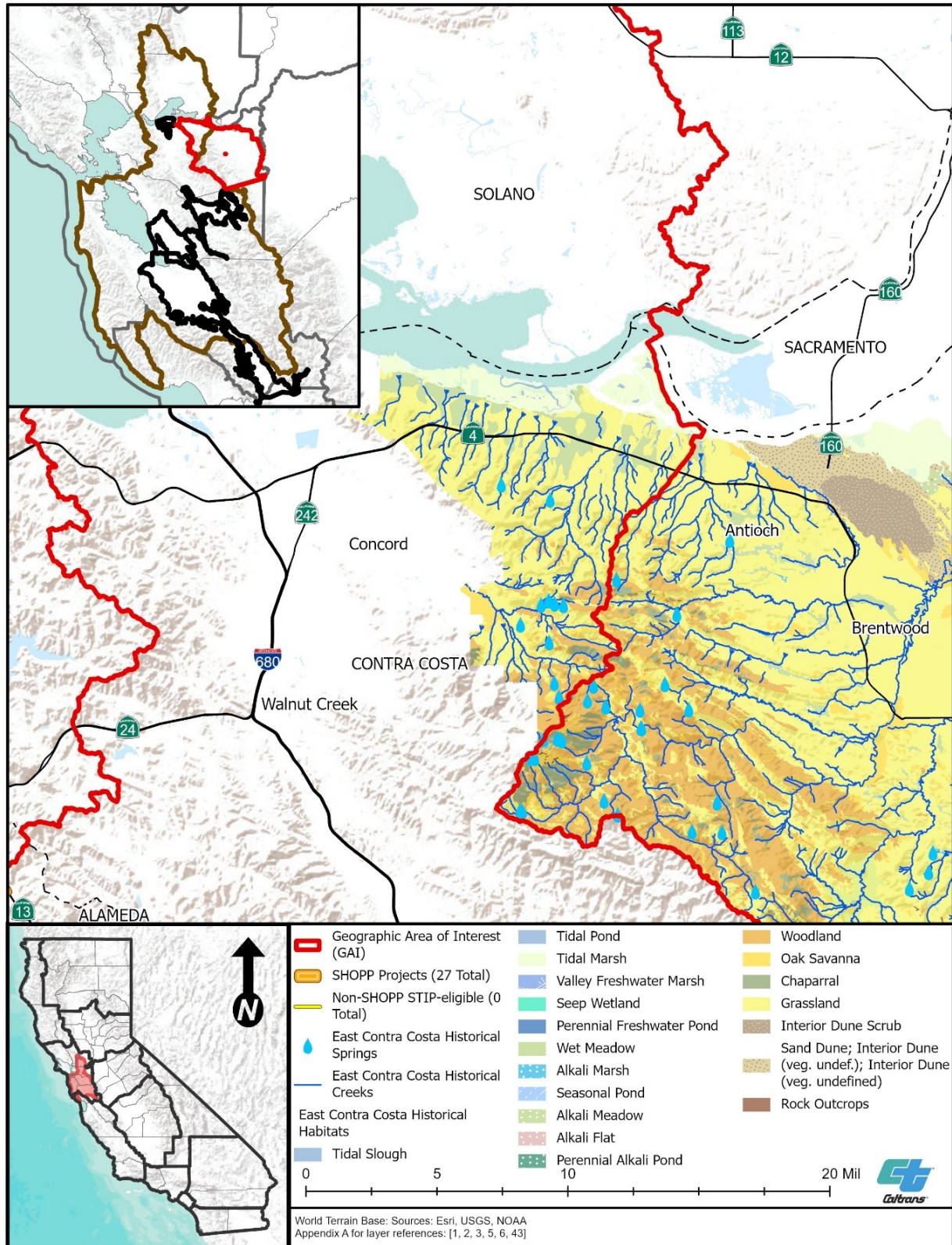


Figure C-4. Lower Walnut Creek Historical Habitat

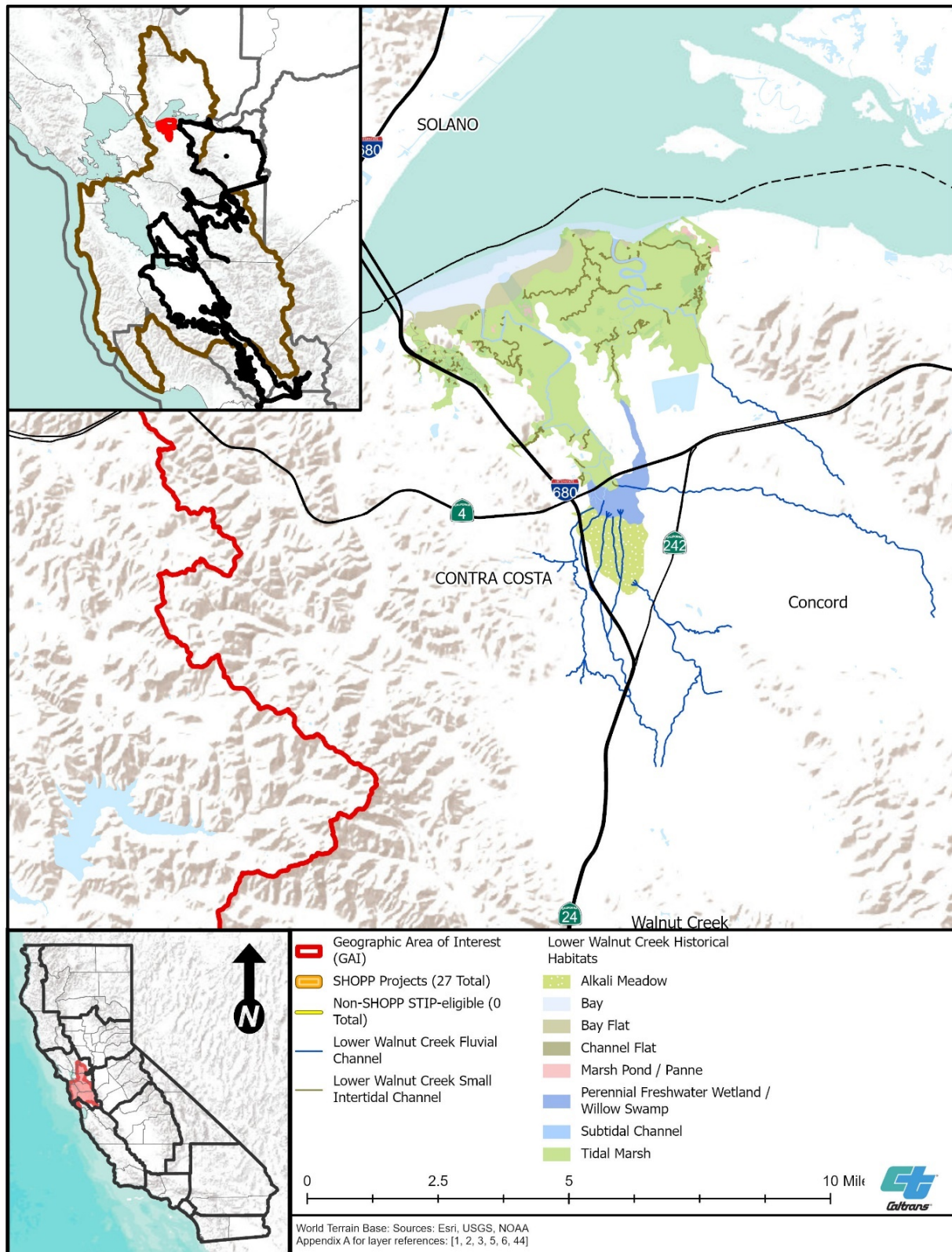
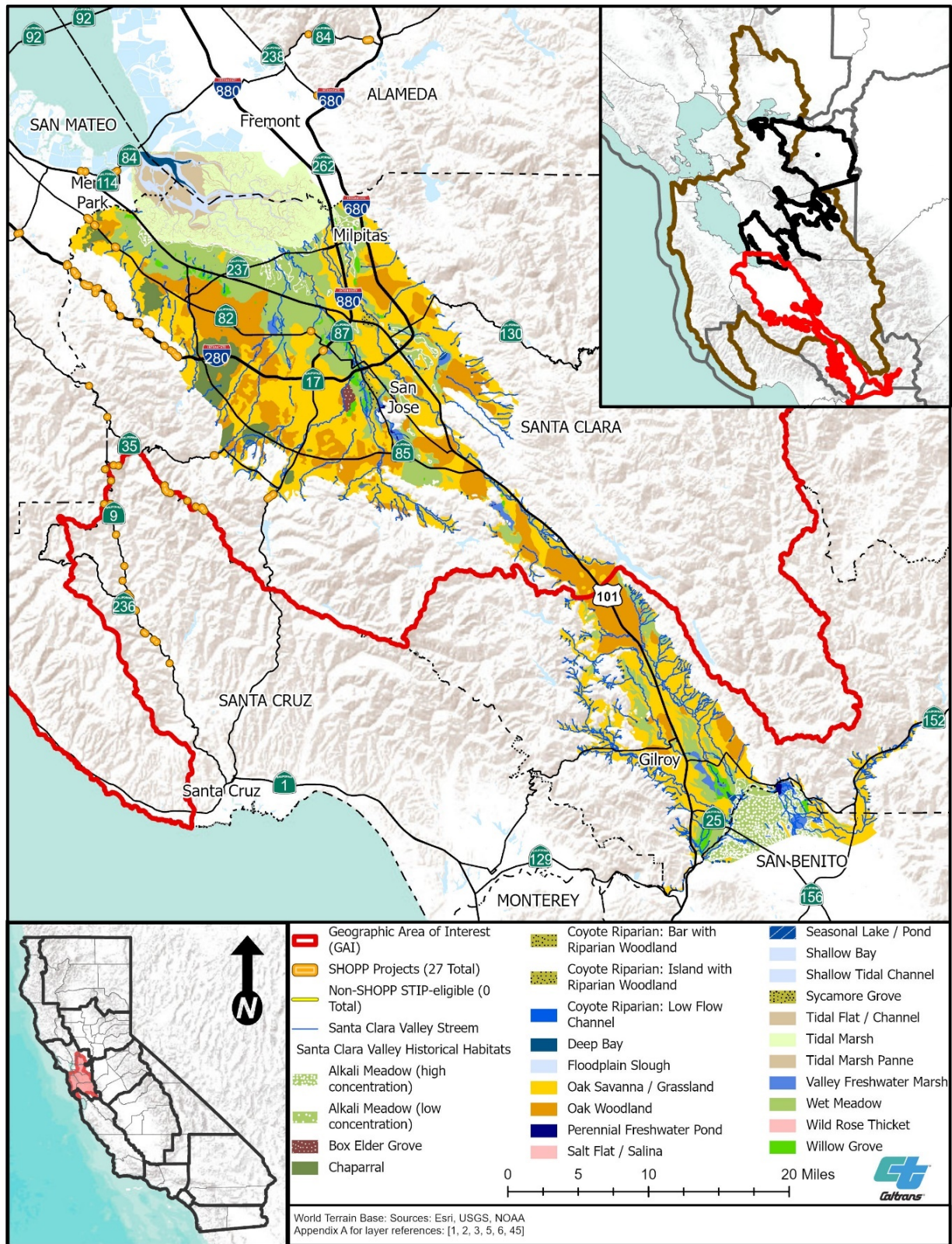


Figure C-5. Santa Clara Valley Historical Habitat



APPENDIX D: LOCAL COASTAL PROGRAMS

The Coastal Act allows any local government to develop an LCP, which is a planning and regulatory tool used to guide and permit development¹ in a local government's coastal zone. LCPs contain policies that determine the use and conservation of coastal resources by specifying the appropriate location, type, and scale of development. An LCP generally consists of one or more LUPs and implementation plans. LCP jurisdictions and associated LCP plans within the GAI are listed by HUC-8 in Table C-1. All LCPs within the GAI are within the San Francisco Coastal South sub-basin. Certified LCPs were excerpted from the CCC's LCP areas maps by county (CCC 2019). A key map is provided after Table D-1 that references mapbook pages. These zoomed-in mapbook pages include LCP areas, segments, areas of deferred certification ("ADCs"), and other uncertified areas ("UAs") within the coastal zone within the GAI. LCPs also address some specific aquatic resources in the coastal zone. Locations of aquatic resources, excerpted from the SAMNA Reporting Tool's water and wetland layers, are shown by HUC-8 sub-basin in Appendix H, *Aquatic Resource Locations* (Caltrans 2023a, 2023b).

LCPs convey some general restoration/conservation goals, but they do not necessarily reflect current priorities or targeted goals and should not be interpreted as a conclusive guide to CCC's or a local government's conservation goals and objectives. However, LCPs include relevant information to consider while scoping and planning an advance mitigation project, including:

- Conservation and restoration policies
- Any specific areas that have been prioritized for restoration or conservation, which may provide useful targets for advance mitigation projects
- Definitions or maps of ESHAs. Enhancement or expansion of existing ESHAs could offer a significant mitigation opportunity. However, for some advance mitigation proposals (for example, those that involve substantial disruption of existing habitat), it may be important to avoid areas of existing ESHAs to prevent ESHA removal or habitat type conversion. ESHA determinations are made on a case-by-case basis, so not all ESHAs are necessarily captured in the LCP.
- Policies on allowable uses in ESHAs
- Land use designations (for example, agricultural, industrial, residential development) that could conflict with habitat projects, making certain areas infeasible for mitigation projects

It will be important to consult with CCC and local government staff in interpreting LCP goals and policies when scoping advance mitigation projects.

¹ Development is defined broadly under Public Resources Code § 30106 and includes many habitat restoration activities.

References

- Caltrans. 2023a. "Waters_ D04/D05 in Caltrans District 4 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2022/2023" (data file). Accessed November 13, 2023. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- Caltrans. 2023b. "Wetlands_ D04/D05 in Caltrans District 4 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2022/2023" (data file). Accessed November 13, 2023. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- City of Daly City. 1984. *Daly City Coastal Element Local Coastal Program*.
- City of Half Moon Bay. 2020. *Local Coastal Land Use Plan: City of Half Moon Bay. 2020 Comprehensive Update*.
- City of Pacifica. 2023. *City of Pacifica Local Coastal Land Use Plan*. Accessed December 14, 2023. <https://www.planpacific.org/project-docs>.
- City of San Francisco. 2018. *Western Shoreline Area Plan*.
- City of Santa Cruz. 2021. *City of Santa Cruz Local Coastal Program 2021 Amendment*.
- CCC (California Coastal Commission). 2019. "Maps: Local Coast Program Areas." Accessed December 12, 2023. <https://www.coastal.ca.gov/maps/lcp/>.
- San Mateo County. 1980. *County of San Mateo Local Coastal Program*.
- Santa Cruz County. 2024. *2024 General Plan and Local Coastal Program for the County of Santa Cruz*.
- University of California, Santa Cruz. 2021. *University of Santa Cruz 2021 Long Range Development Plan*.

Table D-1. Local Coastal Programs in the GAI

Mapbook Grid Number	HUC-8 Name	LCP Jurisdiction	LCP/LUP/ General Plan Name	Description	Status	Segments/ Areas Identified on Maps	UAs and ADCs ^a	Federal or State Lands not Included in LCP	Website	Total Acres of LCP ^b
1, 2	San Francisco Coastal South	City/County of San Francisco	<i>Western Shoreline Area Plan</i> (1986, amended 2018)	LCP is incorporated into the City of San Francisco General Plan Western Shoreline Element. Requires retention of the open space quality of the Olympic Country Club area, including the protection of the westerly bluffs.	Certified	City/County of San Francisco; Olympic Club	None	Fort Miley Military Reservation; Golden Gate National Recreation Area	https://generalplan.sfplanning.org/Western_Shoreline.htm	1,807
2	San Francisco Coastal South	City of Daly City	<i>Daly City Coastal Element Local Coastal Program</i> (1984)	LCP from the City of Daly City General Plan.	Certified	City of Daly City	None	None	https://www.dalycity.org/363/General-Plan http://www.dalycity.org/DocumentCenter/View/898/Coastal-Element-PDF	11
2	San Francisco Coastal South	City of Pacifica	<i>City of Pacifica Local Coastal Land Use Plan</i> (2023)	Includes a goal to restore and/or enhance all riparian vegetation in the City of Pacifica's portion of the coastal zone. Municipal code for implementing the LCP for the City of Pacifica. Policies created by the City of Pacifica, the California Coastal Conservancy, and CCC (2018) related to including sea level rise in permitting decisions.	Pending	City of Pacifica	Quarry Area ADC; Shell Dance Nursery ADC	None	https://www.planpacific.org/project-docs https://library.municode.com/ca/pacific/codes/code_of_ordinances?node=TIT9PLZO_CH4ZO_ART43CO_ZOCODI https://documents.coastal.ca.gov/assets/rflg/FY17_18_LCPStatusSummaryChart.pdf	1,165
2-8	San Francisco Coastal South	San Mateo County	<i>County of San Mateo Local Coastal Program</i> (1980)	Requires buffer zones of 50 feet from perennial riparian corridors; 30 feet from intermittent riparian corridors; and 100 feet from wetlands, lakes, and ponds. Requires habitat enhancement for Pillar Point Marsh and Pescadero Marsh.	Certified	San Mateo County	None	Pillar Point Air Force Station – United States Air Force	https://www.smcgov.org/planning/local-coastal-program#	92,192
7-9	San Francisco Coastal South	Santa Cruz County	<i>2024 General Plan and Local Coastal Program for the County of Santa Cruz, California</i>	LCP and General Plan for Santa Cruz County. Prohibits development within the 100-foot riparian corridor of all wetlands.	Certified	Santa Cruz County	None	U.C. Santa Cruz – Long Marine Lab ^c	https://cdi.santacruzcountyca.gov/Planning/PolicyPlanning/General_TownVillagePlans.aspx https://www.sccoplanning.com/PlanningHome/SustainabilityPlanning/GeneralPlanTownPlans.aspx https://lrdp.ucsc.edu/Final2008CLRDP/clrdp08.pdf	55,438
3	San Francisco Coastal South	City of Half Moon Bay	<i>City of Half Moon Bay Local Coastal Land Use Plan</i> (2020)	LCP for City of Half Moon Bay. Requires a minimum 100-foot-wide buffer area between development and ESHAs.	Certified	City of Half Moon Bay	None	None	https://www.half-moon-bay.ca.us/154/Local-Coastal-Program-Land-Use-Plan	3,982

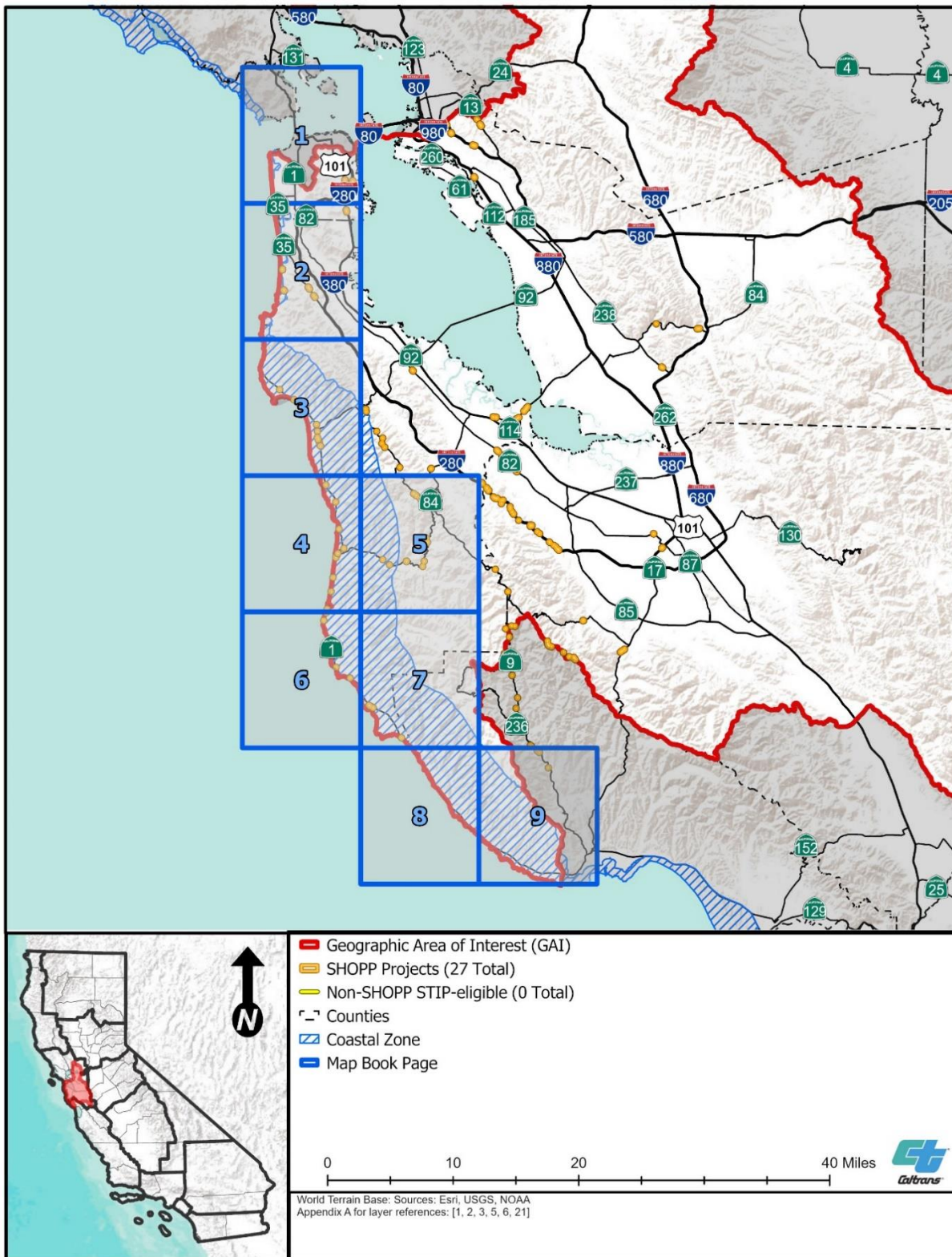
Mapbook Grid Number	HUC-8 Name	LCP Jurisdiction	LCP/LUP/ General Plan Name	Description	Status	Segments/ Areas Identified on Maps	UAs and ADCs ^a	Federal or State Lands not Included in LCP	Website	Total Acres of LCP ^b
9	San Francisco Coastal South	City of Santa Cruz	<i>City of Santa Cruz Local Coastal Program 2021 Amendment (2021)</i>	Includes goals for enhancement of the San Lorenzo River and Neary Lagoon. Requires a buffer of 100 feet from the center of a riparian feature and 100 feet from the edge of a wetland plus any riparian vegetation that exceeds the buffer. County of Santa Cruz Required LCP Program Amendments	Amendment Pending Certification	City of Santa Cruz	None	None	https://www.cityofsantacruz.com/government/about-us/general-plan https://www.cityofsantacruz.com/home/showpublisheddocument/87200/637743953526470000	2,202

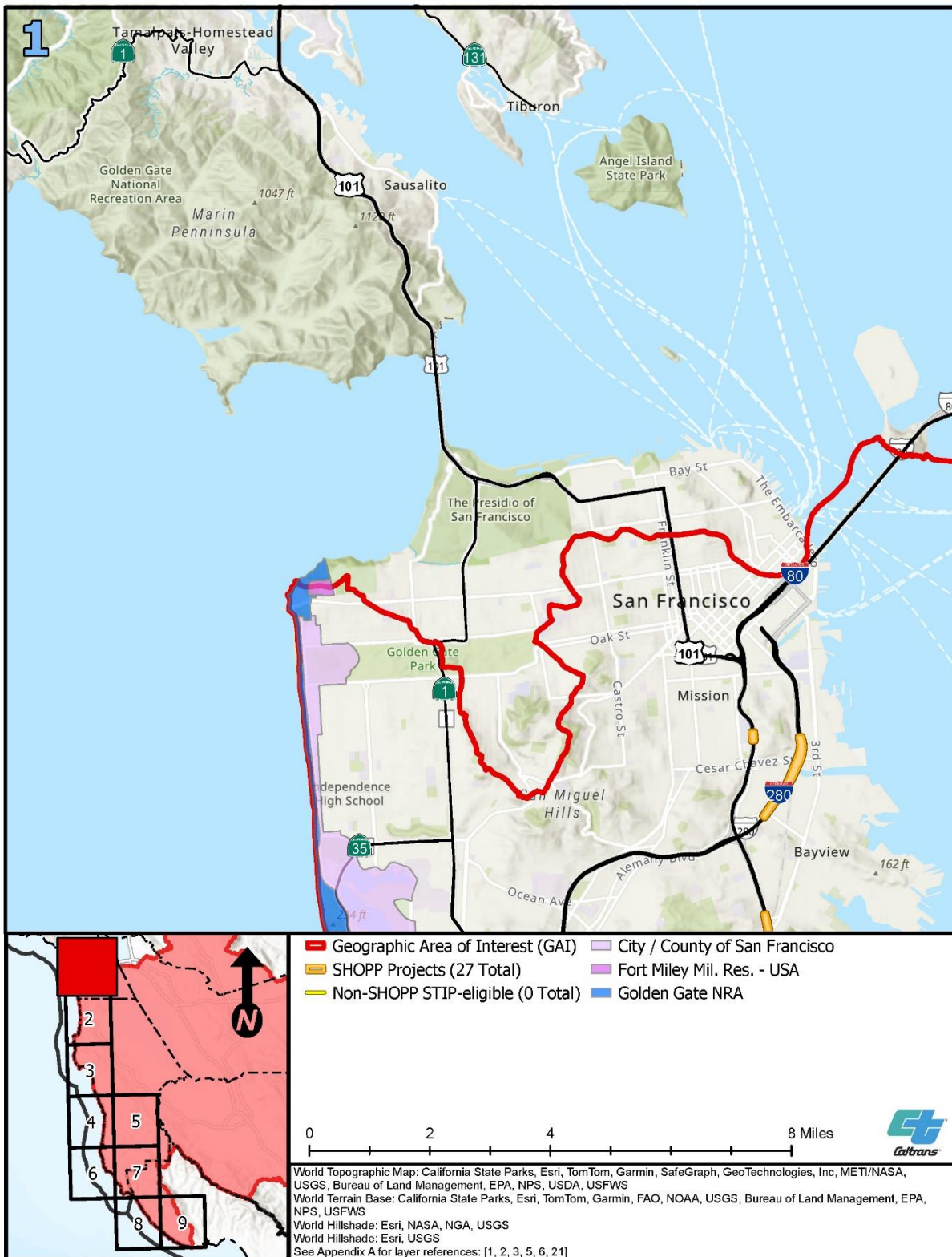
Source: CCC 2019

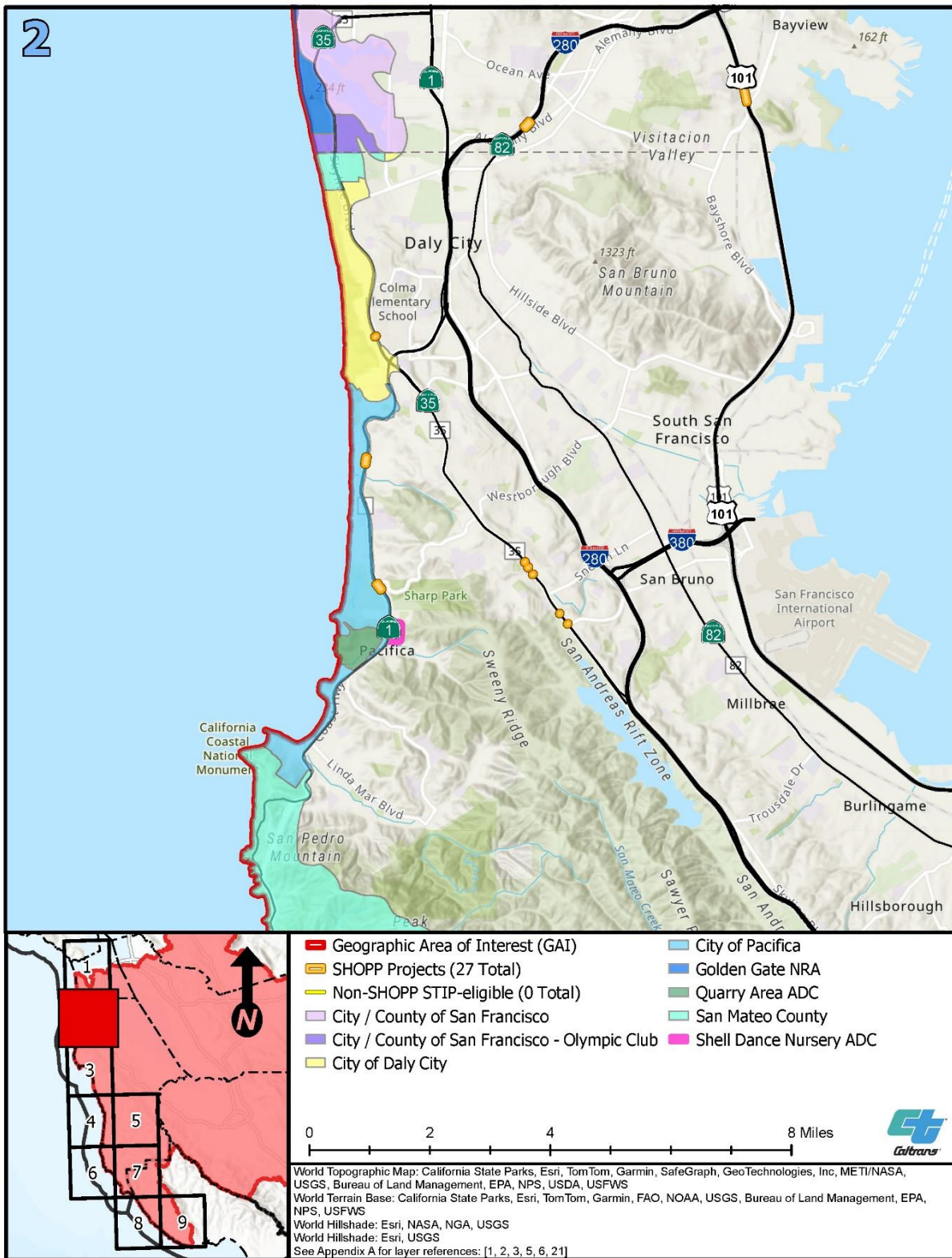
^a ADC refers to a geographic area that has not been officially segmented for purposes of LCP preparation and, during certification review of the LCP, was not certified. A UA may be an area that was created through annexation or was subsequently identified but may not have been included in any LCP segment. The CCC retains permit authority until an LCP is effectively certified for these areas.

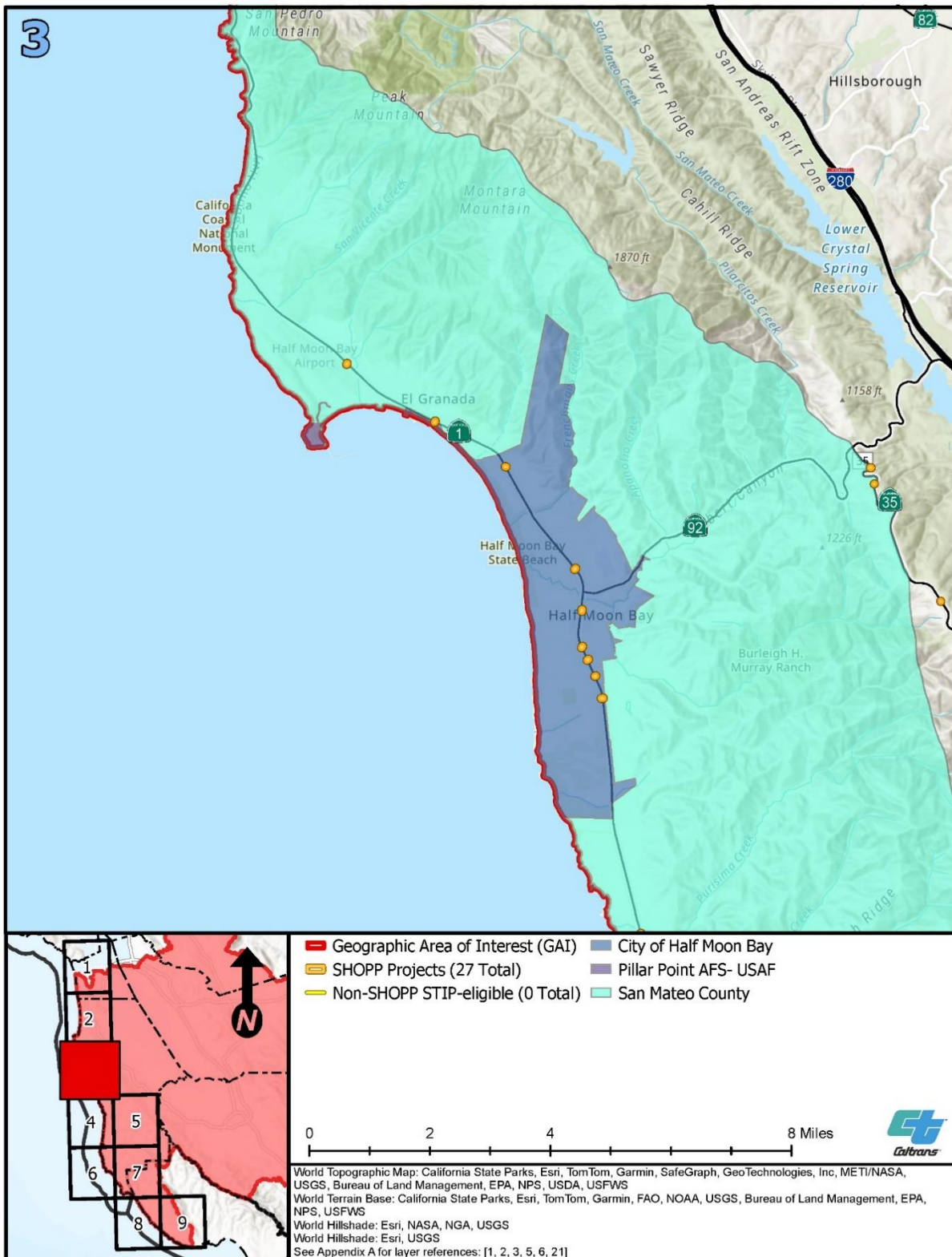
^b Numbers were rounded to the nearest whole number. Excludes ADCs, federal lands, and state lands.

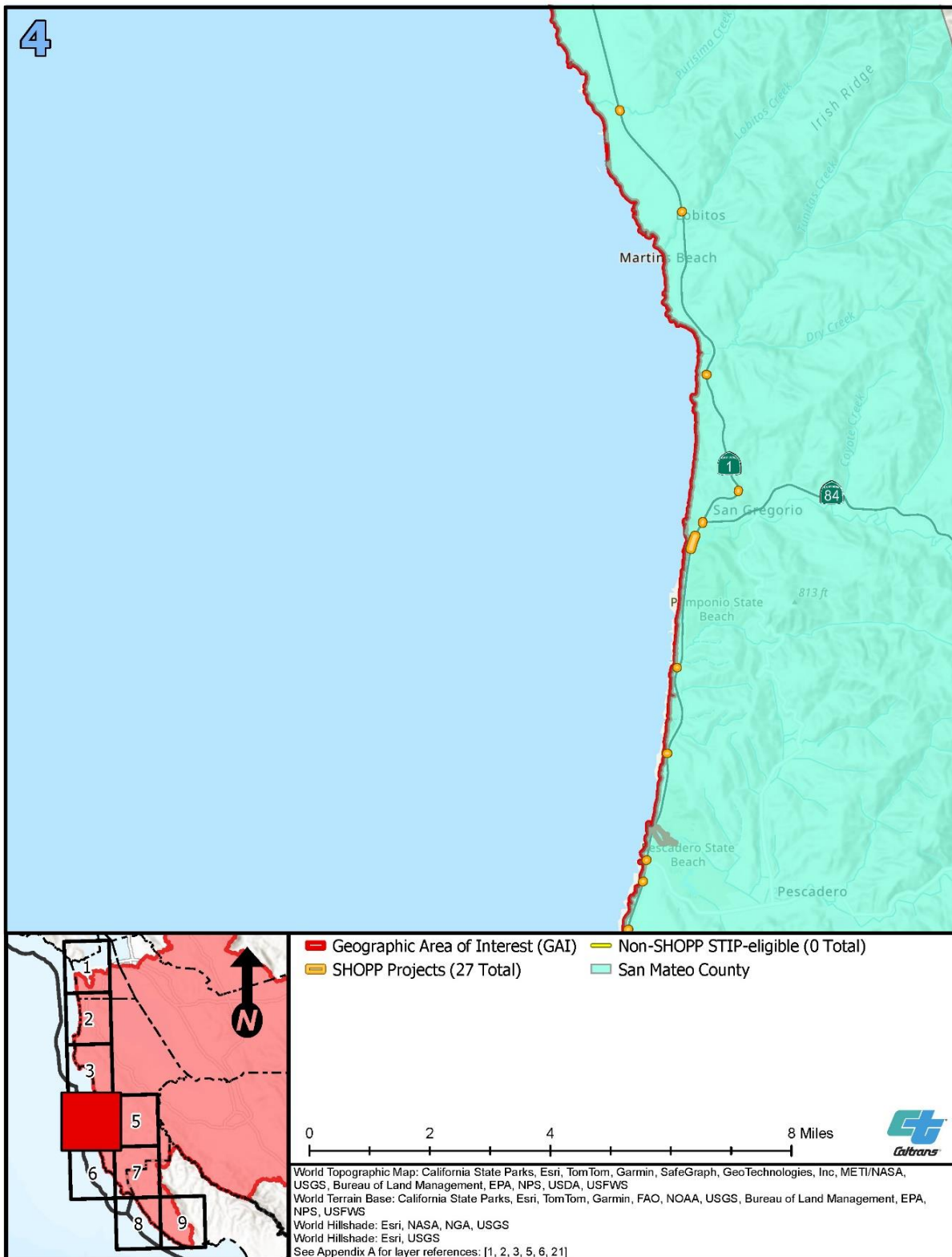
^c Development at U.C. Santa Cruz is governed by the U.C, Santa Cruz 2021 Long Range Development Plan (U.C. Santa Cruz 2021).

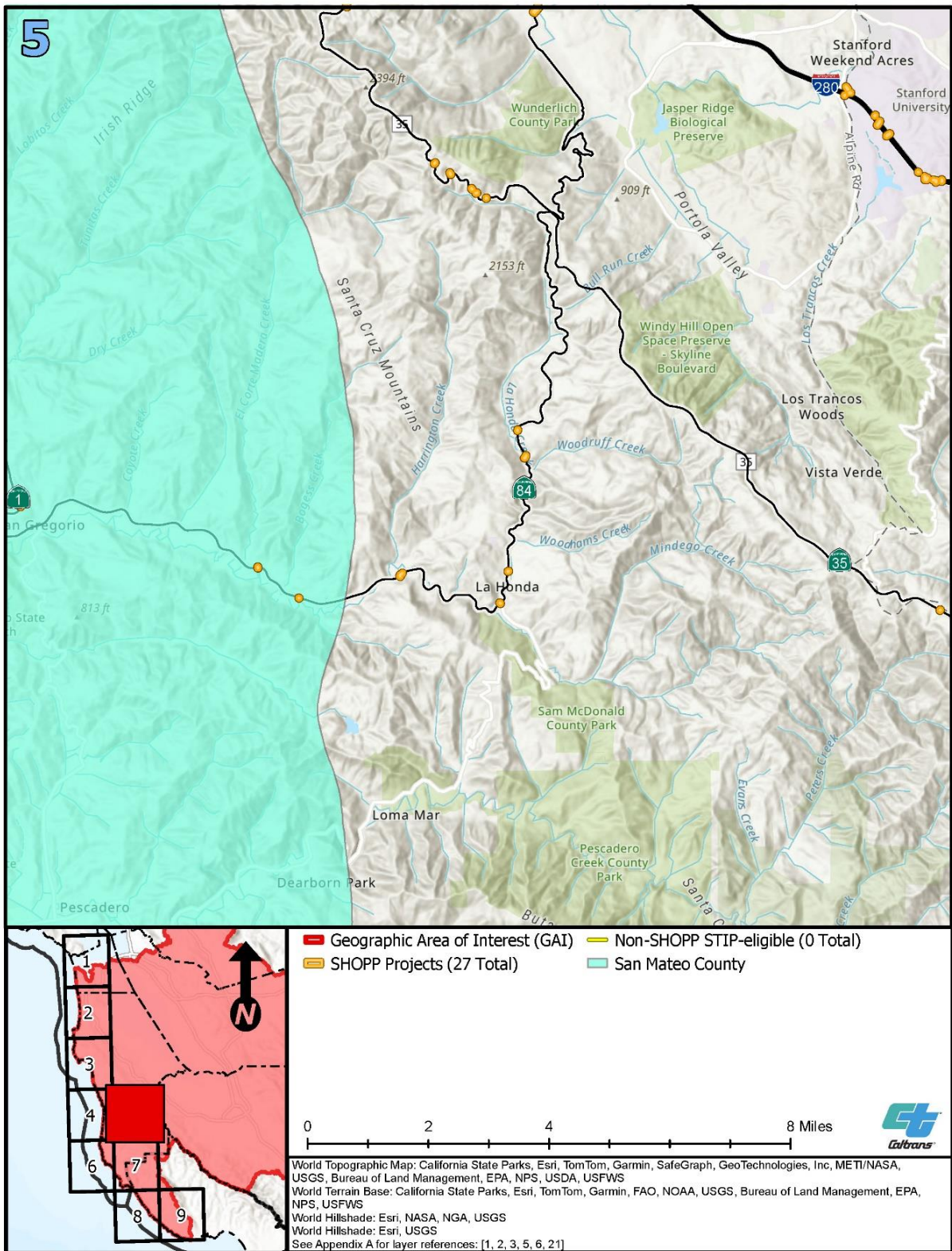


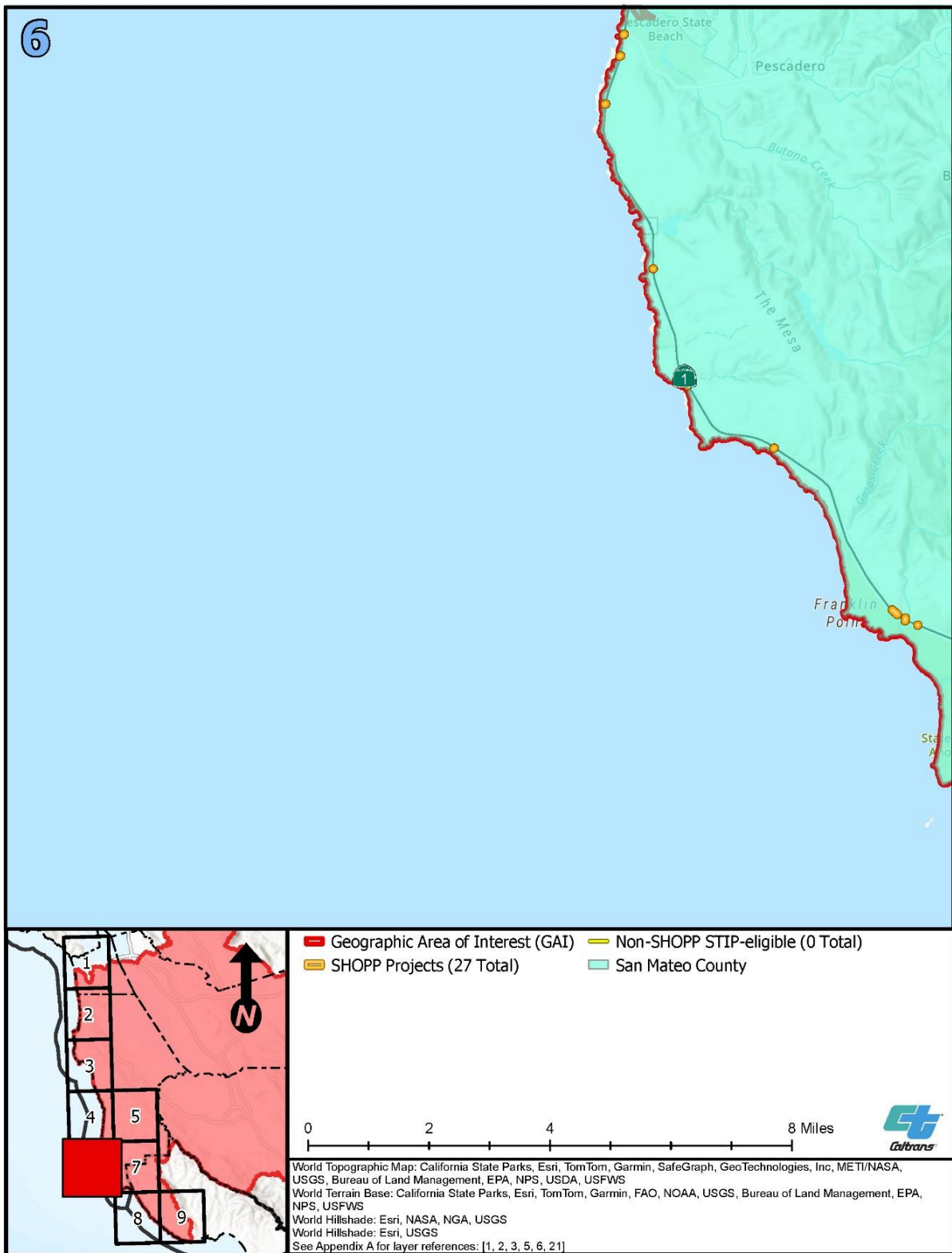


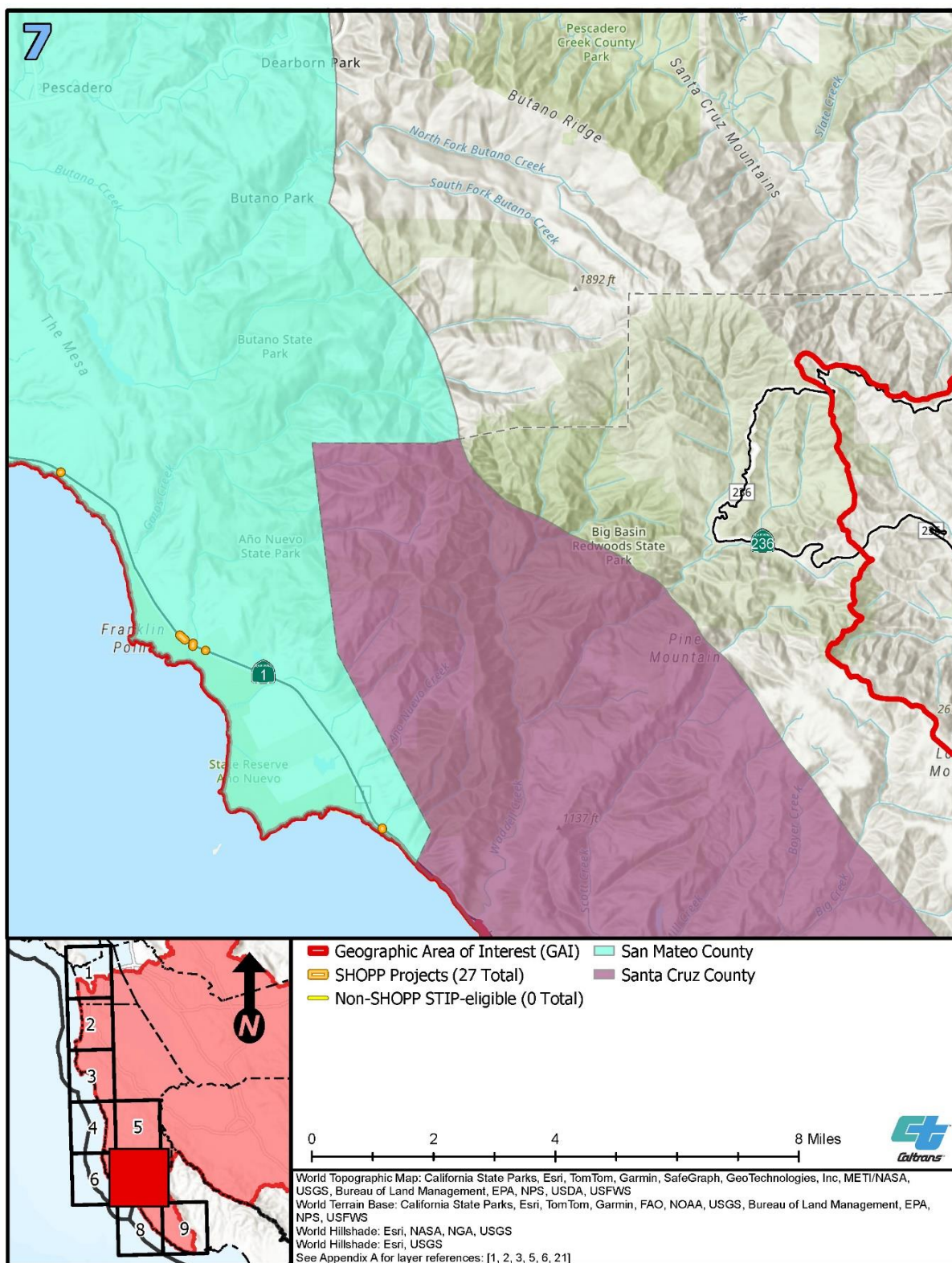


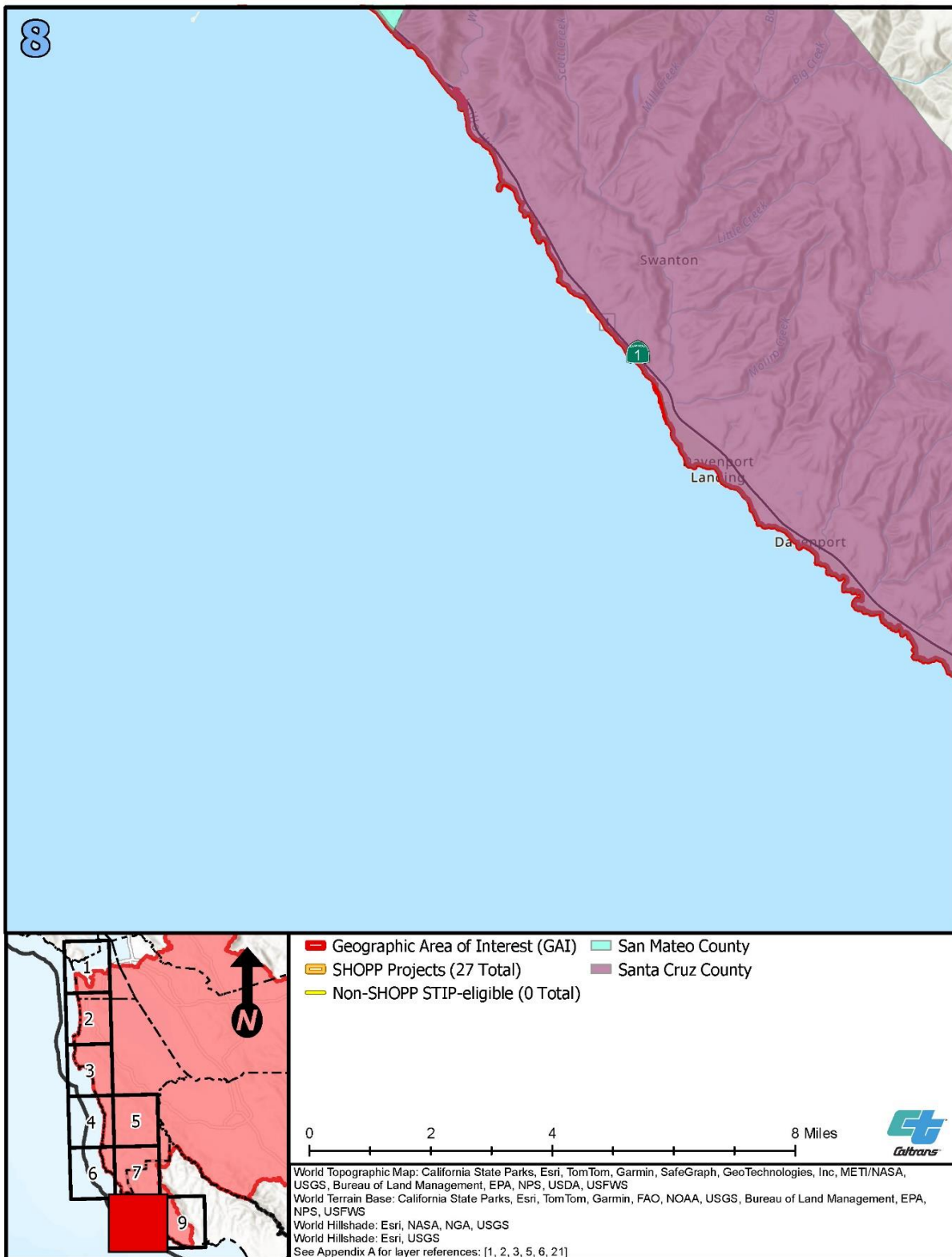


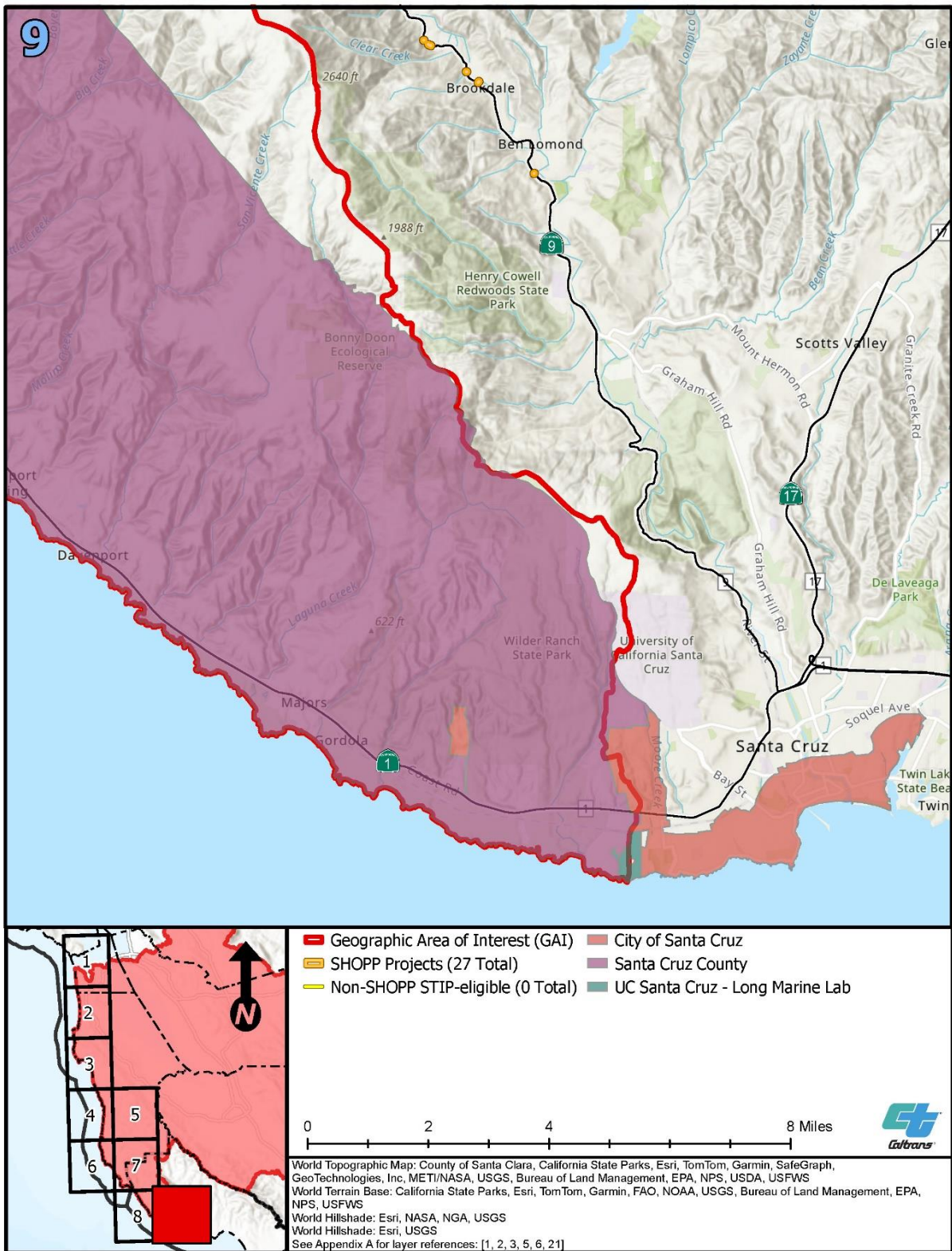












APPENDIX E: LAND COVER TYPES

Land cover types within the GAI were excerpted from the SAMNA Reporting Tool's vegetation layer, which was developed by merging CDFW's CWHR Vegetation Classification and Mapping Program GIS database (CDFW 2019), the USFS's Classification and Assessment with LandSat of Visible Ecological Groupings, and the California Department of Forestry and Fire Protection vegetation layer (Caltrans 2023a, 2023b). A general description of each land cover type found within the GAI is provided below, and complete descriptions can be found in Mayer and Laudenslayer (1988). Table 2-3 in the RAMNA's main text indicates the acreages of each habitat type that are mapped in the Central California Coast, Central California Coast Ranges, Great Valley, Northern California Coast, Northern California Coast Ranges, and Northern California Interior Coast Ranges Ecoregion Sections.

A key map, provided after the list of habitat types, references mapbook pages, including zoomed-in views of locations within the GAI and mapped land cover types (page D-3). These 15 maps correspond with the aquatic resources maps in Appendix I, *Aquatic Resource Locations*.

Tree-dominated Habitats: Tree-dominated habitats have at least 10 percent total tree canopy crown closure. Within the GAI, tree-dominated habitats include blue oak-foothill pine, blue oak woodland, closed-cone pine-cypress, coastal oak woodland, eucalyptus, juniper, montane hardwood, montane hardwood-conifer, montane riparian, ponderosa pine, redwood, valley foothill riparian, and valley oak woodland.

Shrub-dominated Habitats: Shrub-dominated habitats have at least 10 percent total cover by shrub species and less than 10 percent cover by tree species. Within the GAI, shrub-dominated habitats include alkali desert scrub, chamise-redshank chaparral, coastal scrub, and mixed chaparral.

Herbaceous-dominated Habitats: Herbaceous-dominated habitats have at least 2 percent total cover by herbaceous species and less than 10 percent total cover by tree or shrub species. Within the GAI, herbaceous-dominated habitats include annual grassland, fresh emergent wetland, freshwater emergent marsh, pasture, perennial grassland, saline emergent wetland, and wet meadow.

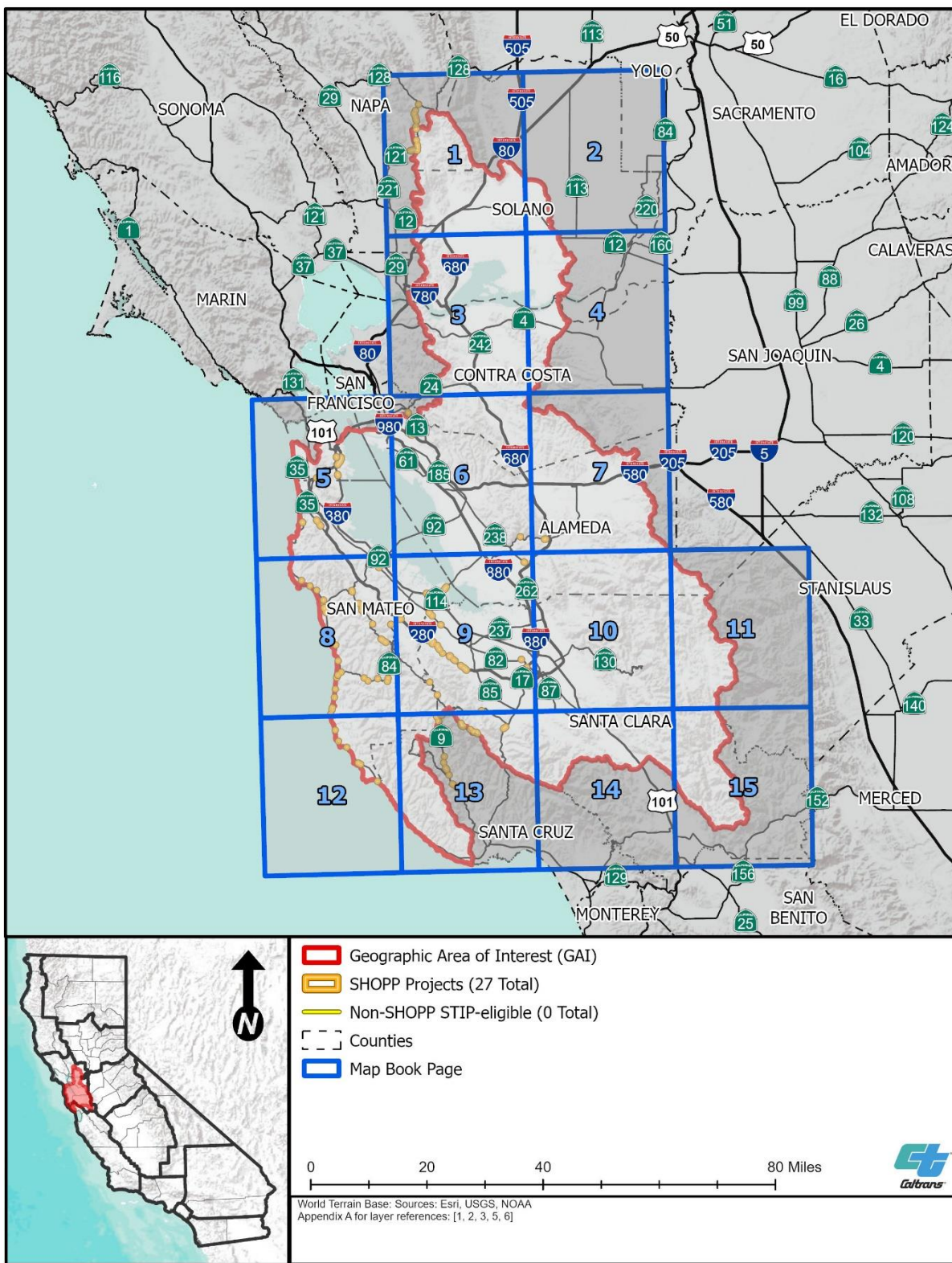
Aquatic Habitats: Aquatic habitats have at least 98 percent total cover by open water and no more than 2 percent total cover by vegetation in the continually exposed shore zone. Within the GAI, aquatic habitats include estuarine, lacustrine, marine, and riverine.

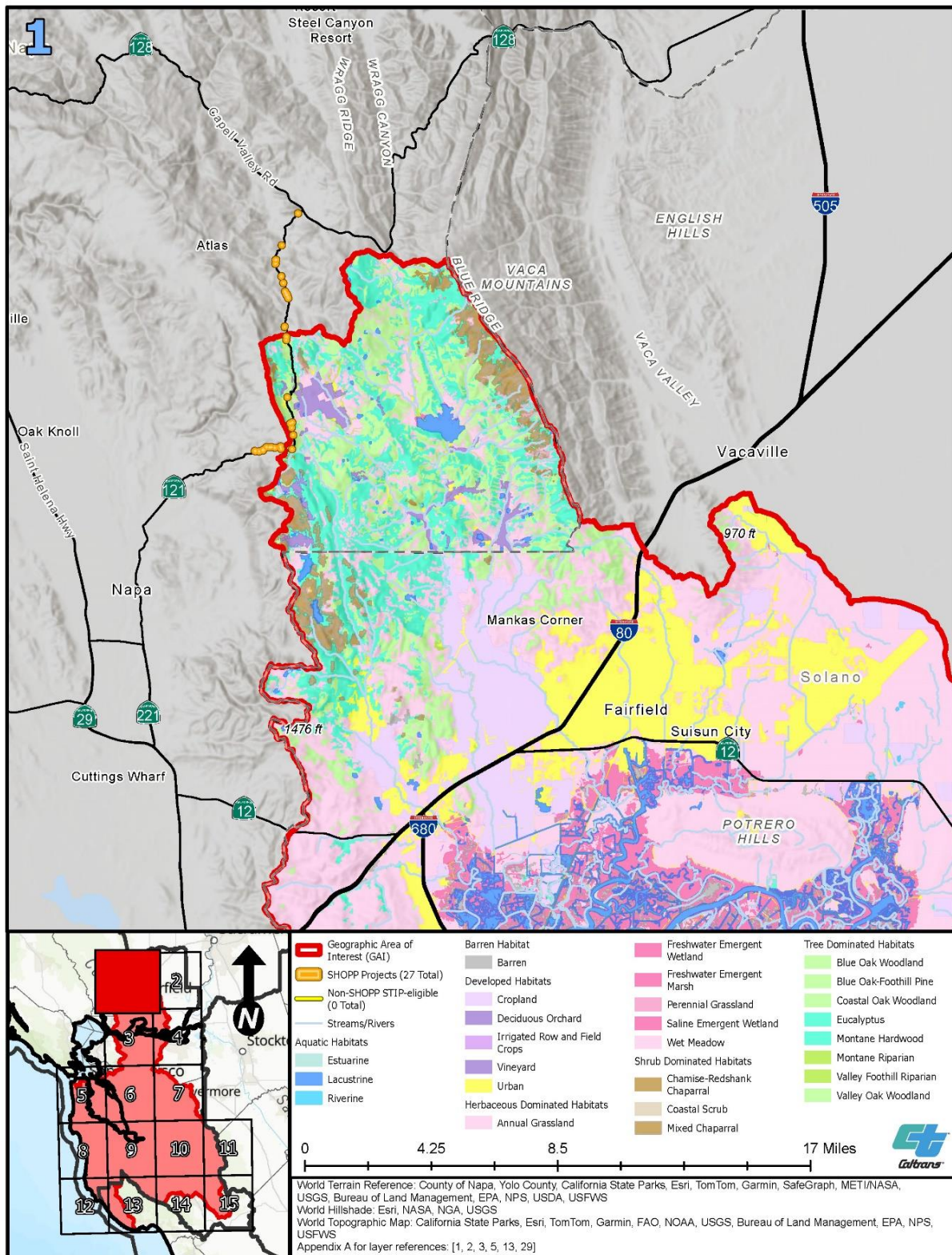
Developed Habitats: Developed habitats have at least 2 percent total cover by non-wildland vegetation grown for food, fiber, or landscaping, and do not meet criteria for any wildland habitat. Within the GAI, developed habitats include cropland, deciduous orchard, irrigated row and field crops, orchard-vineyard, and urban.

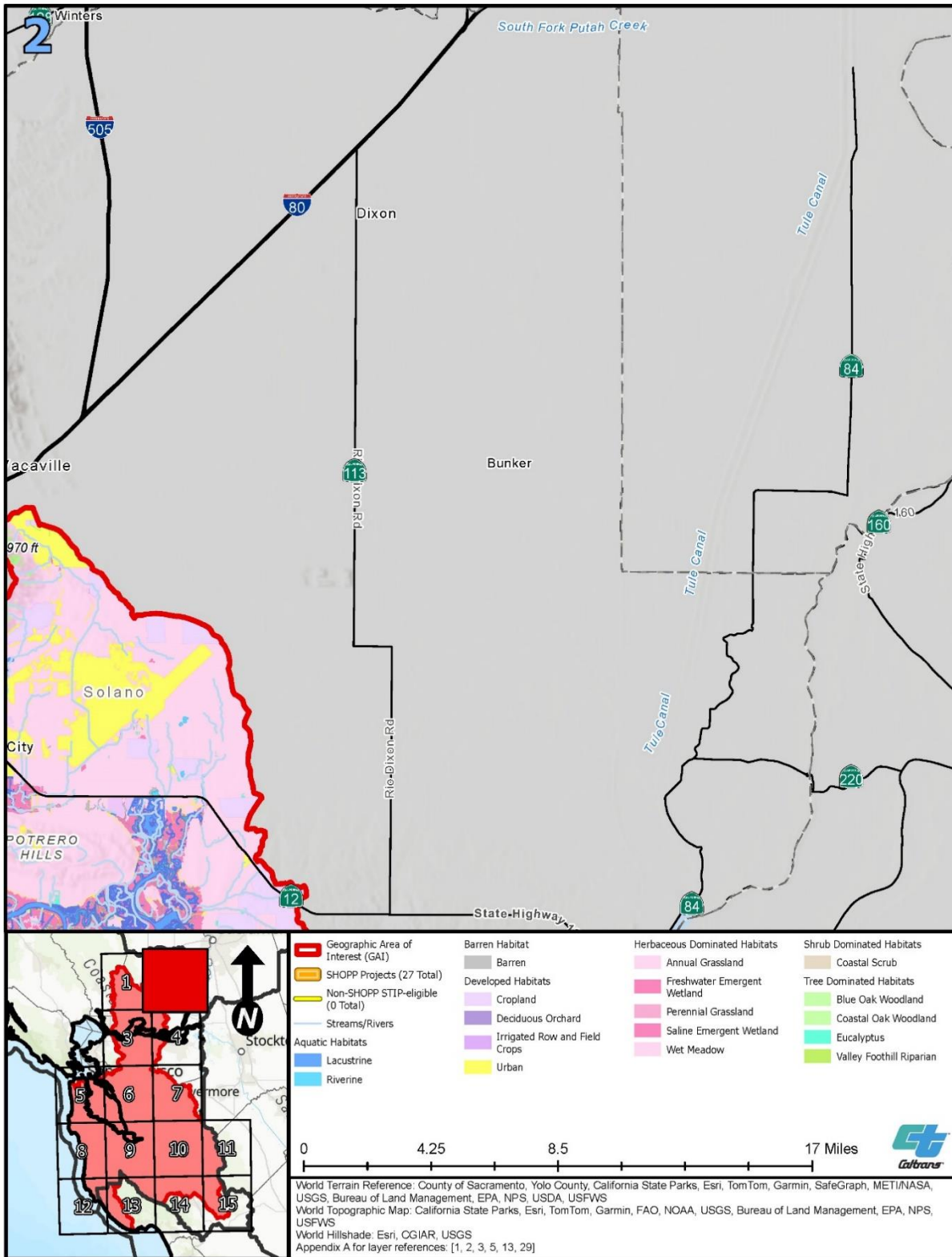
Non-vegetated Habitats: Non-vegetated habitats include barren areas, characterized by less than 2 percent cover by herbaceous species. Within the GAI, non-vegetated habitats consist of barren areas.

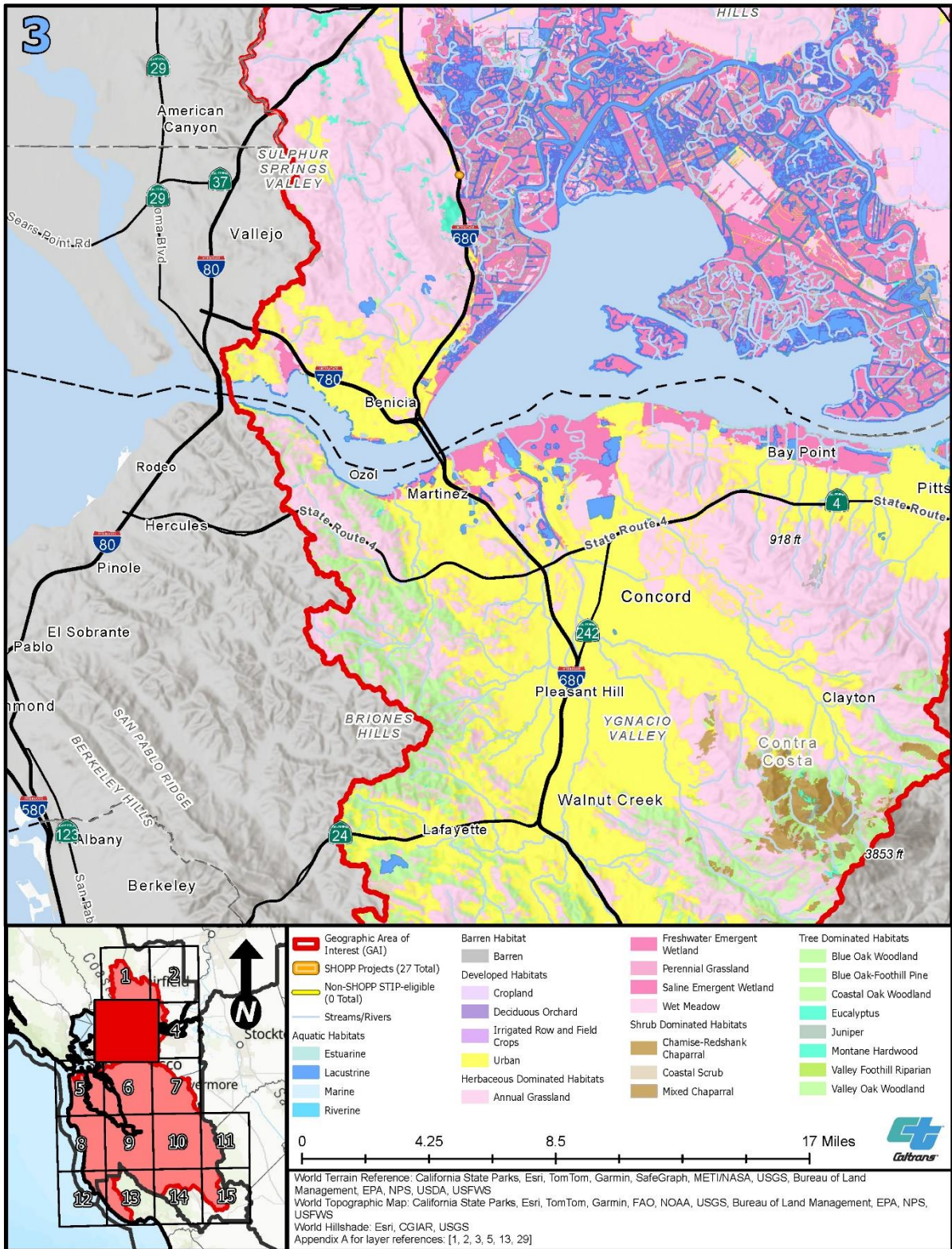
References

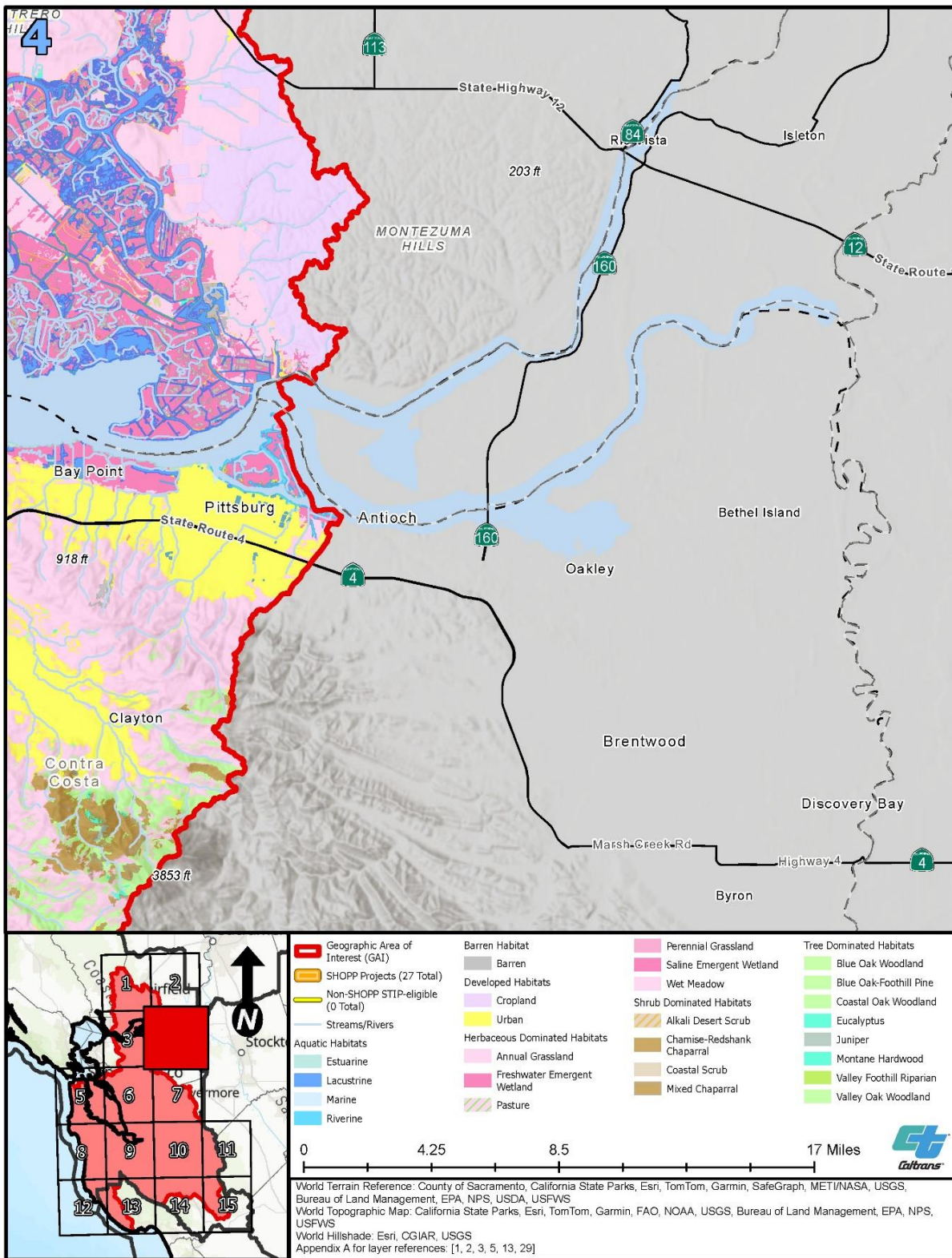
- Caltrans (California Department of Transportation). 2023a. "Vegetation_D04/D05 in Caltrans District 4 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2022/2023" (data file). Accessed November 13, 2023. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
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- CDFW (California Department of Fish and Wildlife). 2019. *California Wildlife Habitat Relationships (CWHR) System*. Supported by the California Interagency Wildlife Task Group and maintained by the CDFW. Database Version 9.0.
- Mayer, Kenneth E., and William F. Laudenslayer, Jr., eds. 1988. *A Guide to Wildlife Habitats of California*. State of California, Resources Agency, Department of Fish and Game. Sacramento, California. Including Revisions and Updates. Accessed January 24, 2023. <https://www.wildlife.ca.gov/Data/CWHR/Wildlife-Habitats>.

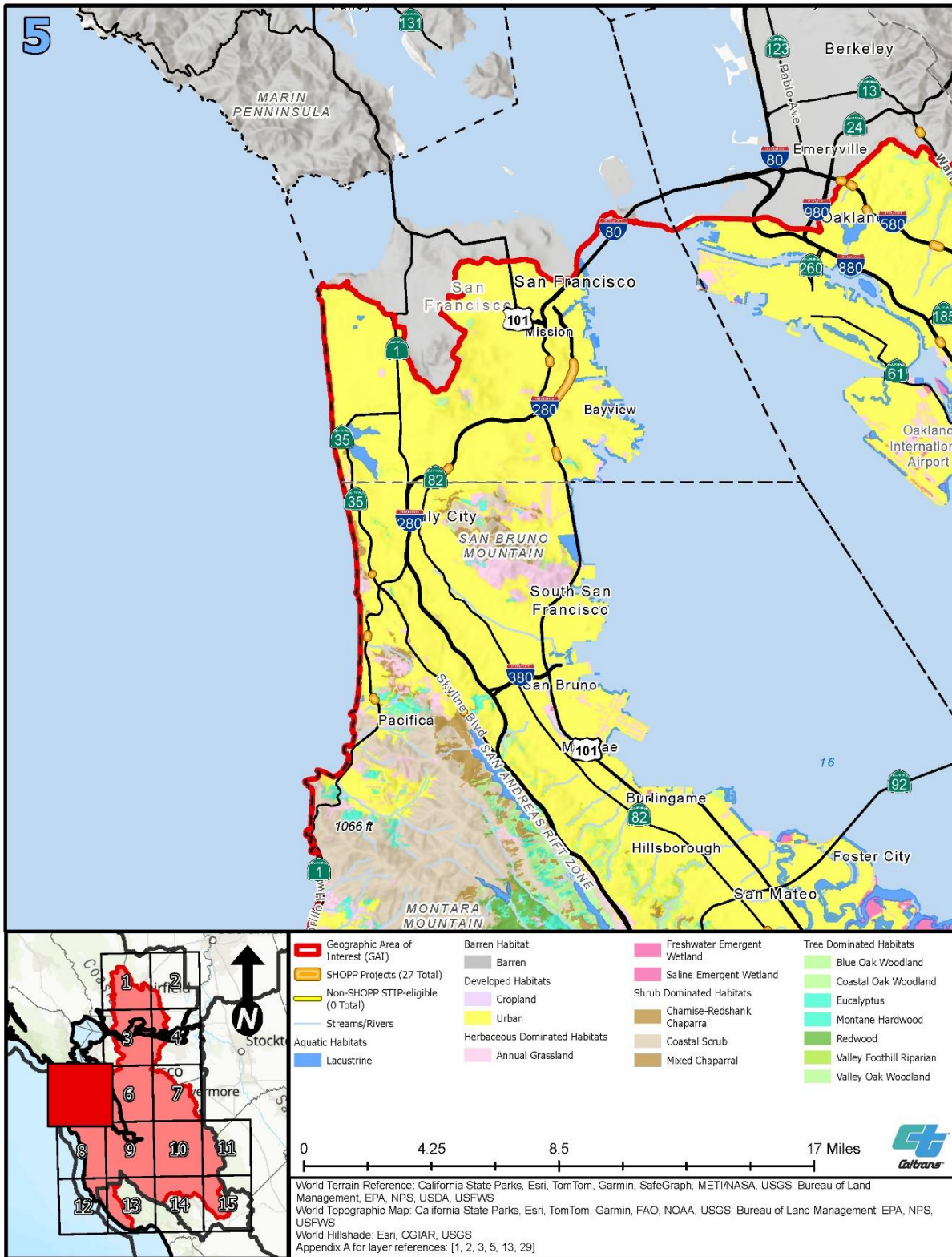


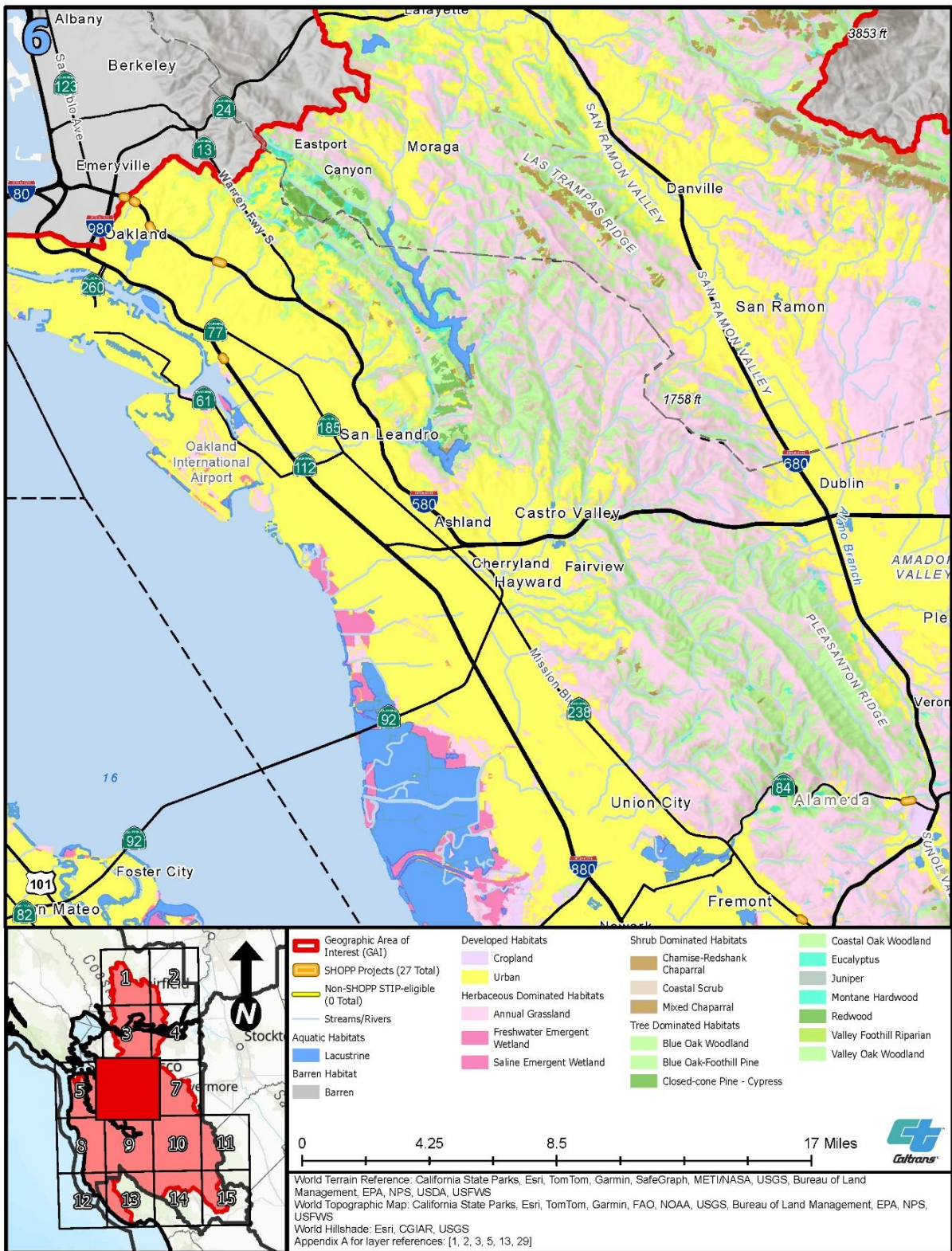


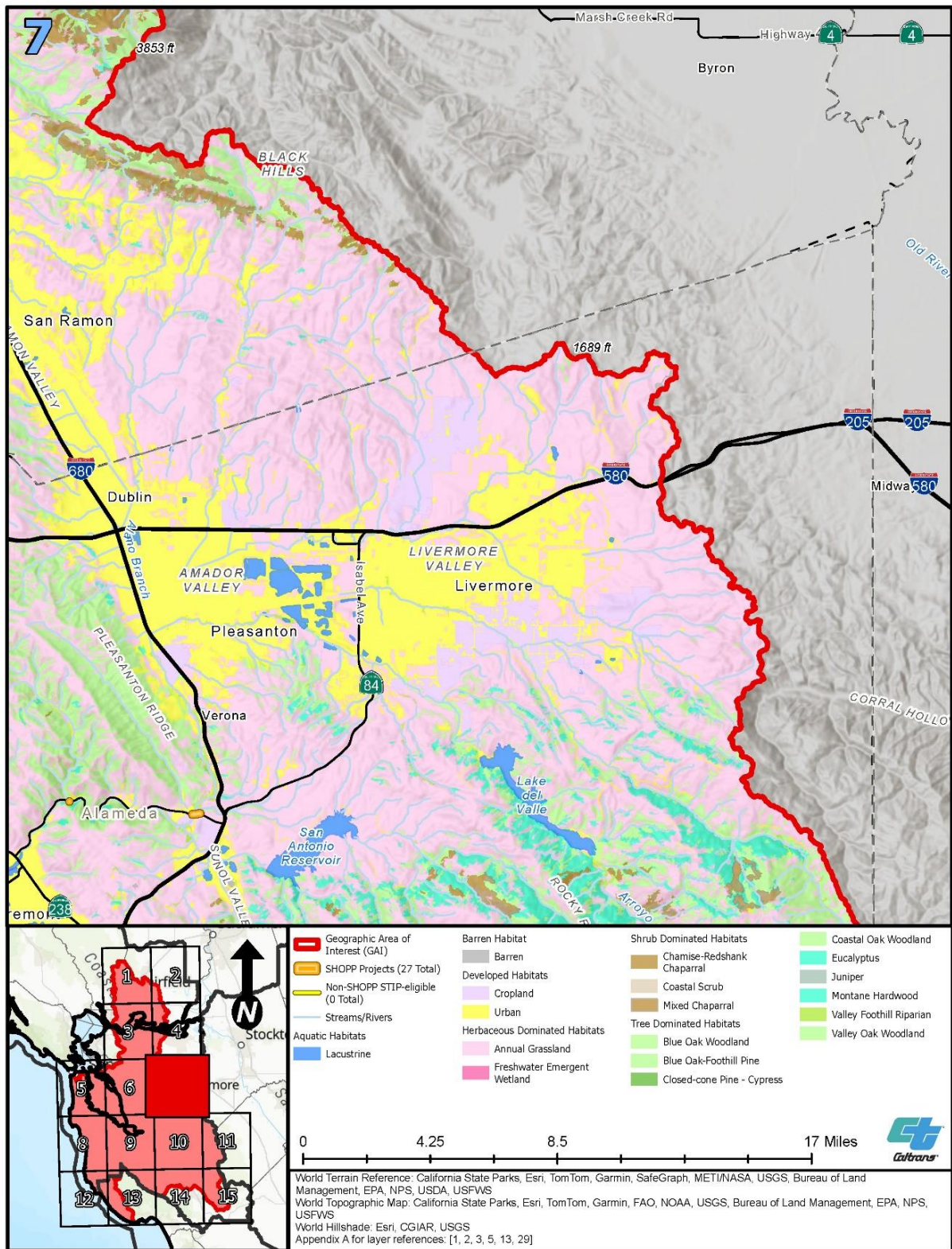


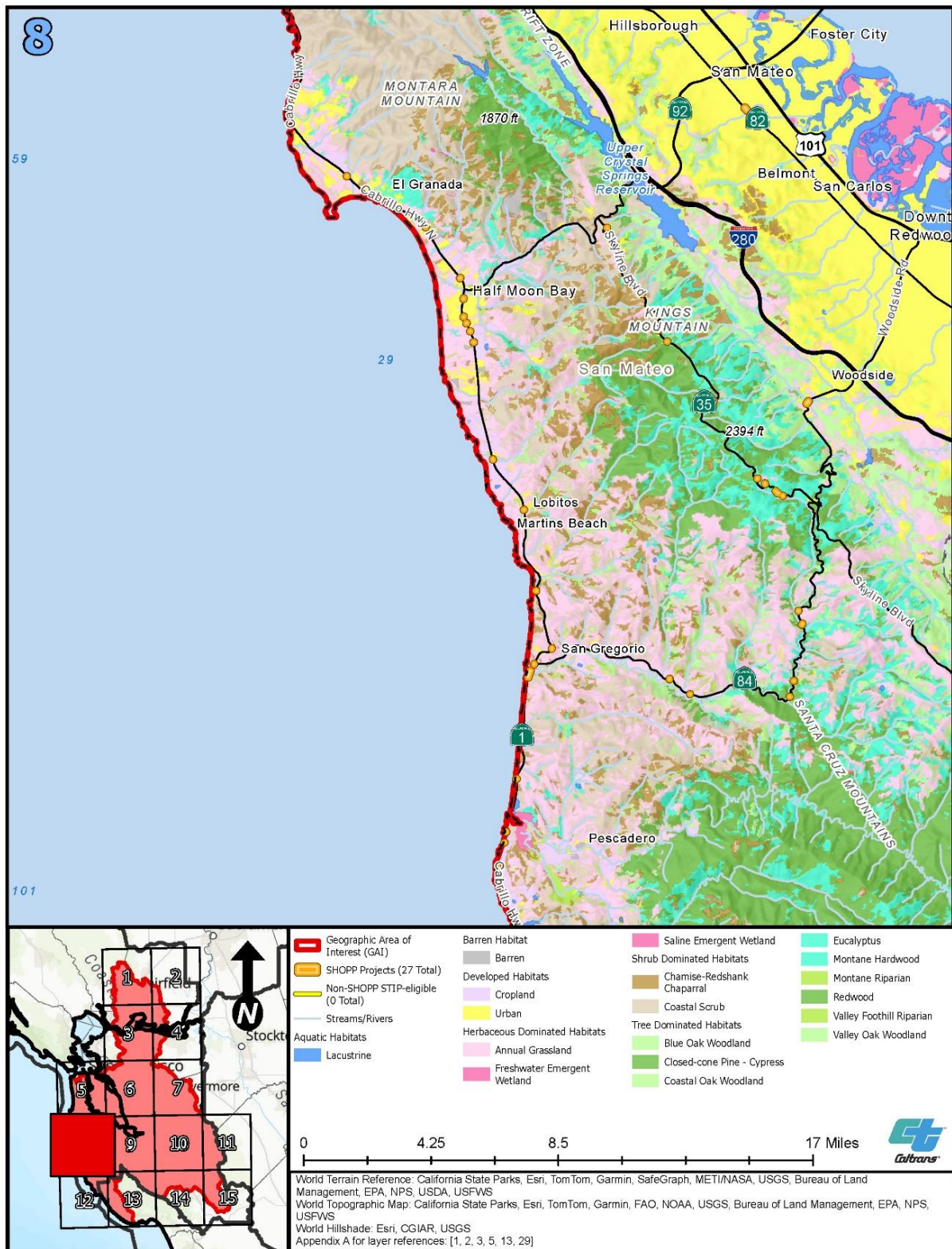


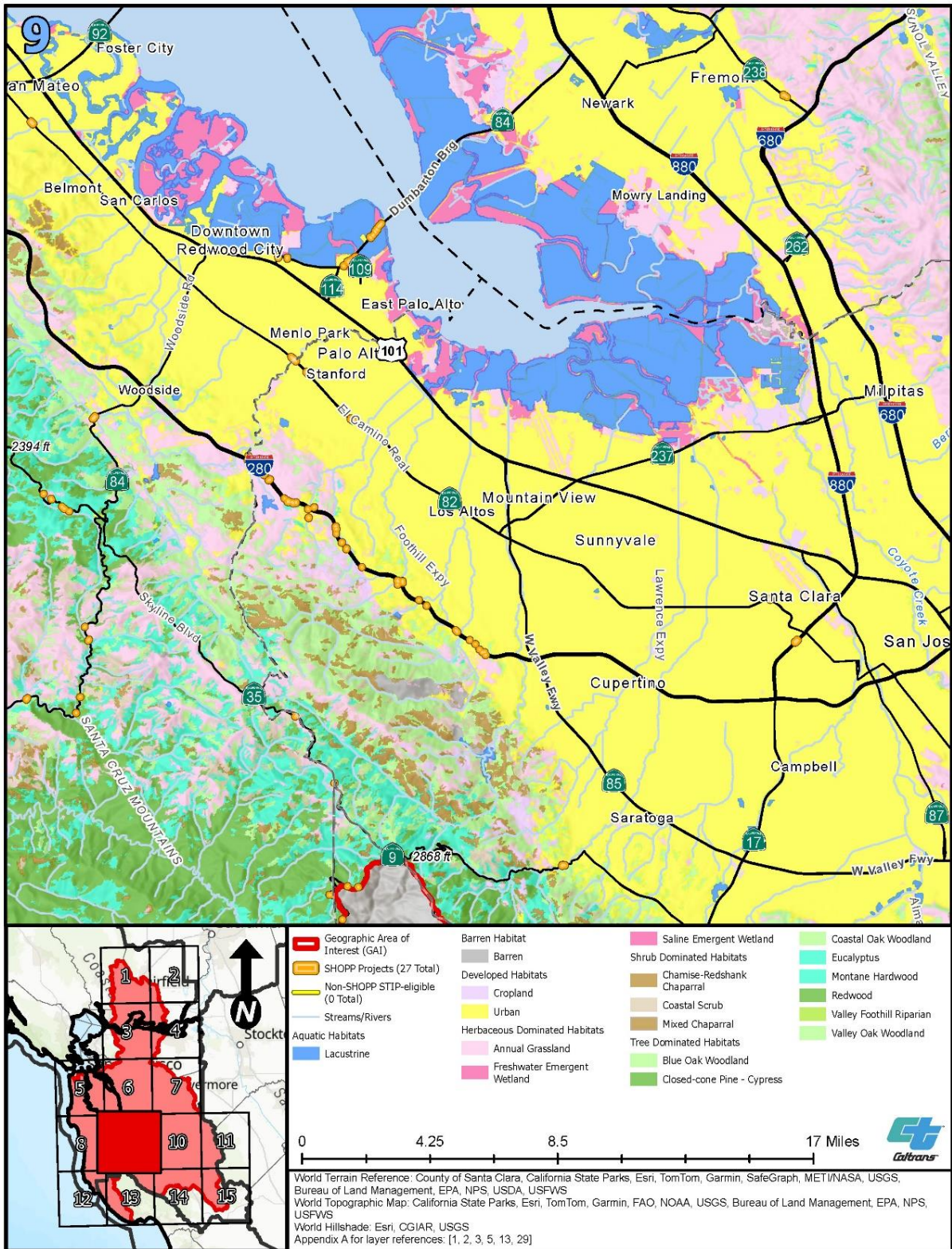


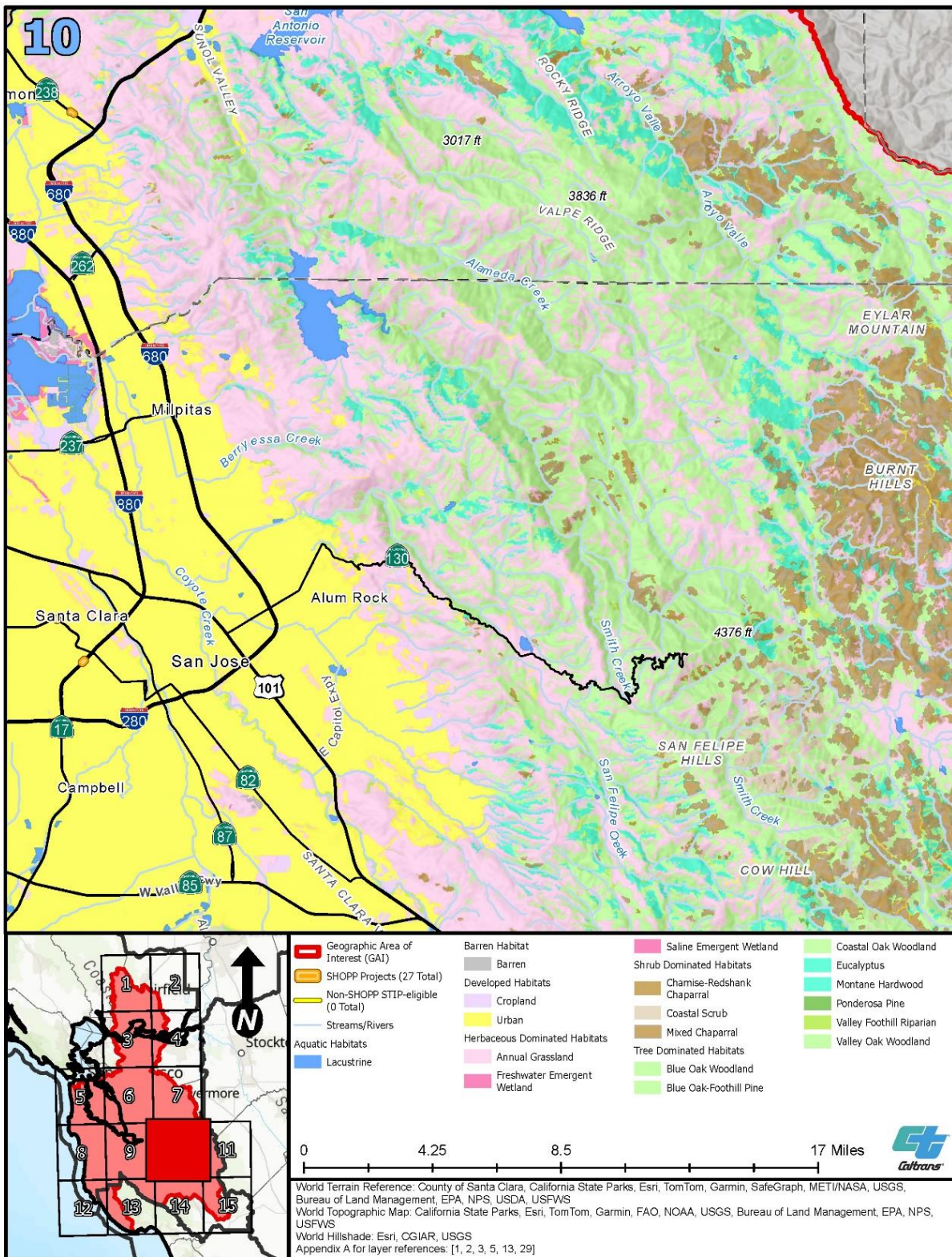


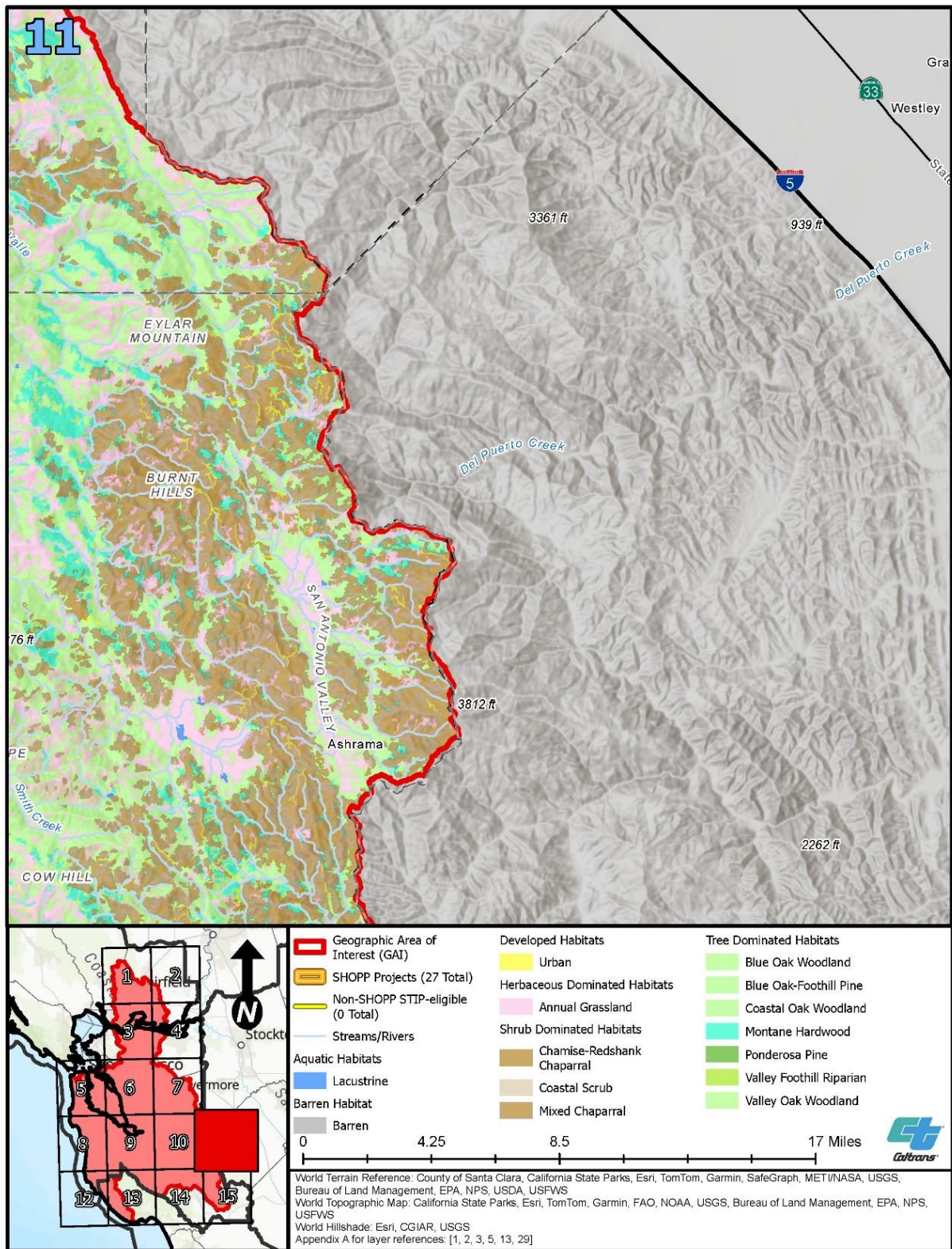


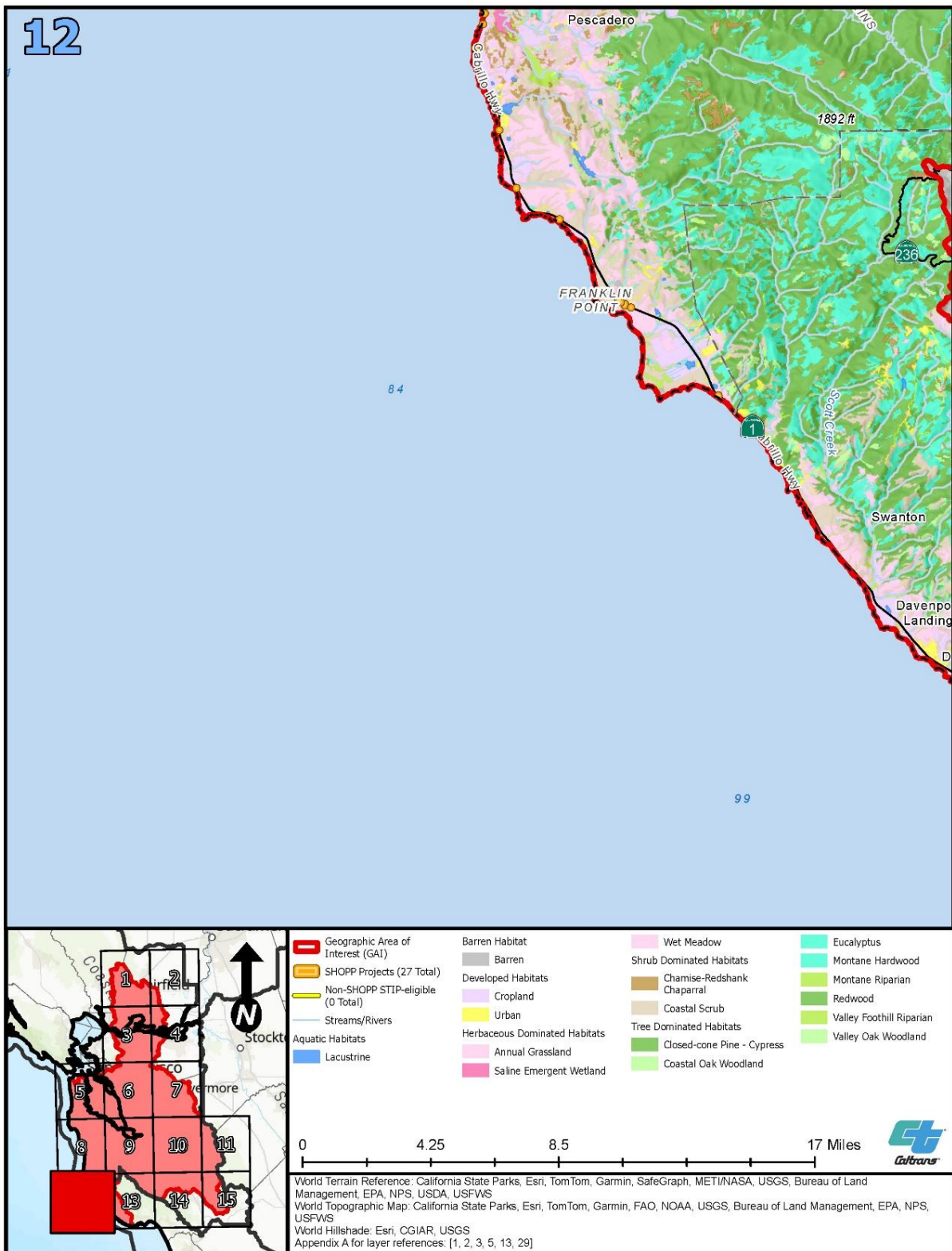


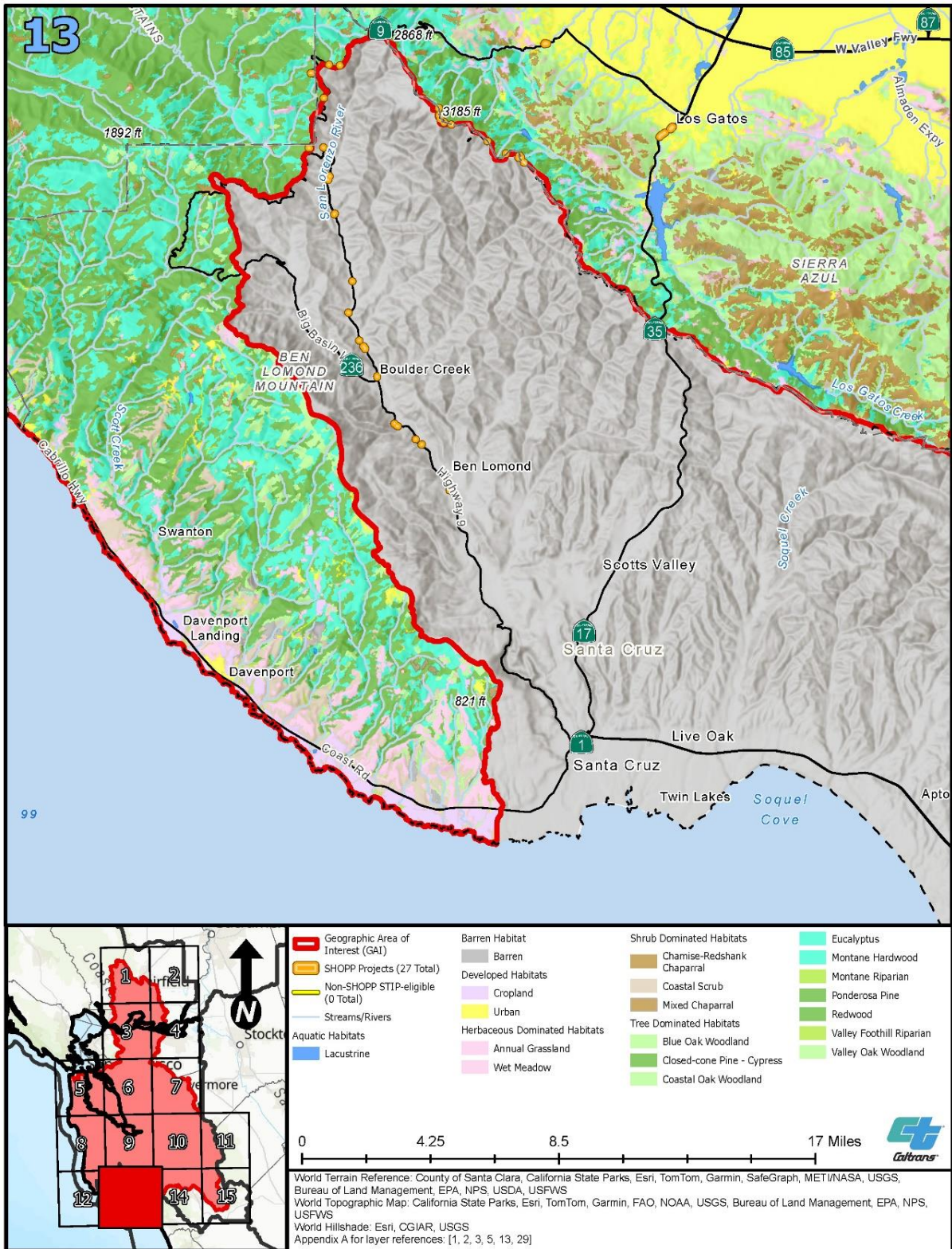


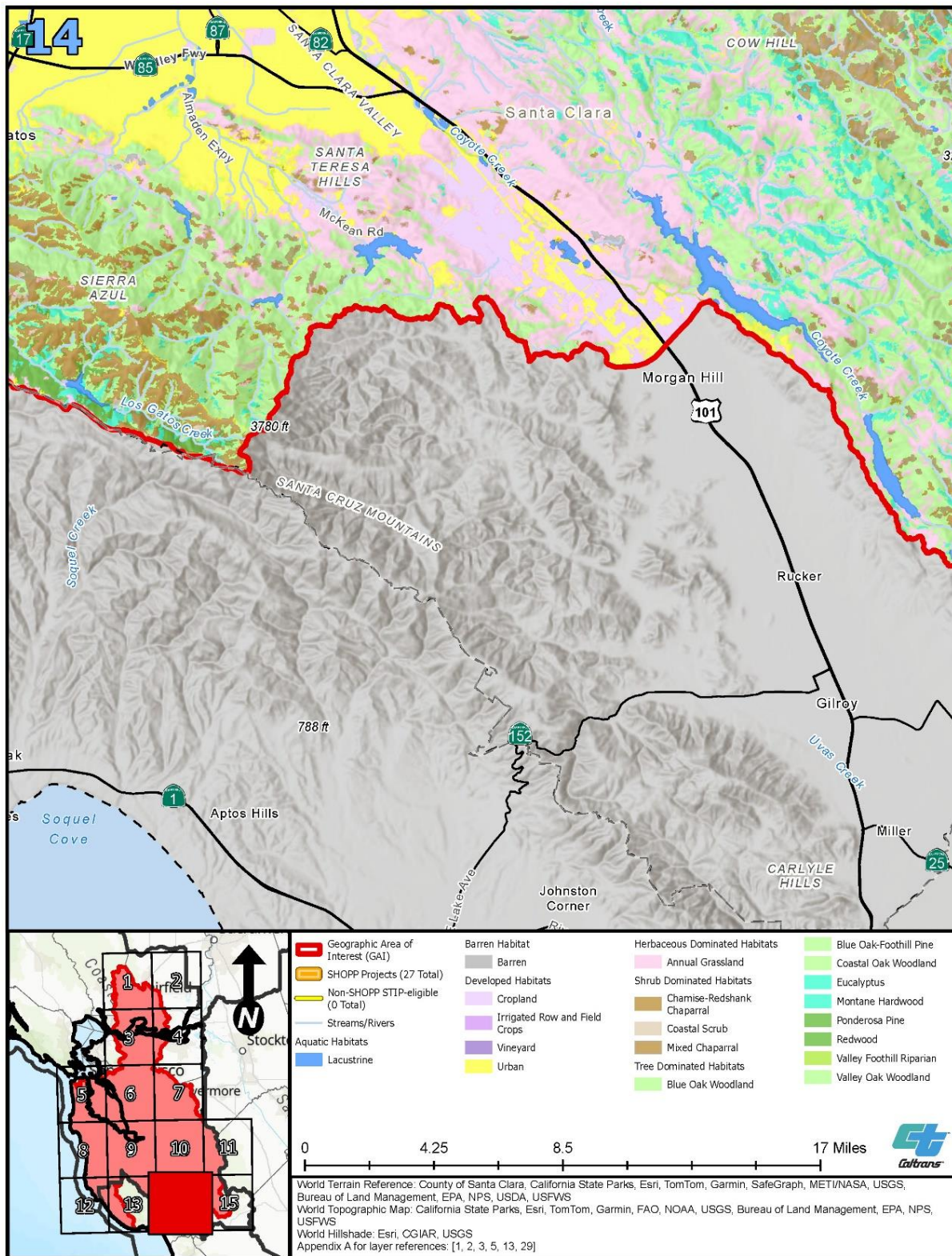


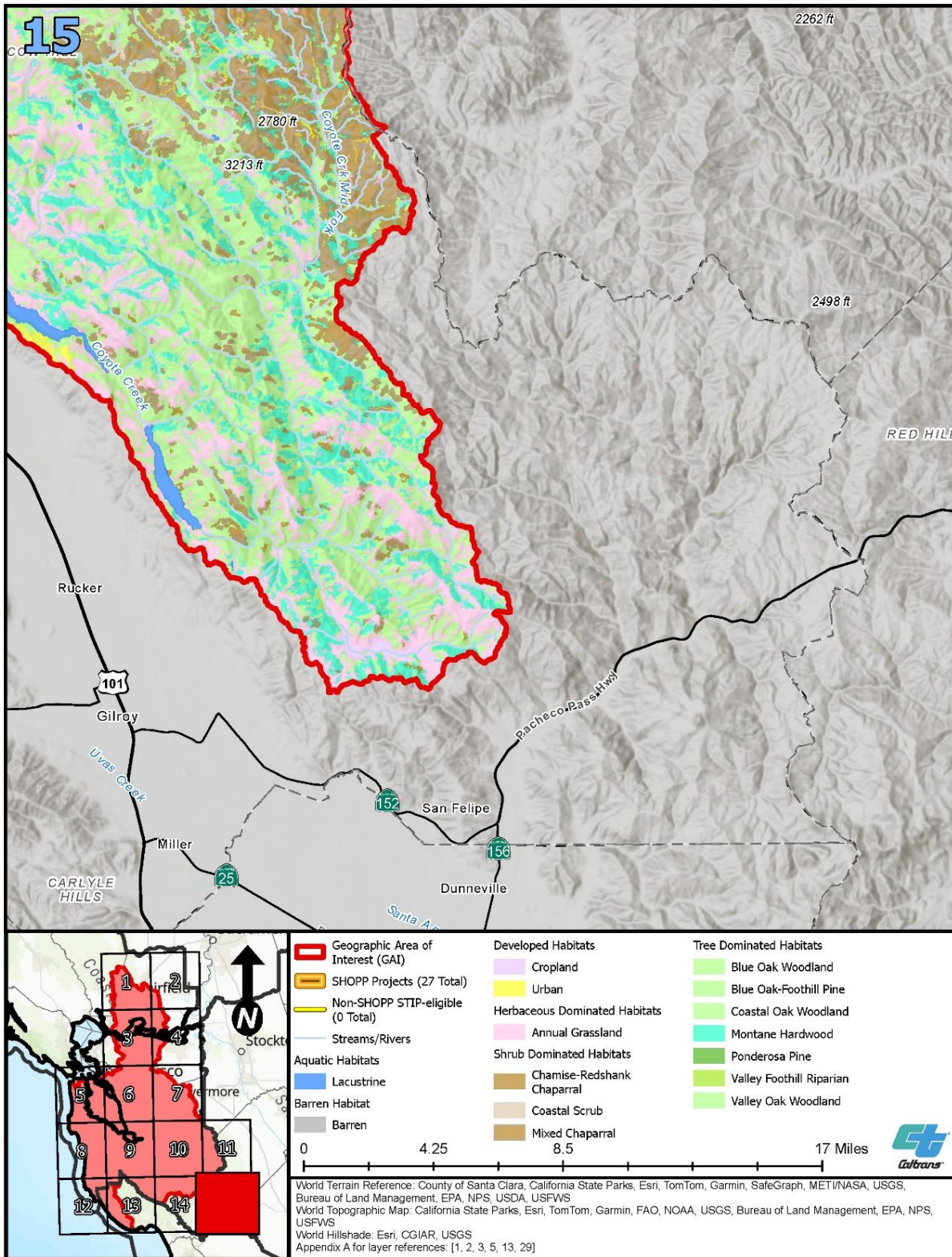












APPENDIX F: COMPLETE SAMNA SPECIES RESULTS

Complete terrestrial species SAMNA results for the GAI are provided in Tables F-1 through F-5, which include SAMNA results for the portions of the Central California Coast Ecoregion Section (starts on page F-3), Central California Coast Ranges Ecoregion Section (starts on page F-13), Great Valley Ecoregion Section (starts on page F-16), Northern California Coast Ecoregion Section (starts on page F-23), and Northern California Coast Ranges Ecoregion Section (starts on page F-27), within the GAI. There are no impacts forecast in the Northern California Interior Coast Ranges Ecoregion Section. The tables list the species for which the SAMNA has enough and the right kind of information to forecast potential impacts from transportation projects conceptualized in long-range transportation plans (Caltrans 2023). SAMNA results are only as accurate as their foundational data and have not been ground-truthed. Regarding these results:

- Species without CWHR system-supplied home ranges but identified by the California Natural Diversity Database as potentially present will be incorporated into the analysis of specific advance mitigation projects and future transportation projects.
- Subspecies may or may not have CWHR-supplied or other documented sources showing their home ranges. When a subspecies did not have home range information that could not be incorporated into the SAMNA model (that is, from a geographically based, available dataset), SAMNA results are provided at the species level, which may include both special-status and non-special-status species; therefore, the number of species with the potential to be affected may be overestimated.
- If impacts were estimated, additional information sources¹ were consulted to determine whether special-status subspecies are located within the GAI and the SAMNA results are usable for this analysis. Footnotes have been added to the tables where data input limitations and modeling assumptions resulted in identification of potential impacts on species or subspecies that are not present within the GAI.
- When no impacts are estimated for a specific habitat, for any species, the habitat was excluded from this appendix.
- When no impacts for a species are estimated for any habitat, the species is included. Based on available information, it is potentially present within the GAI, but not in the habitats forecast to be affected by transportation projects.

Total habitat impacts for each special-status species are indicated in the far-right column of the table. Total habitat impacts in the bottom row of the table indicate the total

¹ For plants, this includes the California Native Plant Society and the California Consortium of Herbaria. For federally listed species, this includes recent 5-year reviews, FWS species profiles, recovery plans, and Environmental Conservation Online System range maps. For birds, this includes *California Species of Special Concern* (Shuford and Gardali 2008). For amphibians and reptiles, this includes California Herps online, HCPs/NCCPs, and NPS documents.

anticipated impacts for each habitat type. These totals are not additive across all special-status species because each habitat type may provide suitable habitat for more than one special-status species or subspecies.

Habitats referenced in Tables F-1 through F-5 are mapped in Appendix E, *Land Cover Types*. The terrestrial species of mitigation need for this GAI include Alameda whipsnake (*Masticophis lateralis euryxanthus*), California red-legged frog (*Rana draytonii*), Central California Distinct Population Segment (“DPS”) of California tiger salamander (*Ambystoma californiense*), foothill yellow-legged frog (*Rana boylei*), and San Francisco gartersnake (*Thamnophis sirtalis tetrataenia*). Several other special-status species share habitat with these species of mitigation need and may be affected by Caltrans’ future transportation projects. Advance mitigation planning will consider the special-status species that co-occur in habitats that may also benefit from advance mitigation project planning and scoping to improve the conservation benefits of compensatory mitigation within the GAI. For example, advance mitigation established for California tiger salamander impacts may also provide mitigation to compensate for impacts on other species. The types of habitats for the species of mitigation need with the potential to be affected within the GAI, and the other special-status species that may share these habitats, were excerpted from Tables F-1 through F-5 and are provided in tables in Chapter 5, *Modeled Estimated Impacts* of the RAMNA main text.

References

- Caltrans (California Department of Transportation). 2023. *Statewide Advance Mitigation Needs Assessment Report*. State Highway Operation and Protection Program. Ten-Year Project Book. Second Quarter 2022/2023 Fiscal Year. In Process. Sacramento, California. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- Shuford, W. D., and T. Gardali, editors. 2008. *California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conversation Concern in California*.

Table F-1. Complete SAMNA Results for the Central California Coast Ecoregion Section within the GAI, by Land Cover (acres)

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Chamise- Redshank Chaparral	Closed- Cone Pine- Cypress	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Fresh Emergent Wetland	Lacustrine	Montane Hardwood - Conifer	Montane Riparian	Redwood	Saline Emergent Wetland	Valley Foothill Riparian	Valley Oak Woodland	Total
Plants	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Adobe sanicle ^a	<i>Sanicula maritima</i>	FS, SR	10.29	0.00	0.00	0.00	0.00	0.00	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.33
Baker's larkspur ^a	<i>Delphinium bakeri</i>	FE, SE	10.29	0.00	0.00	0.00	0.00	0.00	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.33
Beach layia ^a	<i>Layia carnosa</i>	FT, SE	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Beach spectaclepod ^a	<i>Dithyrea maritima</i>	ST	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Ben Lomond spineflower	<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	FE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.24	0.00	0.00	0.00	0.00	0.00	3.24
Butano Ridge cypress ^a	<i>Hesperocyparis</i> <i>abramsiana</i> var. <i>butanoensis</i>	FT, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.24	0.00	0.00	0.00	0.00	0.00	3.24
California seablite	<i>Suaeda californica</i>	FE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.42
Coast yellow leptosiphon	<i>Leptosiphon croceus</i>	SE	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Coastal dunes milk- vetch ^a	<i>Astragalus tener</i> var. <i>titi</i>	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Contra Costa goldfields ^a	<i>Lasthenia conjugens</i>	FE	10.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.29
Coyote ceanothus ^a	<i>Ceanothus ferrisiae</i>	FE	7.46	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.64
Crystal Springs fountain thistle ^a	<i>Cirsium fontinale</i> var. <i>fontinale</i>	FE, SE	7.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.46
Dudley's lousewort ^a	<i>Pedicularis dudleyi</i>	FS, SR	10.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.29
Dwarf goldenstar ^a	<i>Bloomeria humilis</i>	FS, SR	3.60	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47
Franciscan manzanita ^a	<i>Arctostaphylos</i> <i>franciscana</i>	FE	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Golden larkspur ^a	<i>Delphinium luteum</i>	FE, SR	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Gowen cypress ^a	<i>Hesperocyparis</i> <i>goveniana</i>	FT	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
Hearsts' ceanothus ^a	<i>Ceanothus</i> <i>hearstiorum</i>	FS, SR	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Chamise-Redshank Chaparral	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Fresh Emergent Wetland	Lacustrine	Montane Hardwood - Conifer	Montane Riparian	Redwood	Saline Emergent Wetland	Valley Foothill Riparian	Valley Oak Woodland	Total
Hearsts' manzanita ^a	<i>Arctostaphylos hookeri</i> ssp. <i>hearsstiorum</i>	SE	3.60	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47
Hickman's cinquefoil ^a	<i>Potentilla hickmanii</i>	FE, SE	0.00	0.00	0.00	0.00	0.63	0.00	2.87	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.63
La Graciosa thistle ^a	<i>Cirsium scariosum</i> var. <i>loncholepis</i>	FE, ST	3.60	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	6.89
Lompoc yerba santa ^a	<i>Eriodictyon capitatum</i>	FE, SR	0.00	0.00	0.00	0.00	0.63	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.49
Marin western flax ^a	<i>Hesperolinon congestum</i>	FT, ST	10.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.29
Maritime ceanothus ^a	<i>Ceanothus maritimus</i>	SR	3.60	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47
Marsh sandwort	<i>Arenaria paludicola</i>	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.42
Mason's lilaeopsis ^a	<i>Lilaeopsis masonii</i>	SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.09
Menzies' wallflower ^a	<i>Erysimum menziesii</i>	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Metcalf Canyon jewelflower ^a	<i>Streptanthus albidus</i> ssp. <i>albidus</i>	FE	7.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.46
Monterey clover ^a	<i>Trifolium trichocalyx</i>	FE, SE	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
Monterey gilia ^a	<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	FE, ST	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Monterey spineflower ^a	<i>Chorizanthe pungens</i> var. <i>pungens</i>	FT, FS	10.29	0.00	0.00	0.00	0.00	0.00	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.33
Morro manzanita ^a	<i>Arctostaphylos morroensis</i>	FT	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Nipomo Mesa lupine ^a	<i>Lupinus nipomensis</i>	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Pacific Grove clover ^a	<i>Trifolium polyodon</i>	FS, SR	3.60	0.00	0.00	0.00	0.63	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.09
Pacific manzanita	<i>Arctostaphylos pacifica</i>	SE	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Pallid manzanita ^a	<i>Arctostaphylos pallida</i>	FT, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
Pismo clarkia ^a	<i>Clarkia speciosa</i> ssp. <i>immaculata</i>	FE, SR	3.60	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.23

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Chamise- Redshank Chaparral	Closed- Cone Pine- Cypress	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Fresh Emergent Wetland	Lacustrine	Montane Hardwood - Conifer	Montane Riparian	Redwood	Saline Emergent Wetland	Valley Foothill Riparian	Valley Oak Woodland	Total
Point Reyes blennosperma ^a	<i>Blennosperma nanum</i> var. <i>robustum</i>	SR	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Point Reyes meadowfoam ^a	<i>Limnanthes douglasii</i> ssp. <i>sulphurea</i>	SE	3.60	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.60
Presidio clarkia ^a	<i>Clarkia franciscana</i>	FE, SE	10.29	0.00	0.00	0.00	0.00	0.00	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.33
Presidio manzanita ^a	<i>Arctostaphylos montana</i> ssp. <i>ravenii</i>	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Robust spineflower	<i>Chorizanthe robusta</i> var. <i>robusta</i>	FE	0.00	0.00	0.00	0.00	0.00	0.00	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.04
Rock sanicle ^a	<i>Sanicula saxatilis</i>	SR	7.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.46
Roderick's fritillary ^a	<i>Fritillaria roderickii</i>	SE	10.29	0.00	0.00	0.00	0.00	0.00	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.33
Salt marsh bird's-beak ^a	<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	FE, SE, FS	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	3.29
San Bruno Mountain manzanita	<i>Arctostaphylos imbricata</i>	SE	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
San Francisco lessingia	<i>Lessingia germanorum</i>	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.04
San Francisco popcornflower	<i>Plagiobothrys diffusus</i>	SE	10.29	0.00	0.00	0.00	0.00	0.00	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.33
San Mateo thorn-mint	<i>Acanthomintha duttonii</i>	FE, SE	10.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.29
San Mateo woolly sunflower ^a	<i>Eriophyllum latilobum</i>	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	3.24	0.00	0.00	0.00	0.00	0.00	3.41
Santa Clara Valley dudleya ^a	<i>Dudleya abramsii</i> ssp. <i>setchellii</i>	FE	7.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.46
Santa Cruz cypress ^a	<i>Hesperocyparis abramsiana</i> var. <i>abramsiana</i>	FT, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.24	0.00	0.00	0.00	0.00	0.00	3.24
Santa Cruz tarplant ^a	<i>Holocarpha macradenia</i>	FT, SE	3.60	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47
Santa Cruz wallflower ^a	<i>Erysimum teretifolium</i>	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.24	0.00	0.00	0.00	0.00	0.00	3.24

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Chamise-Redshank Chaparral	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Fresh Emergent Wetland	Lacustrine	Montane Hardwood - Conifer	Montane Riparian	Redwood	Saline Emergent Wetland	Valley Foothill Riparian	Valley Oak Woodland	Total
Scotts Valley polygonum ^a	<i>Polygonum hickmanii</i>	FE, SE	7.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.46
Scotts Valley Spineflower ^a	<i>Chorizanthe robusta</i> var. <i>hartwegii</i>	FE	7.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.46
Seaside bird's-beak ^a	<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	FS, SE	0.00	0.00	0.00	0.00	0.63	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.49
Soft bird's-beak ^a	<i>Chloropyron molle</i> ssp. <i>molle</i>	FE, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.42
Sonoma alopecurus ^a	<i>Alopecurus aequalis</i> var. <i>sonomensis</i>	FE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.37
Sonoma spineflower ^a	<i>Chorizanthe valida</i>	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Sonoma sunshine ^a	<i>Blennosperma bakeri</i>	FE, SE	7.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.46
Surf thistle ^a	<i>Cirsium rhotophilum</i>	FS, ST	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Tiburon jewelflower ^a	<i>Streptanthus glandulosus</i> ssp. <i>niger</i>	FE, SE	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.60
Tiburon mariposa lily ^a	<i>Calochortus tiburonensis</i>	FT, ST	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.60
Tiburon paintbrush ^a	<i>Castilleja affinis</i> var. <i>neglecta</i>	FE, ST	7.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.46
Tidestrom's lupine ^a	<i>Lupinus tidestromii</i>	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.87
Two-fork clover	<i>Trifolium amoenum</i>	FE	10.29	0.00	0.00	0.00	0.00	0.00	3.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.33
White-rayed pentachaeta ^a	<i>Pentachaeta bellidiflora</i>	FE, SE	10.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.29
Yadon's rein orchid ^a	<i>Piperia yadonii</i>	FE	0.00	0.00	0.00	0.00	0.63	0.00	2.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.49
Invertebrates	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Bay checkerspot butterfly	<i>Euphydryas editha bayensis</i>	FT	6.48	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.54
Mission blue butterfly	<i>Plebejus icarioides missionensis</i>	FE	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Chamise-Redshank Chaparral	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Fresh Emergent Wetland	Lacustrine	Montane Hardwood - Conifer	Montane Riparian	Redwood	Saline Emergent Wetland	Valley Foothill Riparian	Valley Oak Woodland	Total
Myrtle's silverspot butterfly	<i>Speyeria zerene myrtleae</i>	FE	0.00	0.67	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07
San Bruno elfin butterfly	<i>Callophrys mossii bayensis</i>	FE	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09
Amphibians	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
California newt ^b	<i>Taricha torosa</i>	SSC	10.29	0.00	0.23	0.00	0.00	1.30	3.04	0.17	0.00	0.00	3.54	0.09	0.00	0.00	0.23	0.27	19.16
California red-legged frog	<i>Rana draytonii</i>	FT, SSC	10.29	0.00	0.23	0.00	0.63	1.30	3.04	0.17	0.14	0.28	3.54	0.09	1.22	0.00	0.23	0.27	21.42
California tiger salamander	<i>Ambystoma californiense</i>	FE, FT, ST	6.53	0.00	0.23	0.00	0.00	1.17	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.02	0.27	8.36
Ensatina ^c	<i>Ensatina eschscholtzii</i>	FS	0.00	0.00	0.23	0.00	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	10.71
Foothill yellow-legged frog	<i>Rana boylei</i>	FCE, FCT, FS, SE, ST, SSC	10.29	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	22.40
Reptiles	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Blainville's horned lizard	<i>Phrynosoma blainvillii</i>	FS, SSC	0.12	0.00	0.23	0.02	0.00	0.48	0.11	0.00	0.00	0.00	2.75	0.00	0.00	0.00	0.00	0.00	3.70
California mountain kingsnake	<i>Lampropeltis zonata</i>	None	9.74	0.00	0.00	0.00	0.63	0.70	0.00	0.17	0.00	0.00	3.05	0.09	1.22	0.00	0.21	0.00	15.81
Common gartersnake	<i>Thamnophis sirtalis</i>	SSC	10.29	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.14	0.28	3.54	0.09	1.22	0.00	0.23	0.27	22.82
Gophersnake	<i>Pituophis catenifer</i>	None	10.29	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.14	0.00	3.54	0.09	1.22	0.00	0.23	0.27	22.54
Northern rubber boa	<i>Charina bottae</i>	None	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.00	5.88
Ring-necked snake ^d	<i>Diadophis punctatus</i>	FS, SSC	10.29	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.14	0.00	3.54	0.09	0.00	0.00	0.23	0.27	21.32
Striped racer	<i>Masticophis [Coluber] lateralis</i>	FT, ST	0.00	0.00	0.23	1.40	0.00	1.30	3.04	0.17	0.00	0.00	3.54	0.09	0.00	0.00	0.23	0.27	10.27
Western skink ^e	<i>Plestiodon skiltonianus</i>	FS	10.29	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	22.40
Birds	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Alameda song sparrow	<i>Melospiza melodia pusillula</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.50

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Chamise-Redshank Chaparral	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Fresh Emergent Wetland	Lacustrine	Montane Hardwood - Conifer	Montane Riparian	Redwood	Saline Emergent Wetland	Valley Foothill Riparian	Valley Oak Woodland	Total
American white pelican ^f	<i>Pelecanus erythrorhynchos</i>	SSC	0.00	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	2.23
Ashy storm-petrel ^g	<i>Oceanodroma homochroa</i>	FS, SSC	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
Bald eagle	<i>Haliaeetus leucocephalus</i>	FS, SE, SFP, SFS	10.29	1.95	0.23	1.40	0.00	1.30	3.04	0.17	0.14	0.28	3.54	0.09	1.22	0.42	0.23	0.27	24.56
Barrow's goldeneye ^h	<i>Bucephala islandica</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.28
Bell's sparrow ⁱ	<i>Artemisiospiza belli</i>	FT, SSC	0.00	0.00	0.00	1.40	0.00	0.00	2.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.32
Bewick's wren ^j	<i>Thryomanes bewickii</i>	SSC	0.00	0.00	0.23	1.40	0.00	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	11.48
Black rail	<i>Laterallus jamaicensis</i>	FS, ST, SFP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.28	0.00	0.00	0.00	0.42	0.00	0.00	0.84
Black storm-petrel ^k	<i>Oceanodroma melania</i>	SSC	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
Black swift	<i>Cypseloides niger</i>	SSC	3.46	1.93	0.00	0.00	0.63	0.12	0.00	0.17	0.00	0.00	0.31	0.00	0.05	0.00	0.21	0.00	6.87
Bryant's savannah sparrow	<i>Passerculus sandwichensis alaudinus</i>	SSC	9.74	0.00	0.00	1.40	0.00	0.70	3.04	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	15.27
Burrowing owl	<i>Athene cunicularia</i>	FS, SSC	10.15	1.38	0.23	1.40	0.00	0.88	2.78	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.27	17.47
California Ridgway's [clapper] rail	<i>Rallus longirostris obsoletus</i>	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.28	0.00	0.00	0.00	0.42	0.00	0.00	0.84
California quail ^l	<i>Callipepla californica</i>	SSC	10.29	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	22.40
California towhee ^m	<i>Pipilo crissalis</i>	None	0.00	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	0.00	0.00	0.23	0.27	10.90
Ridgway's [Clapper] rail ⁿ	<i>Rallus longirostris</i>	FE, FS, SE, ST, SSC, SFP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.28	0.00	0.00	0.00	0.42	0.00	0.00	0.84
Common loon ^o	<i>Gavia immer</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.28
Common yellowthroat	<i>Geothlypis trichas</i>	SSC	10.29	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.14	0.00	0.00	0.09	0.00	0.42	0.23	0.00	11.34
Fork-tailed storm-petrel ^p	<i>Oceanodroma furcata</i>	FS, SSC	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
Golden eagle	<i>Aquila chrysaetos</i>	FS, SFS, SFP	10.29	1.95	0.23	1.40	0.00	1.30	3.04	0.17	0.14	0.00	3.54	0.09	1.22	0.00	0.23	0.27	23.86

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Chamise-Redshank Chaparral	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Fresh Emergent Wetland	Lacustrine	Montane Hardwood - Conifer	Montane Riparian	Redwood	Saline Emergent Wetland	Valley Foothill Riparian	Valley Oak Woodland	Total
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC	9.74	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.91
Great blue heron	<i>Ardea herodias</i>	SFS	10.29	0.00	0.23	0.00	0.63	1.30	3.04	0.17	0.14	0.28	3.54	0.09	1.22	0.42	0.23	0.27	21.84
Great egret	<i>Ardea alba</i>	SFS	10.29	0.00	0.23	0.00	0.63	1.30	0.00	0.17	0.14	0.28	3.54	0.09	1.22	0.42	0.23	0.27	18.80
Hutton's vireo ^q	<i>Vireo huttoni</i>	SSC	0.00	0.00	0.23	1.40	0.05	1.30	0.58	0.17	0.00	0.00	3.24	0.09	1.22	0.00	0.12	0.27	8.65
Least tern	<i>Sternula antillarum</i>	FE, SE, SFP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.42
Loggerhead shrike	<i>Lanius ludovicianus</i>	SE, SSC	10.29	1.95	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	0.00	0.00	0.23	0.27	23.13
Long-eared owl	<i>Asio otus</i>	SSC	10.29	0.00	0.23	1.40	0.00	1.30	0.00	0.17	0.00	0.00	3.54	0.09	0.00	0.00	0.23	0.27	17.52
Marsh wren ^r	<i>Cistothorus palustris</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.09	0.00	0.42	0.23	0.00	0.89
Northern harrier	<i>Circus cyaneus</i>	SSC	10.29	1.95	0.23	1.40	0.63	1.30	3.04	0.17	0.14	0.28	3.54	0.09	1.22	0.42	0.23	0.27	25.19
Olive-sided flycatcher	<i>Contopus cooperi</i>	SSC	0.00	0.00	0.00	1.40	0.00	0.00	0.00	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.00	0.00	6.42
Osprey	<i>Pandion haliaetus</i>	None	10.29	1.95	0.23	0.00	0.63	1.30	0.00	0.17	0.14	0.28	3.54	0.09	1.22	0.42	0.23	0.27	20.75
Peregrine falcon	<i>Falco peregrinus</i>	SFS, SFP	10.29	1.95	0.23	1.40	0.63	1.30	3.04	0.17	0.14	0.28	3.54	0.09	1.22	0.42	0.23	0.27	25.19
Purple martin	<i>Progne subis</i>	SSC	9.74	0.00	0.00	0.00	0.63	0.70	0.00	0.17	0.00	0.00	3.05	0.09	1.22	0.00	0.21	0.00	15.81
Redhead	<i>Aythya americana</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.28
Red-winged blackbird ^s	<i>Agelaius phoeniceus</i>	SSC	10.29	0.00	0.00	0.00	0.00	0.00	3.04	0.17	0.14	0.00	0.00	0.09	0.00	0.42	0.23	0.00	14.39
Rufous-crowned sparrow ^t	<i>Aimophila ruficeps</i>	SSC	10.29	0.00	0.00	1.40	0.00	0.00	3.04	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	15.13
Savannah sparrow ^u	<i>Passerculus sandwichensis</i>	SE, SSC	10.29	0.00	0.23	1.40	0.00	1.30	3.04	0.17	0.00	0.00	0.00	0.00	0.00	0.42	0.23	0.27	17.35
Short-eared owl	<i>Asio flammeus</i>	SSC	7.71	0.00	0.00	1.16	0.00	0.13	2.92	0.17	0.14	0.00	1.11	0.09	0.16	0.42	0.21	0.00	14.23
Snowy plover	<i>Charadrius nivosus</i>	FT, SSC	0.00	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	2.23
Song sparrow ^v	<i>Melospiza melodia</i>	SSC	10.29	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.14	0.28	3.54	0.09	1.22	0.42	0.23	0.27	23.25
Spotted towhee ^w	<i>Pipilo maculatus</i>	SSC	0.00	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	12.11

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Chamise- Redshank Chaparral	Closed- Cone Pine- Cypress	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Fresh Emergent Wetland	Lacustrine	Montane Hardwood - Conifer	Montane Riparian	Redwood	Saline Emergent Wetland	Valley Foothill Riparian	Valley Oak Woodland	Total
Tricolored blackbird	<i>Agelaius tricolor</i>	FS, ST, SSC	10.29	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.14	0.00	0.00	0.00	0.00	0.00	0.23	0.00	10.83
Vaux's swift	<i>Chaetura vauxi</i>	SSC	0.00	0.00	0.00	0.00	0.63	0.72	0.00	0.17	0.00	0.00	2.61	0.00	0.98	0.00	0.16	0.00	5.27
White-tailed kite	<i>Elanus leucurus</i>	FS, SFP	10.29	1.95	0.23	1.40	0.00	1.30	3.04	0.17	0.14	0.00	0.00	0.00	1.22	0.42	0.23	0.27	20.65
Yellow warbler	<i>Setophaga petechia</i>	SSC	0.00	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	12.11
Yellow-breasted chat	<i>Icteria virens</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.02
Mammals	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
American badger	<i>Taxidea taxus</i>	SSC	10.29	1.95	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	24.35
Black-tailed jackrabbit	<i>Lepus californicus</i>	None	10.29	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	22.40
Broad-footed mole ^x	<i>Scapanus latimanus</i>	SSC	10.29	0.00	0.23	0.00	0.00	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	20.37
Brush rabbit ^y	<i>Sylvilagus bachmani</i>	FE, SE	10.29	0.00	0.23	1.40	0.00	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	21.77
California pocket mouse	<i>Chaetodipus californicus</i>	None	3.53	0.00	0.23	0.12	0.00	1.30	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	5.56
California sea-lion	<i>Zalophus californianus</i>	None	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
California vole	<i>Microtus californicus</i>	FE, FS, SE, SSC	10.29	0.00	0.23	0.00	0.00	1.30	3.04	0.17	0.14	0.00	3.54	0.09	1.22	0.42	0.23	0.27	20.93
Deer mouse ^z	<i>Peromyscus maniculatus</i>	SSC	10.29	1.95	0.23	1.40	0.63	1.30	3.04	0.17	0.14	0.00	3.54	0.09	1.22	0.42	0.23	0.27	24.91
Dusky-footed woodrat	<i>Neotoma fuscipes</i>	FE, SSC	0.00	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	12.11
Fringed myotis	<i>Myotis thysanodes</i>	FS	10.29	1.95	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.28	3.54	0.09	1.22	0.00	0.23	0.27	24.63
Guadalupe fur-seal ^{aa}	<i>Arctocephalus townsendi</i>	FT, ST, SFP	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
Harbor seal	<i>Phoca vitulina</i>	None	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
Heermann's kangaroo rat ^{bb}	<i>Dipodomys heermanni</i>	None	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Kit fox ^{cc}	<i>Vulpes macrotis</i>	FE, ST	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.05

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Chamise-Redshank Chaparral	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Fresh Emergent Wetland	Lacustrine	Montane Hardwood - Conifer	Montane Riparian	Redwood	Saline Emergent Wetland	Valley Foothill Riparian	Valley Oak Woodland	Total
Long-eared myotis	<i>Myotis evotis</i>	FS	0.00	1.95	0.23	1.40	0.63	1.30	3.04	0.17	0.14	0.28	3.54	0.09	1.22	0.00	0.23	0.27	14.48
Mountain lion ^{dd}	<i>Puma concolor</i>	SSC	10.29	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	22.40
Narrow-faced kangaroo rat	<i>Dipodomys venustus</i>	None	7.31	0.00	0.23	0.39	0.00	1.26	0.17	0.00	0.00	0.00	0.00	0.00	1.22	0.00	0.00	0.27	10.84
Northern (steller) sea-lion	<i>Eumetopias jubatus</i>	SSC	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
Northern elephant seal	<i>Mirounga angustirostris</i>	None	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
Northern fur-seal	<i>Callorhinus ursinus</i>	None	0.00	1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93
Ornate shrew	<i>Sorex ornatus</i>	FE, SSC	10.29	0.00	0.23	0.00	0.00	1.30	3.04	0.17	0.14	0.00	3.54	0.09	0.00	0.42	0.23	0.27	19.72
Pallid bat	<i>Antrozous pallidus</i>	FS, SSC	10.29	1.95	0.23	1.40	0.00	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	23.72
Red fox ^{ee}	<i>Vulpes vulpes</i>	FE, FS, ST	5.91	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.29
Ringtail	<i>Bassariscus astutus</i>	SFP	10.29	1.95	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	24.35
Salt-marsh harvest mouse	<i>Reithrodontomys raviventris</i>	FE, SE, SFP	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.91
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	FE, ST	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.05
Santa Cruz kangaroo rat	<i>Dipodomys venustus venustus</i>	None	7.31	0.00	0.23	0.39	0.00	1.26	0.17	0.00	0.00	0.00	0.00	0.00	1.22	0.00	0.00	0.27	10.84
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	FS, SSC	10.29	1.95	0.23	1.40	0.00	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	23.72
Vagrant shrew	<i>Sorex vagrans</i>	SSC	10.21	0.00	0.00	0.00	0.00	0.72	3.04	0.17	0.14	0.00	0.75	0.09	0.28	0.42	0.21	0.27	16.30
Western mastiff bat	<i>Eumops perotis</i>	FS, SSC	10.29	1.95	0.23	1.40	0.63	1.30	3.04	0.17	0.14	0.00	3.54	0.09	0.00	0.00	0.23	0.27	23.27
Western red bat	<i>Lasiurus blossevillei</i>	SSC	10.29	0.00	0.23	1.40	0.00	1.30	3.04	0.17	0.14	0.28	3.54	0.09	1.22	0.00	0.23	0.27	22.19
Western spotted skunk ^{ff}	<i>Spilogale gracilis</i>	SSC	10.29	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.00	0.00	3.54	0.09	1.22	0.00	0.23	0.27	22.40
Yuma myotis	<i>Myotis yumanensis</i>	FS	10.29	0.00	0.23	1.40	0.63	1.30	3.04	0.17	0.14	0.28	3.54	0.09	1.22	0.00	0.23	0.27	22.82

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Chamise- Redshank Chaparral	Closed- Cone Pine- Cypress	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Fresh Emergent Wetland	Lacustrine	Montane Hardwood - Conifer	Montane Riparian	Redwood	Saline Emergent Wetland	Valley Foothill Riparian	Valley Oak Woodland	Total
Total		Not applicable	10.29	1.95	0.23	1.40	0.63	1.30	3.04	0.17	0.14	0.28	3.54	0.09	1.22	0.42	0.23	0.27	25.19

Notes: FCE = federal candidate endangered; FCT = federal candidate threatened; FE = federally endangered; FS = federally sensitive (USFS and/or BLM sensitive); FT = federally threatened; SE = state endangered; SFP = state fully protected; SFS = state fire sensitive; SR = state rare; SSC = species of special concern (CDFW); ST = state threatened

^a Plant species does not occur in the Central California Coast Ecoregion Section within the GAI.

^b California newt: Only the Coast Range population is special status, and it does not occur within the GAI (only occurs from Monterey County south).

^c Ensatina: Only the yellow-blotched and large-blotched subspecies are considered special status and they do not occur within the GAI (neither occur north of Kern County).

^d Ring-necked snake: Only the Regal (Great Basin), San Bernardino, and San Diego subspecies are considered special status and they do not occur within the GAI (only occur from Inyo County south).

^e Western skink: Only the coast subspecies is special status, and it does not occur within the GAI (does not occur north of Riverside County).

^f American white pelican: Only considered special status in nesting colony portion of range in northeastern part of state. Does not nest within the GAI.

^g Ashy storm-petrel: Only nesting colonies considered special status and only nests on offshore islands. Does not nest within the GAI.

^h Barrow's goldeneye: Only considered special status in nesting portion of range in northeastern part of state (and may be extirpated as a breeder in the state of California). Does not nest within the GAI.

ⁱ Bell's sparrow: Only the San Clemente subspecies is considered special status, and it does not occur within the GAI (restricted to San Clemente Island).

^j Bewick's wren: Only the San Clemente subspecies is special status, and it does not occur within the GAI (was endemic to San Clemente Island and is now extinct).

^k Black storm-petrel: Only nesting colonies considered special status and only nests on offshore islands. Does not nest within the GAI.

^l California quail: Only the Catalina subspecies is considered special status, and it does not occur within the GAI (restricted to the Channel Islands).

^m California towhee: Only the Inyo subspecies is considered special status, and it does not occur within the GAI (restricted to Inyo, Kern, and San Bernardino Counties).

ⁿ Ridgway's [clapper] rail: California Ridgway's [clapper] rail (listed above this species in the table) is the only special-status subspecies present within the GAI.

^o Common loon: Only considered special status in nesting portion of range in the northeastern part of state. Does not nest within the GAI.

^p Fork-tailed storm-petrel: Only nesting colonies considered special status and only nests on offshore islands. Does not nest within the GAI.

^q Hutton's vireo: Only the Catalina subspecies is considered special status, and it does not occur within the GAI (restricted to Santa Catalina Island).

^r Marsh wren: Only the Clark's subspecies is considered special status, and it does not occur within the GAI (does not occur north of Los Angeles County).

^s Red-winged blackbird: Only the Kern subspecies is considered special status, and it does not occur within the GAI (restricted to Kern County).

^t Rufous-crowned sparrow: Only the Santa Cruz Island subspecies is special status, and it does not occur within the GAI (restricted to Channel Islands).

^u Savannah sparrow: Bryant's savannah sparrow (listed above this species in the table) is the only special-status subspecies present within the GAI.

^v Song sparrow: Alameda, Modesto, and Samuel's subspecies (listed above this species in the table), as well as Suisun subspecies (listed below this species in the table) comprise the four special-status subspecies present within the GAI.

^w Spotted towhee: Only the San Clemente subspecies is special status, and it only occurs on the Channel Islands.

^x Broad-footed mole: Alameda Island subspecies (listed above this species in the table) is the only special-status subspecies present within the GAI.

^y Brush rabbit: Only the riparian subspecies is special status, and it does not occur within the GAI (restricted to San Joaquin and Stanislaus Counties).

^z Deer mouse: Only the Anacapa Island and San Clemente subspecies are considered special-status, and neither occurs within the GAI (restricted to the Channel Islands).

^{aa} Guadalupe fur-seal: Only occurs rarely on/off rocky coastline portions of GAI from San Francisco to Santa Cruz.

^{bb} Heermann's kangaroo rat: Only the Morro Bay subspecies is special status, and it does not occur within the GAI (endemic to San Luis Obispo County).

^{cc} Kit fox: San Joaquin subspecies (listed below this species in the table) is the only special-status subspecies present within the GAI.

^{dd} Mountain lion: Only the Yuma subspecies is considered special status, and it does not occur within the GAI (restricted to the Lower Colorado River Valley).

^{ee} Red fox: Only the Sierra Nevada subspecies is considered special status, and it does not occur within the GAI (restricted to the Sierra Nevada and Cascade Ranges).

^{ff} Western spotted skunk: Only the Channel Islands subspecies is special status, and it does not occur within the GAI (restricted to Channel Islands).

**Table F-2. Complete SAMNA Results for the Central California Coast Ranges
Ecoregion Section within the GAI, by Land Cover (acres)**

Common Name	Scientific Name	Status	Annual Grassland (acres)	Valley Foothill Riparian (acres)	Total (acres)
Plants	See below	See below	See below	See below	See below
Adobe sanicle ^a	<i>Sanicula maritima</i>	FS, SR	0.43	0.00	0.43
Baker's larkspur ^a	<i>Delphinium bakeri</i>	FE, SE	0.43	0.00	0.43
Contra Costa goldfields	<i>Lasthenia conjugens</i>	FE	0.43	0.00	0.43
Coyote ceanothus	<i>Ceanothus ferrisiae</i>	FE	0.43	0.00	0.43
Crystal Springs fountain thistle	<i>Cirsium fontinale</i> var. <i>fontinale</i>	FE, SE	0.43	0.00	0.43
Dudley's lousewort	<i>Pedicularis dudleyi</i>	FS, SR	0.43	0.00	0.43
Marin western flax	<i>Hesperolinon congestum</i>	FT, ST	0.43	0.00	0.43
Metcalf Canyon jewelflower	<i>Streptanthus albidus</i> ssp. <i>albidus</i>	FE	0.43	0.00	0.43
Monterey spineflower ^a	<i>Chorizanthe pungens</i> var. <i>pungens</i>	FT, FS	0.43	0.00	0.43
Presidio clarkia	<i>Clarkia franciscana</i>	FE, SE	0.43	0.00	0.43
Rock sanicle	<i>Sanicula saxatilis</i>	SR	0.43	0.00	0.43
Roderick's fritillary ^a	<i>Fritillaria roderickii</i>	SE	0.43	0.00	0.43
San Francisco popcornflower	<i>Plagiobothrys diffusus</i>	SE	0.43	0.00	0.43
San Mateo thorn-mint	<i>Acanthomintha duttonii</i>	FE, SE	0.43	0.00	0.43
Santa Clara Valley dudleya	<i>Dudleya abramsii</i> ssp. <i>setchellii</i>	FE	0.43	0.00	0.43
Scotts Valley polygonum ^a	<i>Polygonum hickmanii</i>	FE, SE	0.43	0.00	0.43
Scotts Valley spineflower ^a	<i>Chorizanthe robusta</i> var. <i>hartwegii</i>	FE	0.43	0.00	0.43
Sonoma alopecurus ^a	<i>Alopecurus aequalis</i> var. <i>sonomensis</i>	FE	0.00	0.99	0.99
Sonoma sunshine ^a	<i>Blennosperma bakeri</i>	FE, SE	0.43	0.00	0.43

Common Name	Scientific Name	Status	Annual Grassland (acres)	Valley Foothill Riparian (acres)	Total (acres)
Tiburon paintbrush	<i>Castilleja affinis</i> var. <i>neglecta</i>	FE, ST	0.43	0.00	0.43
Two-fork clover ^a	<i>Trifolium amoenum</i>	FE	0.43	0.00	0.43
White-rayed pentachaeta	<i>Pentachaeta bellidiflora</i>	FE, SE	0.43	0.00	0.43
Amphibians	See below	See below	See below	See below	See below
California newt ^b	<i>Taricha torosa</i>	SSC	0.43	0.99	1.42
California red-legged frog	<i>Rana draytonii</i>	FT, SSC	0.43	0.99	1.42
California tiger salamander	<i>Ambystoma californiense</i>	FE, FT, ST	0.43	0.99	1.42
Ensatina ^c	<i>Ensatina eschscholtzii</i>	FS	0.00	0.99	0.99
Foothill yellow-legged frog	<i>Rana boylei</i>	FCE, FCT, FS, SE, ST, SSC	0.43	0.99	1.42
Reptiles	See below	See below	See below	See below	See below
Blainville's horned lizard	<i>Phrynosoma blainvillii</i>	FS, SSC	0.43	0.99	1.42
California legless lizard	<i>Anniella pulchra</i>	SSC	0.00	0.99	0.99
Coachwhip	<i>Coluber flagellum</i>	SSC	0.43	0.99	1.42
Common gartersnake ^d	<i>Thamnophis sirtalis</i>	SSC	0.43	0.99	1.42
Gophersnake	<i>Pituophis catenifer</i>	None	0.43	0.99	1.42
Northern rubber boa	<i>Charina bottae</i>	None	0.00	0.99	0.99
Ring-necked snake ^e	<i>Diadophis punctatus</i>	FS, SSC	0.43	0.99	1.42
Striped racer	<i>Masticophis [Coluber] lateralis</i>	FT, ST	0.00	0.99	0.99
Western skink ^f	<i>Plestiodon skiltonianus</i>	FS	0.43	0.99	1.42
Birds	See below	See below	See below	See below	See below
Bald eagle	<i>Haliaeetus leucocephalus</i>	FS, SE, SFP, SFS	0.43	0.99	1.42
Bewick's wren ^g	<i>Thryomanes bewickii</i>	SSC	0.00	0.99	0.99

Common Name	Scientific Name	Status	Annual Grassland (acres)	Valley Foothill Riparian (acres)	Total (acres)
Burrowing owl	<i>Athene cunicularia</i>	FS, SSC	0.43	0.99	1.42
California quail ^h	<i>Callipepla californica</i>	SSC	0.43	0.99	1.42
California towhee ⁱ	<i>Pipilo crissalis</i>	None	0.00	0.99	0.99
Common yellowthroat ^j	<i>Geothlypis trichas</i>	SSC	0.43	0.99	1.42
Golden eagle	<i>Aquila chrysaetos</i>	FS, SFS, SFP	0.43	0.99	1.42
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC	0.43	0.00	0.43
Great blue heron	<i>Ardea herodias</i>	SFS	0.43	0.99	1.42
Hutton's vireo ^k	<i>Vireo huttoni</i>	SSC	0.00	0.99	0.99
Loggerhead shrike	<i>Lanius ludovicianus</i>	SE, SSC	0.43	0.99	1.42
Long-eared owl	<i>Asio otus</i>	SSC	0.43	0.99	1.42
Marsh wren ^l	<i>Cistothorus palustris</i>	SSC	0.00	0.99	0.99
Northern harrier	<i>Circus cyaneus</i>	SSC	0.43	0.99	1.42
Peregrine falcon	<i>Falco peregrinus</i>	SFS, SFP	0.43	0.99	1.42
Red-winged blackbird ^m	<i>Agelaius phoeniceus</i>	SSC	0.43	0.99	1.42
Rufous-crowned sparrow ⁿ	<i>Aimophila ruficeps</i>	SSC	0.43	0.99	1.42
Savannah sparrow ^o	<i>Passerculus sandwichensis</i>	SE, SSC	0.43	0.99	1.42
Song sparrow ^p	<i>Melospiza melodia</i>	SSC	0.43	0.99	1.42
Spotted towhee ^q	<i>Pipilo maculatus</i>	SSC	0.00	0.99	0.99
Tricolored blackbird	<i>Agelaius tricolor</i>	FS, ST, SSC	0.43	0.99	1.42
White-tailed kite	<i>Elanus leucurus</i>	FS, SFP	0.43	0.99	1.42
Mammals	See below	See below	See below	See below	See below
American badger	<i>Taxidea taxus</i>	SSC	0.43	0.99	1.42
Black-tailed jackrabbit	<i>Lepus californicus</i>	None	0.43	0.99	1.42

Common Name	Scientific Name	Status	Annual Grassland (acres)	Valley Foothill Riparian (acres)	Total (acres)
Broad-footed mole ^r	<i>Scapanus latimanus</i>	SSC	0.43	0.99	1.42
Brush rabbit ^s	<i>Sylvilagus bachmani</i>	FE, SE	0.43	0.99	1.42
California pocket mouse	<i>Chaetodipus californicus</i>	None	0.43	0.00	0.43
California vole	<i>Microtus californicus</i>	FE, FS, SE, SSC	0.43	0.99	1.42
Deer mouse ^t	<i>Peromyscus maniculatus</i>	SSC	0.43	0.99	1.42
Dusky-footed woodrat	<i>Neotoma fuscipes</i>	FE, SSC	0.00	0.99	0.99
Fringed myotis	<i>Myotis thysanodes</i>	FS	0.43	0.99	1.42
Heermann's kangaroo rat ^u	<i>Dipodomys heermanni</i>	None	0.43	0.00	0.43
Kit fox ^v	<i>Vulpes macrotis</i>	FE, ST	0.43	0.99	1.42
Long-eared myotis	<i>Myotis evotis</i>	FS	0.00	0.99	0.99
Mountain lion ^w	<i>Puma concolor</i>	SSC	0.43	0.99	1.42
Ornate shrew	<i>Sorex ornatus</i>	FE, SSC	0.43	0.99	1.42
Pallid bat	<i>Antrozous pallidus</i>	FS, SSC	0.43	0.99	1.42
Ringtail	<i>Bassariscus astutus</i>	SFP	0.43	0.99	1.42
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	FE, ST	0.43	0.99	1.42
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	FS, SSC	0.43	0.99	1.42
Western mastiff bat	<i>Eumops perotis</i>	FS, SSC	0.43	0.99	1.42
Western red bat	<i>Lasiurus blossevillei</i>	SSC	0.43	0.99	1.42
Western spotted skunk ^x	<i>Spilogale gracilis</i>	SSC	0.43	0.99	1.42
Yuma myotis	<i>Myotis yumanensis</i>	FS	0.43	0.99	1.42
Total	Not applicable	Not applicable	0.43	0.99	1.42

Notes: FCE = federal candidate endangered; FCT = federal candidate threatened; FE = federally endangered; FS = federally sensitive (USFS and/or BLM sensitive); FT = federally threatened; SE = state endangered; SFP = state fully protected; SFS = state fire sensitive; SR = state rare; SSC = species of special concern (CDFW); ST = state threatened

^a Plant species does not occur in the Central California Coast Ranges Ecoregion Section within the GAI.

^b California newt: Only the Coast Range population is special status, and it does not occur within the GAI (only occurs from Monterey County south).

- ^c Ensatina: Only the yellow-blotched and large-blotched subspecies are considered special-status, and they do not occur within the GAI (neither occur north of Kern County).
- ^d Common gartersnake: The San Francisco subspecies is considered special status and occurs within the GAI, but only within the Central California Coast Ecoregion Section.
- ^e Ring-necked snake: Only the Regal (Great Basin), San Bernardino, and San Diego subspecies are considered special status, and they do not occur within the GAI (only occur from Inyo County south).
- ^f Western skink: Only the Coronado subspecies is considered special status, and it does not occur within the GAI (does not occur north of Riverside County).
- ^g Bewick's wren: Only the San Clemente subspecies is considered special status, and it does not occur within the GAI (was restricted to the Channel Islands and is now considered extinct).
- ^h California quail: Only the Catalina subspecies is considered special status, and it does not occur within the GAI (restricted to the Channel Islands).
- ⁱ California towhee: Only the Inyo subspecies is considered special status, and it does not occur within the GAI (restricted to Inyo, Kern, and San Bernardino Counties).
- ^j Common yellowthroat: Occurs within the GAI but only within the Central California Coast Ecoregion Section.
- ^k Hutton's vireo: Only the Catalina subspecies is considered special status, and it does not occur within the GAI (restricted to Santa Catalina Island).
- ^l Marsh wren: Only the Clark's subspecies is considered special status, and it does not occur within the GAI (does not occur north of Los Angeles County).
- ^m Red-winged blackbird: Only the Kern subspecies is considered special status, and it does not occur within the GAI (restricted to Kern County).
- ⁿ Rufous-crowned sparrow: Only the Santa Cruz Island subspecies is special status, and it does not occur within the GAI (restricted to Channel Islands).
- ^o Savannah sparrow: Bryant's subspecies is special-status and occurs within the GAI but only within the Central California Coast Ecoregion Section.
- ^p Song sparrow: Alameda, Modesto, and Samuel's subspecies (listed above this species in the table), as well as Suisun subspecies (listed below this species in the table) comprise the four special-status subspecies present within the GAI.
- ^q Spotted towhee: Only the San Clemente subspecies is special status, and it only occurs on the Channel Islands.
- ^r Broad-footed mole: Alameda Island subspecies (listed above this species in the table) is the only special-status subspecies present within the GAI, and it is only present within the Central California Coast Ecoregion Section.
- ^s Brush rabbit: Only the riparian subspecies is special status, and it does not occur within the GAI (restricted to San Joaquin and Stanislaus Counties).
- ^t Deer mouse: Only the Anacapa Island and San Clemente subspecies are considered special status, and neither occurs within the GAI (restricted to the Channel Islands).
- ^u Heermann's kangaroo rat: Only the Morro Bay subspecies is special status, and it does not occur within the GAI (endemic to San Luis Obispo County).
- ^v Kit fox: San Joaquin subspecies (listed below this species in the table) is the only special-status subspecies present within the GAI.
- ^w Mountain lion: Only the Yuma subspecies is considered special status, and it does not occur within the GAI (restricted to the Lower Colorado River Valley).
- ^x Western spotted skunk: Only the Channel Islands subspecies is considered special status, and it does not occur within the GAI (restricted to the Channel Islands).

Table F-3. Complete SAMNA Results for the Great Valley Ecoregion Section in the GAI, by Land Cover (acres)

Common Name	Scientific Name	Status	Annual Grassland (acres)	Total (acres)
Plants	See below	See below	See below	See below
Adobe sanicle ^a	<i>Sanicula maritima</i>	FS, SR	0.04	0.04
Baker's larkspur ^a	<i>Delphinium bakeri</i>	FE, SE	0.04	0.04
Contra Costa goldfields	<i>Lasthenia conjugens</i>	FE	0.04	0.04
Dudley's lousewort ^a	<i>Pedicularis dudleyi</i>	FS, SR	0.04	0.04
Dwarf goldenstar ^a	<i>Bloomeria humilis</i>	FS, SR	0.04	0.04
Hearsts' manzanita ^a	<i>Arctostaphylos hookeri</i> ssp. <i>hearstiorum</i>	SE	0.04	0.04
La Graciosa thistle ^a	<i>Cirsium scariosum</i> var. <i>loncholepis</i>	FE, ST	0.04	0.04
Marin western flax ^a	<i>Hesperolinon congestum</i>	FT, ST	0.04	0.04
Maritime ceanothus ^a	<i>Ceanothus maritimus</i>	SR	0.04	0.04
Monterey spineflower ^a	<i>Chorizanthe pungens</i> var. <i>pungens</i>	FT, FS	0.04	0.04
Pacific Grove clover ^a	<i>Trifolium polyodon</i>	FS, SR	0.04	0.04
Pismo clarkia ^a	<i>Clarkia speciosa</i> ssp. <i>immaculata</i>	FE, SR	0.04	0.04
Point Reyes meadowfoam ^a	<i>Limnanthes douglasii</i> ssp. <i>sulphurea</i>	SE	0.04	0.04
Presidio clarkia ^a	<i>Clarkia franciscana</i>	FE, SE	0.04	0.04
Roderick's fritillary	<i>Fritillaria roderickii</i>	SE	0.04	0.04
San Francisco ^a popcornflower	<i>Plagiobothrys diffusus</i>	SE	0.04	0.04
San Mateo thorn-mint ^a	<i>Acanthomintha duttonii</i>	FE, SE	0.04	0.04
Santa Cruz tarplant ^a	<i>Holocarpha macradenia</i>	FT, SE	0.04	0.04
Tiburon jewelflower ^a	<i>Streptanthus glandulosus</i> ssp. <i>niger</i>	FE, SE	0.04	0.04

Common Name	Scientific Name	Status	Annual Grassland (acres)	Total (acres)
Tiburon mariposa lily ^a	<i>Calochortus tiburonensis</i>	FT, ST	0.04	0.04
Two-fork clover	<i>Trifolium amoenum</i>	FE	0.04	0.04
White-rayed pentachaeta ^a	<i>Pentachaeta bellidiflora</i>	FE, SE	0.04	0.04
Amphibians	<i>See below</i>	See below	See below	See below
California newt ^b	<i>Taricha torosa</i>	SSC	0.04	0.04
California red-legged frog	<i>Rana draytonii</i>	FT, SSC	0.04	0.04
California tiger salamander	<i>Ambystoma californiense</i>	FE, FT, ST	0.04	0.04
Foothill yellow-legged frog	<i>Rana boylei</i>	FCE, FCT, FS, SE, ST, SSC	0.04	0.04
Western spadefoot	<i>Spea hammondi</i>	FS, SSC	0.04	0.04
Reptiles	<i>See below</i>	See below	See below	See below
Blainville's horned lizard	<i>Phrynosoma blainvillii</i>	FS, SSC	0.04	0.04
Common gartersnake ^c	<i>Thamnophis sirtalis</i>	SSC	0.04	0.04
Gophersnake	<i>Pituophis catenifer</i>	None	0.04	0.04
Ring-necked snake ^d	<i>Diadophis punctatus</i>	FS, SSC	0.04	0.04
Western skink ^e	<i>Plestiodon skiltonianus</i>	FS	0.04	0.04
Birds	<i>See below</i>	See below	See below	See below
Bald eagle	<i>Haliaeetus leucocephalus</i>	FS, SE, SFP, SFS	0.04	0.04
Burrowing owl	<i>Athene cunicularia</i>	FS, SSC	0.04	0.04
California quail ^f	<i>Callipepla californica</i>	SSC	0.04	0.04
Common yellowthroat ^g	<i>Geothlypis trichas</i>	SSC	0.04	0.04
Golden eagle	<i>Aquila chrysaetos</i>	FS, SFS, SFP	0.04	0.04
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC	0.04	0.04
Great blue heron	<i>Ardea herodias</i>	SFS	0.04	0.04

Common Name	Scientific Name	Status	Annual Grassland (acres)	Total (acres)
Great egret	<i>Ardea alba</i>	SFS	0.04	0.04
Greater white-fronted goose ^h	<i>Anser albifrons</i>	SSC	0.04	0.04
Loggerhead shrike	<i>Lanius ludovicianus</i>	SE, SSC	0.04	0.04
Long-eared owl	<i>Asio otus</i>	SSC	0.04	0.04
Northern harrier	<i>Circus cyaneus</i>	SSC	0.04	0.04
Osprey	<i>Pandion haliaetus</i>	None	0.04	0.04
Peregrine falcon	<i>Falco peregrinus</i>	SFS, SFP	0.04	0.04
Red-winged blackbird ⁱ	<i>Agelaius phoeniceus</i>	SSC	0.04	0.04
Savannah sparrow ^j	<i>Passerculus sandwichensis</i>	SE, SSC	0.04	0.04
Short-eared owl	<i>Asio flammeus</i>	SSC	0.04	0.04
Song sparrow ^k	<i>Melospiza melodia</i>	SSC	0.04	0.04
Swainson's hawk	<i>Buteo swainsoni</i>	FS, ST	0.04	0.04
Tricolored blackbird	<i>Agelaius tricolor</i>	FS, ST, SSC	0.04	0.04
Tule greater white-fronted goose	<i>Anser albifrons elgasi</i>	SSC	0.04	0.04
White-tailed kite	<i>Elanus leucurus</i>	FS, SFP	0.04	0.04
Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>	SSC	0.04	0.04
Mammals	<i>See below</i>	See below	See below	See below
American badger	<i>Taxidea taxus</i>	SSC	0.04	0.04
Black-tailed jackrabbit	<i>Lepus californicus</i>	None	0.04	0.04
Broad-footed mole ^l	<i>Scapanus latimanus</i>	SSC	0.04	0.04
Brush rabbit ^m	<i>Sylvilagus bachmani</i>	FE, SE	0.04	0.04
California kangaroo rat ⁿ	<i>Dipodomys californicus</i>	SSC	0.04	0.04
California vole	<i>Microtus californicus</i>	FE, FS, SE, SSC	0.04	0.04

Common Name	Scientific Name	Status	Annual Grassland (acres)	Total (acres)
Deer mouse ^o	<i>Peromyscus maniculatus</i>	SSC	0.04	0.04
Ornate shrew	<i>Sorex ornatus</i>	FE, SSC	0.04	0.04
Pallid bat	<i>Antrozous pallidus</i>	FS, SSC	0.04	0.04
Red fox ^p	<i>Vulpes vulpes</i>	FE, FS, ST	0.04	0.04
Ringtail	<i>Bassariscus astutus</i>	SFP	0.04	0.04
Salt-marsh harvest mouse	<i>Reithrodontomys raviventris</i>	FE, SE, SFP	0.04	0.04
San Joaquin pocket mouse	<i>Perognathus inornatus</i>	FS	0.04	0.04
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	FS, SSC	0.04	0.04
Western red bat	<i>Lasiurus blossevillei</i>	SSC	0.04	0.04
Western spotted skunk ^q	<i>Spilogale gracilis</i>	SSC	0.04	0.04
Yuma myotis	<i>Myotis yumanensis</i>	FS	0.04	0.04
Total	<i>Not applicable</i>	Not applicable	0.04	0.04

Notes: FCE = federal candidate endangered; FCT = federal candidate threatened; FE = federally endangered; FS = federally sensitive (USFS and/or BLM sensitive); FT = federally threatened; SE = state endangered; SFP = state fully protected; SFS = state fire sensitive; SR = state rare; SSC = species of special concern (CDFW); ST = state threatened

^a Plant species does not occur in the Great Valley Ecoregion Section within the GAI.

^b California newt: Only the Coast Range population is special status, and it does not occur within the GAI (only occurs from Monterey County south).

^c Common gartersnake: The San Francisco subspecies is considered special status and occurs within the GAI, but only within the Central California Coast Ecoregion Section.

^d Ring-necked snake: Only the Regal (Great Basin), San Bernardino, and San Diego subspecies are considered special status, and they do not occur within the GAI (only occur from Inyo County south).

^e Western skink: Only the Coronado subspecies is considered special status, and it does not occur within the GAI (does not occur north of Riverside County).

^f California quail: Only the Catalina subspecies is considered special status, and it does not occur within the GAI (restricted to the Channel Islands).

^g Common yellowthroat: Occurs within the GAI but only within the Central California Coast Ecoregion Section.

^h Greater white-fronted goose: Tule greater white-fronted goose (listed below this species in the table) is the only special-status subspecies present within the GAI.

ⁱ Red-winged blackbird: Only the Kern subspecies is considered special status, and it does not occur within the GAI (restricted to Kern County).

^j Savannah sparrow: Bryant's subspecies is special-status and occurs within the GAI, but only within the Central California Coast Ecoregion Section.

^k Song sparrow: Alameda, Modesto, and Samuel's subspecies (listed above this species in the table), as well as Suisun subspecies (listed below this species in the table) comprise the four special-status subspecies present within the GAI.

^l Broad-footed mole: Alameda Island subspecies (listed above this species in the table) is the only special-status subspecies present within the GAI, and it is only present within the Central California Coast Ecoregion Section.

^m Brush rabbit: Only the riparian subspecies is special status, and it does not occur within the GAI (restricted to San Joaquin and Stanislaus Counties).

ⁿ California kangaroo rat: Only the Marysville subspecies is considered special status, and it does not occur within the GAI (restricted to the Sutter Buttes).

^o Deer mouse: Only the Anacapa Island and San Clemente subspecies are considered special status, and neither occurs within the GAI (restricted to the Channel Islands).

^p Red fox: Only the Sierra Nevada subspecies is considered special status, and it does not occur within the GAI (restricted to the Sierra Nevada and Cascade Ranges).

^q Western spotted skunk: Only the Channel Islands subspecies is considered special status, and it does not occur within the GAI (restricted to the Channel Islands).

Table F-4. Complete SAMNA Results for the Northern California Coast Ecoregion Section in the GAI, by Land Cover (acres)

Common Name	Scientific Name	Status	Coastal Oak Woodland (acres)	Montane Hardwood (acres)	Total (acres)
Plants	See below	See below	See below	See below	See below
Clara Hunt's milk-vetch ^a	<i>Astragalus claranus</i>	FE, SE	0.00	0.08	0.08
Indian Valley brodiaea ^a	<i>Brodiaea rosea</i>	FS, SE	0.00	0.08	0.08
Keck's checkerbloom ^a	<i>Sidalcea keckii</i>	FE	0.00	0.08	0.08
Lake County stonecrop ^a	<i>Sedella leiocarpa</i>	FE, SE	0.00	0.08	0.08
Lake County western flax ^a	<i>Hesperolinon didymocarpum</i>	SE	0.00	0.08	0.08
Amphibians	See below	See below	See below	See below	See below
California newt ^b	<i>Taricha torosa</i>	SSC	0.11	0.00	0.11
California red-legged frog	<i>Rana draytonii</i>	FT, SSC	0.11	0.08	0.19
Ensatina ^c	<i>Ensatina eschscholtzii</i>	FS	0.11	0.08	0.19
Foothill yellow-legged frog	<i>Rana boylei</i>	FCE, FCT, FS, SE, ST, SSC	0.11	0.08	0.19
Reptiles	See below	See below	See below	See below	See below
California mountain kingsnake	<i>Lampropeltis zonata</i>	None	0.03	0.00	0.03
Common gartersnake ^d	<i>Thamnophis sirtalis</i>	SSC	0.11	0.08	0.19
Gophersnake	<i>Pituophis catenifer</i>	None	0.11	0.08	0.19
Ring-necked snake ^e	<i>Diadophis punctatus</i>	FS, SSC	0.11	0.08	0.19
Striped racer ^f	<i>Masticophis [Coluber] lateralis</i>	FT, ST	0.11	0.08	0.19
Western skink ^g	<i>Plestiodon skiltonianus</i>	FS	0.11	0.08	0.19
Birds	See below	See below	See below	See below	See below
Bald eagle	<i>Haliaeetus leucocephalus</i>	FS, SE, SFP, SFS	0.11	0.08	0.19

Common Name	Scientific Name	Status	Coastal Oak Woodland (acres)	Montane Hardwood (acres)	Total (acres)
Bewick's wren ^h	<i>Thryomanes bewickii</i>	SSC	0.11	0.08	0.19
California quail ⁱ	<i>Callipepla californica</i>	SSC	0.11	0.08	0.19
California towhee ^j	<i>Pipilo crissalis</i>	None	0.11	0.08	0.19
Golden eagle	<i>Aquila chrysaetos</i>	FS, SFS, SFP	0.11	0.08	0.19
Great blue heron	<i>Ardea herodias</i>	SFS	0.11	0.08	0.19
Great egret	<i>Ardea alba</i>	SFS	0.11	0.00	0.11
Hutton's vireo ^k	<i>Vireo huttoni</i>	SSC	0.11	0.08	0.19
Loggerhead shrike	<i>Lanius ludovicianus</i>	SE, SSC	0.11	0.08	0.19
Long-eared owl	<i>Asio otus</i>	SSC	0.11	0.08	0.19
Northern harrier	<i>Circus cyaneus</i>	SSC	0.03	0.00	0.03
Olive-sided flycatcher	<i>Contopus cooperi</i>	SSC	0.00	0.08	0.08
Osprey	<i>Pandion haliaetus</i>	None	0.11	0.08	0.19
Peregrine falcon	<i>Falco peregrinus</i>	SFS, SFP	0.11	0.08	0.19
Purple martin	<i>Progne subis</i>	SSC	0.11	0.08	0.19
Savannah sparrow ^l	<i>Passerculus sandwichensis</i>	SE, SSC	0.11	0.00	0.11
Short-eared owl	<i>Asio flammeus</i>	SSC	0.11	0.00	0.11
Song sparrow ^m	<i>Melospiza melodia</i>	SSC	0.11	0.08	0.19
Spotted towhee ⁿ	<i>Pipilo maculatus</i>	SSC	0.11	0.08	0.19
White-tailed kite	<i>Elanus leucurus</i>	FS, SFP	0.11	0.00	0.11
Mammals	See below	See below	See below	See below	See below
American badger	<i>Taxidea taxus</i>	SSC	0.11	0.08	0.19
Black-tailed jackrabbit	<i>Lepus californicus</i>	None	0.11	0.08	0.19
Broad-footed mole ^o	<i>Scapanus latimanus</i>	SSC	0.11	0.08	0.19

Common Name	Scientific Name	Status	Coastal Oak Woodland (acres)	Montane Hardwood (acres)	Total (acres)
Brush rabbit ^a	<i>Sylvilagus bachmani</i>	FE, SE	0.11	0.08	0.19
California kangaroo rat ^a	<i>Dipodomys californicus</i>	SSC	0.11	0.08	0.19
California vole	<i>Microtus californicus</i>	FE, FS, SE, SSC	0.11	0.08	0.19
Deer mouse ^f	<i>Peromyscus maniculatus</i>	SSC	0.11	0.08	0.19
Dusky-footed woodrat	<i>Neotoma fuscipes</i>	FE, SSC	0.11	0.08	0.19
Fringed myotis	<i>Myotis thysanodes</i>	FS	0.11	0.08	0.19
Long-eared myotis	<i>Myotis evotis</i>	FS	0.11	0.08	0.19
Mountain lion ^s	<i>Puma concolor</i>	SSC	0.11	0.08	0.19
Ornate shrew	<i>Sorex ornatus</i>	FE, SSC	0.11	0.00	0.11
Pallid bat	<i>Antrozous pallidus</i>	FS, SSC	0.11	0.08	0.19
Ringtail	<i>Bassariscus astutus</i>	SFP	0.11	0.08	0.19
San Joaquin pocket mouse	<i>Perognathus inornatus</i>	FS	0.07	0.00	0.07
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	FS, SSC	0.11	0.08	0.19
Western red bat	<i>Lasiurus blossevillei</i>	SSC	0.11	0.08	0.19
Western spotted skunk ^t	<i>Spilogale gracilis</i>	SSC	0.11	0.08	0.19
Yuma myotis	<i>Myotis yumanensis</i>	FS	0.11	0.08	0.19
Total	Not applicable	Not applicable	0.11	0.08	0.19

Notes: FCE = federal candidate endangered; FCT = federal candidate threatened; FE = federally endangered; FS = federally sensitive (USFS and/or Bureau of Land Management BLM sensitive); FT = federally threatened; SE = state endangered; SFP = state fully protected; SFS = state fire sensitive; SSC = species of special concern (CDFW); ST = state threatened

^a Plant species does not occur in the Northern California Coast Ecoregion Section within the GAI.

^b California newt: Only the Coast Range population is special status, and it does not occur within the GAI (only occurs from Monterey County south).

^c Ensatina: Only the yellow-blotched and large-blotched subspecies are considered special-status, and they do not occur within the GAI (neither occur north of Kern County).

^d Common gartersnake: The San Francisco subspecies is considered special status and occurs within the GAI, but only within the Central California Coast Ecoregion Section.

^e Ring-necked snake: Only the Regal (Great Basin), San Bernardino, and San Diego subspecies are considered special status, and they do not occur within the GAI (only occur from Inyo County south).

^f Striped racer: Only the Alameda subspecies is considered special status, and it occurs within the GAI but only within the Central California Coast and Central California Coast Ranges Ecoregion Sections.

- ^g Western skink: Only the Coronado subspecies is considered special status, and it does not occur within the GAI (does not occur north of Riverside County).
- ^h Bewick's wren: Only the San Clemente subspecies is considered special status, and it does not occur within the GAI (was restricted to the Channel Islands and is now considered extinct).
- ⁱ California quail: Only the Catalina subspecies is considered special status, and it does not occur within the GAI (restricted to the Channel Islands).
- ^j California towhee: Only the Inyo subspecies is considered special status, and it does not occur within the GAI (restricted to Inyo, Kern, and San Bernardino Counties).
- ^k Hutton's vireo: Only the Catalina subspecies is considered special status, and it does not occur within the GAI (restricted to Santa Catalina Island).
- ^l Savannah sparrow: Bryant's subspecies is special-status and occurs within the GAI, but only within the Central California Coast Ecoregion Section.
- ^m Song sparrow: Alameda, Modesto, and Samuel's subspecies (listed above this species in the table), as well as Suisun subspecies (listed below this species in the table) comprise the four special-status subspecies present within the GAI.
- ⁿ Spotted towhee: Only the San Clemente subspecies is special status, and it only occurs on the Channel Islands.
- ^o Broad-footed mole: Alameda Island subspecies (listed above this species in the table) is the only special-status subspecies present within the GAI, and it is only present within the Central Coast Ecoregion Section.
- ^p Brush rabbit: Only the riparian subspecies is special status, and it does not occur within the GAI (restricted to San Joaquin and Stanislaus Counties).
- ^q California kangaroo rat: Only the Marysville subspecies is considered special status, and it does not occur within the GAI (restricted to the Sutter Buttes).
- ^r Deer mouse: Only the Anacapa Island and San Clemente subspecies are considered special status, and neither occurs within the GAI (restricted to the Channel Islands).
- ^s Mountain lion: Only the Yuma subspecies is considered special status, and it does not occur within the GAI (restricted to the Lower Colorado River Valley).
- ^t Western spotted skunk: Only the Channel Islands subspecies is considered special status, and it does not occur within the GAI (restricted to the Channel Islands).

**Table F-5. Complete SAMNA Results for the Northern California Coast Ranges
Ecoregion Section in the GAI, by Land Cover (acres)**

Common Name	Scientific Name	Status	Coastal Oak Woodland (acres)	Montane Hardwood (acres)	Total (acres)
Plants	See below	See below	See below	See below	See below
Clara Hunt's milk-vetch ^a	<i>Astragalus claranus</i>	FE, SE	0.00	0.05	0.05
Indian Valley brodiaea ^a	<i>Brodiaea rosea</i>	FS, SE	0.00	0.05	0.05
Keck's checkerbloom ^a	<i>Sidalcea keckii</i>	FE	0.00	0.05	0.05
Lake County stonecrop ^a	<i>Sedella leiocarpa</i>	FE, SE	0.00	0.05	0.05
Lake County western flax ^a	<i>Hesperolinon didymocarpum</i>	SE	0.00	0.05	0.05
Amphibians	See below	See below	See below	See below	See below
California newt ^b	<i>Taricha torosa</i>	SSC	0.03	0.00	0.03
California red-legged frog	<i>Rana draytonii</i>	FT, SSC	0.03	0.05	0.09
Ensatina ^c	<i>Ensatina eschscholtzii</i>	FS	0.03	0.05	0.09
Foothill yellow-legged frog	<i>Rana boylei</i>	FCE, FCT, FS, SE, ST, SSC	0.03	0.05	0.09
Reptiles	See below	See below	See below	See below	See below
California mountain kingsnake	<i>Lampropeltis zonata</i>	None	0.03	0.05	0.09
Common gartersnake ^d	<i>Thamnophis sirtalis</i>	SSC	0.03	0.05	0.09
Common sagebrush lizard ^e	<i>Sceloporus graciosus</i>	FS	0.00	0.05	0.05
Gophersnake	<i>Pituophis catenifer</i>	None	0.03	0.05	0.09
Northern rubber boa	<i>Charina bottae</i>	None	0.00	0.05	0.05
Ring-necked snake ^f	<i>Diadophis punctatus</i>	FS, SSC	0.03	0.05	0.09
Striped racer ^g	<i>Masticophis [Coluber] lateralis</i>	FT, ST	0.03	0.05	0.09
Western skink ^h	<i>Plestiodon skiltonianus</i>	FS	0.03	0.05	0.09

Common Name	Scientific Name	Status	Coastal Oak Woodland (acres)	Montane Hardwood (acres)	Total (acres)
Birds	See below	See below	See below	See below	See below
Bald eagle	<i>Haliaeetus leucocephalus</i>	FS, SE, SFP, SFS	0.03	0.05	0.09
Bewick's wren ⁱ	<i>Thryomanes bewickii</i>	SSC	0.03	0.05	0.09
California quail ^j	<i>Callipepla californica</i>	SSC	0.03	0.05	0.09
California towhee ^k	<i>Pipilo crissalis</i>	None	0.03	0.05	0.09
Golden eagle	<i>Aquila chrysaetos</i>	FS, SFS, SFP	0.03	0.05	0.09
Great blue heron	<i>Ardea herodias</i>	SFS	0.03	0.05	0.09
Great egret	<i>Ardea alba</i>	SFS	0.03	0.00	0.03
Hutton's vireo ^l	<i>Vireo huttoni</i>	SSC	0.03	0.05	0.09
Loggerhead shrike	<i>Lanius ludovicianus</i>	SE, SSC	0.03	0.05	0.09
Long-eared owl	<i>Asio otus</i>	SSC	0.03	0.05	0.09
Northern harrier	<i>Circus cyaneus</i>	SSC	0.03	0.05	0.09
Olive-sided flycatcher	<i>Contopus cooperi</i>	SSC	0.00	0.05	0.05
Osprey	<i>Pandion haliaetus</i>	None	0.03	0.05	0.09
Peregrine falcon	<i>Falco peregrinus</i>	SFS, SFP	0.03	0.05	0.09
Purple martin	<i>Progne subis</i>	SSC	0.03	0.05	0.09
Savannah sparrow ^m	<i>Passerculus sandwichensis</i>	SE, SSC	0.03	0.00	0.03
Short-eared owl	<i>Asio flammeus</i>	SSC	0.03	0.00	0.03
Song sparrow ⁿ	<i>Melospiza melodia</i>	SSC	0.03	0.05	0.09
Spotted towhee ^o	<i>Pipilo maculatus</i>	SSC	0.03	0.05	0.09
White-tailed kite	<i>Elanus leucurus</i>	FS, SFP	0.03	0.00	0.03
Mammals	See below	See below	See below	See below	See below
American badger	<i>Taxidea taxus</i>	SSC	0.03	0.05	0.09

Common Name	Scientific Name	Status	Coastal Oak Woodland (acres)	Montane Hardwood (acres)	Total (acres)
Black-tailed jackrabbit	<i>Lepus californicus</i>	None	0.03	0.05	0.09
Broad-footed mole ^p	<i>Scapanus latimanus</i>	SSC	0.03	0.05	0.09
Brush rabbit ^a	<i>Sylvilagus bachmani</i>	FE, SE	0.03	0.05	0.09
California kangaroo rat ^f	<i>Dipodomys californicus</i>	SSC	0.03	0.05	0.09
California vole	<i>Microtus californicus</i>	FE, FS, SE, SSC	0.03	0.05	0.09
Deer mouse ^e	<i>Peromyscus maniculatus</i>	SSC	0.03	0.05	0.09
Dusky-footed woodrat	<i>Neotoma fuscipes</i>	FE, SSC	0.03	0.05	0.09
Fringed myotis	<i>Myotis thysanodes</i>	FS	0.03	0.05	0.09
Long-eared myotis	<i>Myotis evotis</i>	FS	0.03	0.05	0.09
Mountain lion ^t	<i>Puma concolor</i>	SSC	0.03	0.05	0.09
Ornate shrew	<i>Sorex ornatus</i>	FE, SSC	0.03	0.00	0.03
Pallid bat	<i>Antrozous pallidus</i>	FS, SSC	0.03	0.05	0.09
Ringtail	<i>Bassariscus astutus</i>	SFP	0.03	0.05	0.09
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	FS, SSC	0.03	0.05	0.09
Western red bat	<i>Lasiurus blossevillei</i>	SSC	0.03	0.05	0.09
Western spotted skunk ^u	<i>Spilogale gracilis</i>	SSC	0.03	0.05	0.09
Yuma myotis	<i>Myotis yumanensis</i>	FS	0.03	0.05	0.09
Total	Not applicable	Not applicable	0.03	0.05	0.09

Notes: FCE = federal candidate endangered; FCT = federal candidate threatened; FE = federally endangered; FS = federally sensitive (USFS and/or BLM sensitive); FT = federally threatened; SE = state endangered; SFP = state fully protected; SFS = state fire sensitive; SSC = species of special concern (CDFW); ST = state threatened

^a Plant species does not occur within the Northern California Coast Ranges Ecoregion Section within the GAI.

^b California newt: Only the Coast Range population is special status, and it does not occur within the GAI (only occurs from Monterey County south).

^c Ensatina: Only the yellow-blotched and large-blotched subspecies are considered special-status, and they do not occur within the GAI (neither occur north of Kern County).

^d Common gartersnake: The San Francisco subspecies is considered special status and occurs within the GAI, but only within the Central California Coast Ecoregion Section.

^e Common sagebrush lizard: Only the northern subspecies is considered special status, and it does not occur within the GAI (restricted to the Great Basin).

^f Ring-necked snake: Only the Regal (Great Basin), San Bernardino, and San Diego subspecies are considered special status, and they do not occur within the GAI (only occur from Inyo County south).

- ^g Striped racer: Only the Alameda subspecies is considered special status, and it occurs within the GAI but only within the Central California Coast and Central California Coast Ranges Ecoregion Sections.
- ^h Western skink: Only the Coronado subspecies is considered special status, and it does not occur within the GAI (does not occur north of Riverside County).
- ⁱ Bewick's wren: Only the San Clemente subspecies is considered special status, and it does not occur within the GAI (was restricted to the Channel Islands and is now considered extinct).
- ^j California quail: Only the Catalina subspecies is considered special status, and it does not occur within the GAI (restricted to the Channel Islands).
- ^k California towhee: Only the Inyo subspecies is considered special status, and it does not occur within the GAI (restricted to Inyo, Kern, and San Bernardino Counties).
- ^l Hutton's vireo: Only the Catalina subspecies is considered special status, and it does not occur within the GAI (restricted to Santa Catalina Island).
- ^m Savannah sparrow: Bryant's subspecies is special-status and occurs within the GAI, but only within the Central California Coast Ecoregion Section.
- ⁿ Song sparrow: Alameda, Modesto, Samuel's, and Suisun subspecies are all special-status subspecies present within the GAI, but none occur within the Northern California Coast Ranges Ecoregion Section.
- ^o Spotted towhee: Only the San Clemente subspecies is special status, and it only occurs on the Channel Islands.
- ^p Broad-footed mole: Alameda Island subspecies (listed above this species in the table) is the only special-status subspecies present within the GAI, and it is only present within the Central Coast Ecoregion Section.
- ^q Brush rabbit: Only the riparian subspecies is special status, and it does not occur within the GAI (restricted to San Joaquin and Stanislaus Counties).
- ^r California kangaroo rat: Only the Marysville subspecies is considered special status, and it does not occur within the GAI (restricted to the Sutter Buttes).
- ^s Deer mouse: Only the Anacapa Island and San Clemente subspecies are considered special status, and neither occurs within the GAI (restricted to the Channel Islands).
- ^t Mountain lion: Only the Yuma subspecies is considered special status, and it does not occur within the GAI (restricted to the Lower Colorado River Valley).
- ^u Western spotted skunk: Only the Channel Islands subspecies is considered special status, and it does not occur within the GAI (restricted to the Channel Islands).

APPENDIX G: HYDROLOGIC UNITS

Sub-basin Descriptions

Four sub-basins overlap the GAI. A description of each sub-basin is provided in the following sections. A crosswalk between the HUC-8 sub-basins and HUs is provided in Table G-1 at the end of this appendix.

Coyote Sub-basin

Within the GAI, the Coyote sub-basin drains an area of 461,005 acres (720 square miles), and includes 601 rivers and streams that traverse 845 miles. As noted in Table G-1, the Coyote sub-basin includes portions of the Big Basin, Middle West Side, Pajaro River, San Mateo, Santa Clara, and South Bay HUs.

The Big Basin HU is located near the Santa Cruz Mountains, with smaller coastal watersheds draining directly into the Pacific Ocean. The main watersheds in the Big Basin HU include Aptos Creek, Soquel Creek, and the San Lorenzo River. The Aptos Creek watershed's main tributaries include Valencia Creek, Mangles Gulch, and Bridge Creek. The San Lorenzo River watershed is in the central Santa Cruz Mountains and drains to the Pacific Ocean at the northern end of Monterey Bay. Its main tributaries include Carbonera, Zayante, Bear, Boulder, Newell, and Branciforte Creeks (SWRCB 2009). The part of the Big Basin HU that lies within the Coyote sub-basin includes a portion of the Santa Cruz hydrologic area.

The Middle West Side HU includes portions of eastern San Benito, Madera, and Merced Counties. The part of the Middle West Side HU that lies within the Coyote sub-basin includes a portion of the Orestimba Creek hydrologic area.

The Pajaro River HU is associated with the Pajaro River and its tributaries: San Benito River, Tequisquita Slough/Santa Ana Creek, Pacheco Creek, Llagas Creek, Uvas Creek, and Corralitos Creek. The river drains into Monterey Bay north of Moss Landing Harbor (SWRCB 2009). The part of the Pajaro River HU that lies within the Coyote sub-basin includes a portion of the Pacheco-Santa Ana Creek, Santa Cruz Mountains, and South Santa Clara Valley hydrologic areas.

The San Mateo HU is associated with San Gregorio and Pescadero Creeks (NOAA 2004). Headwaters begin near Sweeney Ridge and continue southeastward until the Lower Crystal Springs Reservoir, ultimately draining into San Francisco Bay at Ryder Park, just south of Coyote Point (San Francisco Bay RWQCB 2008). The part of the San Mateo HU that lies within the Coyote sub-basin includes portions of the Pescadero Creek, San Gregorio Creek, and the San Mateo Coastal hydrologic areas.

The Santa Clara HU includes the southern portions of San Francisco Bay and associated tributaries, including Coyote Creek and the Guadalupe River (NOAA 2004). The Santa Clara HU is bounded by the Diablo Mountains to the east and the Santa Cruz Mountains to the south and west. The part of the Santa Clara HU that lies within the Coyote sub-

basin includes portions of the Coyote Creek, Fremont Bayside, Guadalupe River, and Palo Alto hydrologic areas.

The South Bay HU includes portions of the South San Francisco Bay and associated tributaries, including Alameda Creek (NOAA 2004). The part of the South Bay HU that lies within the Coyote sub-basin includes portions of the Alameda Creek and San Mateo Bayside hydrologic areas.

San Francisco Bay Sub-basin

Within the GAI, the San Francisco Bay sub-basin drains an area of 734,549 acres (1,148 square miles), and includes 1,259 rivers and streams that traverse 1,386 miles. As noted in Table G-1, the San Francisco Bay sub-basin includes portions of the Bay Bridges, Middle West Side, North Diablo Range, San Mateo, San Pablo, Santa Clara, South Bay, and Suisun HUs. Descriptions of the Middle West Side, San Mateo, Santa Clara, and South Bay HUs are provided in the Coyote sub-basin section.

The Bay Bridges HU includes portions of northern San Francisco Bay and San Pablo Bay (NOAA 2004). The part of the Bay Bridges HU that lies within the San Francisco Bay sub-basin includes portions of the Bay Waters, Berkeley, and San Francisco Bayside hydrologic areas.

The part of the Middle West Side HU that lies within the San Francisco Bay sub-basin includes portions of the Del Puerto Creek and Orestimba Creek hydrologic areas.

No information was found on the North Diablo Range HU. The part of the North Diablo Range HU that lies within the San Francisco sub-basin has an undefined hydrologic area.

The part of the San Mateo HU that lies within the San Francisco Bay sub-basin includes portions of the San Francisco Coastal and San Mateo Coastal hydrologic areas.

The San Pablo HU is associated with the Gallinas Creek, Miller Creek, Napa River, Novato Creek, Petaluma River, Pinole Creek, Rodeo Creek, San Pablo Creek, Sonoma Creek, and Wildcat Creek watersheds, which feed into San Pablo Bay. The part of the San Pablo HU that lies within the San Francisco Bay sub-basin includes a portion of the Pinole hydrologic area.

The part of the Santa Clara HU that lies within the San Francisco Bay sub-basin includes portions of the Coyote Creek, Dumbarton South, Fremont Bayside, and Palo Alto hydrologic areas.

The part of the South Bay HU that lies within the San Francisco Bay sub-basin includes portions of the Alameda Creek, Bay Channel, East Bay Cities, and San Mateo Bayside hydrologic areas.

The Suisun HU is associated with Suisun Bay within the San Francisco Bay Drainage Province. The Suisun Drainage Canal flows southward to Peytonia Slough, Suisun Marsh, and Suisun Bay. Suisun Bay is located at the confluence of the Sacramento and San Joaquin Rivers, forming the entrance to the Sacramento Delta (City of Suisun 2015).

The part of the Suisun HU that lies within the San Francisco Bay sub-basin includes a portion of the Concord hydrologic area.

San Francisco Coastal South Sub-basin

Within the GAI, the San Francisco Coastal South sub-basin drains an area of 255,719 acres (400 square miles), and includes 423 rivers and streams that traverse 528 miles. As noted in Table G-1, the San Francisco Coastal South sub-basin includes portions of the Bay Bridges, Big Basin, San Mateo, Santa Clara, and South Bay HUs. Descriptions of the Big Basin, San Mateo, Santa Clara, and South Bay HUs are provided in the Coyote sub-basin section. A description of the Bay Bridges HU is provided in the San Francisco Bay sub-basin section.

The part of the Bay Bridges HU that lies within the San Francisco Coastal South sub-basin includes a portion of the San Francisco Bayside hydrologic area.

The part of the Big Basin HU that lies within the San Francisco Coastal South sub-basin includes portions of the Ano Nuevo and Santa Cruz hydrologic areas.

The part of the San Mateo HU that lies within the San Francisco Coastal South sub-basin includes portions of the Pescadero Creek, San Francisco Coastal, San Gregorio Creek, and San Mateo Coastal hydrologic areas.

The part of the Santa Clara HU that lies within the San Francisco Coastal South sub-basin includes a portion of the Palo Alto hydrologic area.

The part of the South Bay HU that lies within the San Francisco Coastal South sub-basin includes a portion of the San Mateo bayside hydrologic area.

Suisun Bay Sub-basin

Within the GAI, the Suisun Bay sub-basin drains an area of 386,272 acres (604 square miles), and includes 960 rivers and streams that traverse 828 miles. As noted in Table G-1, the Suisun sub-basin includes portions of the North Diablo Range, Putah Creek, Sacramento Delta, San Joaquin Delta, San Pablo, South Bay, Suisun, Upper Elmira, and Valley Putah-Chache HUs. Descriptions of the North Diablo Range, San Pablo, and Suisun HUs are provided in the San Francisco Bay sub-section. A description of the South Bay HU is provided in the Coyote sub-section.

The part of the North Diablo Range HU that lies within the Suisun Bay sub-basin has an undefined hydrologic area.

The Putah Creek HU is associated with the Putah Creek Watershed. The headwaters of Putah Creek are in Lake County and empty into the Sacramento River. The part of the Putah Creek HU that lies within the Suisun Bay sub-basin includes a portion of the Berryessa hydrologic area.

The Sacramento Delta HU includes the Sacramento River, Steamboat Slough, and Prospect Slough. The Sacramento River stretches for 400 miles, originating within the eastern slopes of the Coast Range, Mount Shasta, the western slopes of the southernmost region of the Cascades, and the northern portion of the Sierra Nevada

(Rivers for Change 2014). The river then meets with the San Joaquin River to form the Sacramento Delta before flowing out to the Pacific Ocean. The part of the Sacramento Delta HU that lies within the Suisun Bay sub-basin has an undefined hydrologic area.

The San Joaquin Delta HU includes the San Joaquin, Middle, and Old Rivers. The San Joaquin River originates in the high Sierra Nevada and flows westward for 100 miles before turning northward for 260 miles. The waters confluence with the Sacramento River and form the San Joaquin Delta before flowing out to the Pacific Ocean (EPA 2020).

The part of the San Pablo HU that lies within the Suisun Bay sub-basin includes portions of the Napa River and Pinole hydrologic areas.

The part of the South Bay HU that lies within the Suisun Bay sub-basin includes portions of the Alameda Creek and East Bay Cities hydrologic areas.

The part of the Suisun HU that lies within the Suisun Bay sub-basin includes portions of the Concord, Fairfield, Suisun Bay, and Suisun Bay – in Delta hydrologic areas.

The Upper Elmira HU includes the Santa Cruz Mountains, South Santa Clara Valley, and Pacheco and Santa Ana Creeks. The part of the Upper Elmira HU that lies within the Suisun Bay sub-basin includes portions of the East Rocky Ridge and Upper Ulati hydrologic areas.

The Valley Putah-Cache HU is associated with the Lower Putah Creek watershed, which outlets to the Yolo Bypass and the Sacramento Bypass (EPA n.d.). The Lower Putah Creek watershed includes the Putah Creek reach from Monticello Dam east toward the Sacramento River. Tributaries for this reach include Thompson, Cold, Bray Canyon, and Pleasants Creeks (Lower Putah Creek Coordinating Committee 2005). The part of the Valley Putah-Cache HU that lies within the Suisun Bay sub-basin includes a portion of the Elmira hydrologic area.

Crosswalk: HUC-8s to HUs

The SAMNA Reporting Tool expresses the landscape in terms of USGS HUC-8 sub-basins (Caltrans 2023; USGS 2014). However, the SWRCB considers beneficial uses in terms of HUs (California Department of Water Resources 2016). Table G-1 provides a crosswalk between the HUC-8 and HU classification systems for the GAI and reports acreages for the entirety of each HUC-8 and HU, including acreages outside the GAI.

Table G-1. Crosswalk Table of HUC-8 Sub-basins with HUs within the GAI

HUC-8 #	HUC-8 Name	HUC-8 Acreage ^a	HU #	HU Name	HU Acreage ^a
18050003	Coyote	461,005	304	Big Basin	235,190
18050003	Coyote	461,005	542	Middle West Side	579,418
18050003	Coyote	461,005	305	Pajaro River	466,180
18050003	Coyote	461,005	202	San Mateo	164,493

HUC-8 #	HUC-8 Name	HUC-8 Acreage ^a	HU #	HU Name	HU Acreage ^a
18050003	Coyote	461,005	205	Santa Clara	390,003
18050003	Coyote	461,005	206	Santa Clara	734,398
18050003	Coyote	461,005	204	South Bay	780,667
18050004	San Francisco Bay	853,256	203	Bay Bridges	122,491
18050004	San Francisco Bay	853,256	542	Middle West Side	579,418
18050004	San Francisco Bay	853,256	543	North Diablo Range	165,776
18050004	San Francisco Bay	853,256	202	San Mateo	164,493
18050004	San Francisco Bay	853,256	207	San Pablo	482,024
18050004	San Francisco Bay	853,256	205	Santa Clara	390,003
18050004	San Francisco Bay	853,256	206	Santa Clara	734,398
18050004	San Francisco Bay	853,256	204	South Bay	780,667
18050004	San Francisco Bay	853,256	207	Suisun	482,024
18050006	San Francisco Coastal South	431,363	203	Bay Bridges	122,491
18050006	San Francisco Coastal South	431,363	304	Big Basin	235,190
18050006	San Francisco Coastal South	431,363	202	San Mateo	164,493
18050006	San Francisco Coastal South	431,363	206	Santa Clara	734,398
18050006	San Francisco Coastal South	431,363	204	South Bay	780,667
18050001	Suisun Bay	417,512	543	North Diablo Range	165,776
18050001	Suisun Bay	417,512	512	Putah Creek	363,072
18050001	Suisun Bay	417,512	510	Sacramento Delta	488,596
18050001	Suisun Bay	417,512	544	San Joaquin Delta	433,311
18050001	Suisun Bay	417,512	206	San Pablo	734,398
18050001	Suisun Bay	417,512	207	San Pablo	482,024
18050001	Suisun Bay	417,512	204	South Bay	780,667
18050001	Suisun Bay	417,512	207	Suisun	482,024
18050001	Suisun Bay	417,512	560	Upper Elmira	101,682
18050001	Suisun Bay	417,512	511	Valley Putah-Cache	498,605

Source: Caltrans 2023

^a Numbers were rounded to the nearest whole number.

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APPENDIX H: LIST OF 303(d) IMPAIRED WATERS

Section 303(d) of the CWA requires that every 2 years, each state submit to EPA a list of rivers, lakes, and reservoirs in the state for which pollution control or requirements have failed to meet water quality standards. Water bodies within the GAI that are included on the Section 303(d) list of impaired waters, their impairments, and whether TMDLs have been established are provided in Table H-1 (SWRCB 2021).

Table H-1. Impaired Waters within the GAI

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
Coyote	Alamitos Creek	Mercury	Being addressed by EPA-approved TMDL	Yes
Coyote	Almaden Lake	Mercury	Being addressed by EPA-approved TMDL	Yes
Coyote	Almaden Reservoir	Mercury	Being addressed by EPA-approved TMDL	Yes
Coyote	Anderson Reservoir	Mercury	TMDL still required	Yes
Coyote	Calero Reservoir	Mercury	Being addressed by EPA-approved TMDL	Yes
Coyote	Coyote Reservoir	Mercury	TMDL still required	Yes
Coyote	Guadalupe Creek	Mercury	Being addressed by EPA-approved TMDL	Yes
Coyote	Guadalupe Reservoir	Mercury	Being addressed by EPA-approved TMDL	Yes
Coyote	Las Animas	Diazinon	Being addressed by EPA-approved TMDL	Yes
Coyote	Lexington Reservoir	Mercury	TMDL still required	Yes
Coyote	Los Gatos Creek (R2)	Diazinon	Being addressed by EPA-approved TMDL	Yes
Coyote	Los Gatos Creek, Lower	Diazinon	Being addressed by EPA-approved TMDL	Yes
Coyote	Oiger Quarry Ponds	Mercury	TMDL still required	Yes
Coyote	San Tomas Aquinas Creek	Trash	Being addressed by action other than a TMDL	No
Coyote	Saratoga Creek	Diazinon	Being addressed by EPA-approved TMDL	Yes
Coyote	Silver Creek (Santa Clara County)	Trash	Being addressed by action other than a TMDL	No

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
Coyote	Stevens Creek Reservoir	Dieldrin	TMDL still required	Yes
San Francisco Bay	Alameda Creek	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	Aquatic Park (Marina Lagoon, San Mateo County)	Indicator Bacteria	Being addressed by EPA-approved TMDL	No
San Francisco Bay	Arroyo De La Laguna	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	Arroyo Del Valle	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	Arroyo Las Positas	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	Arroyo Mocho	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	Calabazas Creek (Santa Clara County)	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	Calaveras Reservoir	Mercury	TMDL still required	Yes
San Francisco Bay	Candlestick Point	Indicator Bacteria	Being addressed by EPA-approved TMDL	No
San Francisco Bay	Central Basin, San Francisco (part of SF Bay, Lower)	Dioxin compounds (including 2,3,7,8-tetra-chlorodibenzo-dioxin)	TMDL still required	Yes
San Francisco Bay	Colma Creek	Trash	Being addressed by action other than a TMDL	No
San Francisco Bay	Coyote Creek (Santa Clara County)	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	Damon Slough	Trash	Being addressed by action other than a TMDL	No
San Francisco Bay	Del Valle Reservoir	Mercury	TMDL still required	Yes
San Francisco Bay	Guadalupe River	Diazinon	Being addressed by EPA-approved TMDL	Yes

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
San Francisco Bay	Guadalupe Slough	Toxicity ^b	TMDL still required	Yes
San Francisco Bay	Islais Creek	Ammonia	TMDL still required	Yes
San Francisco Bay	Kiteboard Beach (San Francisco Bay, Lower)	Indicator Bacteria	TMDL still required	No
San Francisco Bay	Lake Chabot (Alameda County)	DDT (Dichlorodiphenyl trichloroethane)	TMDL still required	Yes
San Francisco Bay	Lake Merritt	Organic Enrichment/Low Dissolved Oxygen	TMDL still required	Yes
San Francisco Bay	Lakeshore Park Beach (Marina Lagoon, San Mateo County)	Indicator Bacteria	Being addressed by EPA-approved TMDL	No
San Francisco Bay	Laurel Creek (San Mateo County)	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	Lower Crystal Springs Reservoir	Mercury	TMDL still required	Yes
San Francisco Bay	Matadero Creek	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	Mission Creek	Zinc	TMDL still required	Yes
San Francisco Bay	Oakland Inner Harbor	Indicator Bacteria	TMDL still required	No
San Francisco Bay	Oakland Inner Harbor (Fruitvale Site, part of San Francisco Bay, Lower)	DDT	TMDL still required	Yes
San Francisco Bay	Oakland Inner Harbor (Pacific Drydock Yard 1 Site, part of San Francisco Bay, Lower)	Zinc	TMDL still required	Yes
San Francisco Bay	Old Alameda Creek	Trash	Being addressed by action other than a TMDL	No

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
San Francisco Bay	Oyster Point Marina (San Francisco Bay, Lower)	Indicator Bacteria	TMDL still required	No
San Francisco Bay	Permanente Creek	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	San Francisco Bay, Central	DDT	TMDL still required	Yes
San Francisco Bay	San Francisco Bay, Lower	DDT	TMDL still required	Yes
San Francisco Bay	San Francisco Bay, South	Dieldrin	TMDL still required	Yes
San Francisco Bay	San Francisquito Creek	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	San Leandro Bay (part of San Francisco Bay, Lower)	Zinc	TMDL still required	Yes
San Francisco Bay	San Leandro Creek, Lower	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	San Lorenzo Creek	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	San Mateo Creek	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	San Mateo Creek, Lower	Toxicity	TMDL still required	Yes
San Francisco Bay	Sausal Creek	Trash	Being addressed by action other than a TMDL	No
San Francisco Bay	Shadow Cliffs Reservoir	Mercury	TMDL still required	Yes
San Francisco Bay	Stevens Creek	Diazinon	Being addressed by EPA-approved TMDL	Yes
San Francisco Bay	Upper San Leandro Reservoir	Mercury	TMDL still required	Yes
San Francisco Coastal South	Butano Creek	Sedimentation/ Siltation	TMDL still required	Yes
San Francisco Coastal South	Lake Merced	pH	TMDL still required	Yes
San Francisco Coastal South	Pacific Ocean (Point Ano Nuevo to Soquel Point)	Dieldrin	TMDL still required	Yes

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
San Francisco Coastal South	Pacific Ocean at Pacifica State/Linda Mar Beach	Indicator Bacteria	Being addressed by EPA-approved TMDL	No
San Francisco Coastal South	Pacific Ocean at Pillar Point	Mercury	TMDL still required	Yes
San Francisco Coastal South	Pacific Ocean at Pillar Point Beach	Indicator Bacteria	TMDL still required	No
San Francisco Coastal South	Pacific Ocean at Waddell Creek Beach	Total Coliform	TMDL still required	No
San Francisco Coastal South	Pescadero Creek	Sedimentation/ Siltation	TMDL still required	Yes
San Francisco Coastal South	Pilarcitos Lake	Mercury	TMDL still required	Yes
San Francisco Coastal South	Pomponio Creek	Indicator Bacteria	TMDL still required	No
San Francisco Coastal South	San Gregorio Creek	Sedimentation/ Siltation	TMDL still required	Yes
San Francisco Coastal South	San Pedro Creek	Indicator Bacteria	Being addressed by EPA-approved TMDL	No
San Francisco Coastal South	San Vicente Creek	Indicator Bacteria	TMDL still required	No
San Francisco Coastal South	Scott Creek Lagoon	Sodium	TMDL still required	Yes
San Francisco Coastal South	Waddell Creek Lagoon	pH	TMDL still required	Yes
Suisun Bay	Carquinez Strait	Invasive Species	TMDL still required	Yes
Suisun Bay	Cordellia Slough, unnamed tributary	Mercury	Being addressed by EPA-approved TMDL	Yes
Suisun Bay	Delta Waterways (western portion)	DDT	TMDL still required	Yes
Suisun Bay	Grayson Creek	Trash	Being addressed by action other than a TMDL	No
Suisun Bay	Hill Slough	Mercury	Being addressed by EPA-approved TMDL	Yes
Suisun Bay	Kirker Creek	Toxicity	TMDL still required	Yes
Suisun Bay	Lafayette Reservoir	PCBs (Polychlorinated biphenyls)	TMDL still required	Yes

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
Suisun Bay	Lake Herman	Mercury	TMDL still required	Yes
Suisun Bay	Ledgewood Creek	Diazinon	Being addressed by EPA-approved TMDL	Yes
Suisun Bay	Mt. Diablo Creek	Diazinon	Being addressed by EPA-approved TMDL	Yes
Suisun Bay	Pine Creek (Contra Costa County)	Diazinon	Being addressed by EPA-approved TMDL	Yes
Suisun Bay	Sacramento San Joaquin Delta	Dioxin compounds (including 2,3,7,8- tetra-chlorodibenzo-dioxin)	TMDL still required	Yes
Suisun Bay	Suisun Bay	Furan Compounds	TMDL still required	Yes
Suisun Bay	Suisun Creek	Temperature, Water	TMDL still required	Yes
Suisun Bay	Suisun Marsh Wetlands	Mercury	Being addressed by EPA-approved TMDL	Yes
Suisun Bay	Suisun Slough	Diazinon	Being addressed by EPA-approved TMDL	Yes
Suisun Bay	Walnut Creek	Diazinon	Being addressed by EPA-approved TMDL	Yes

Source: SWRCB (2021)^a TMDLs relevant to the RAMNA reflect impaired aquatic resource-related beneficial uses.

^b Refers to toxicity to aquatic organisms

References

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https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html.

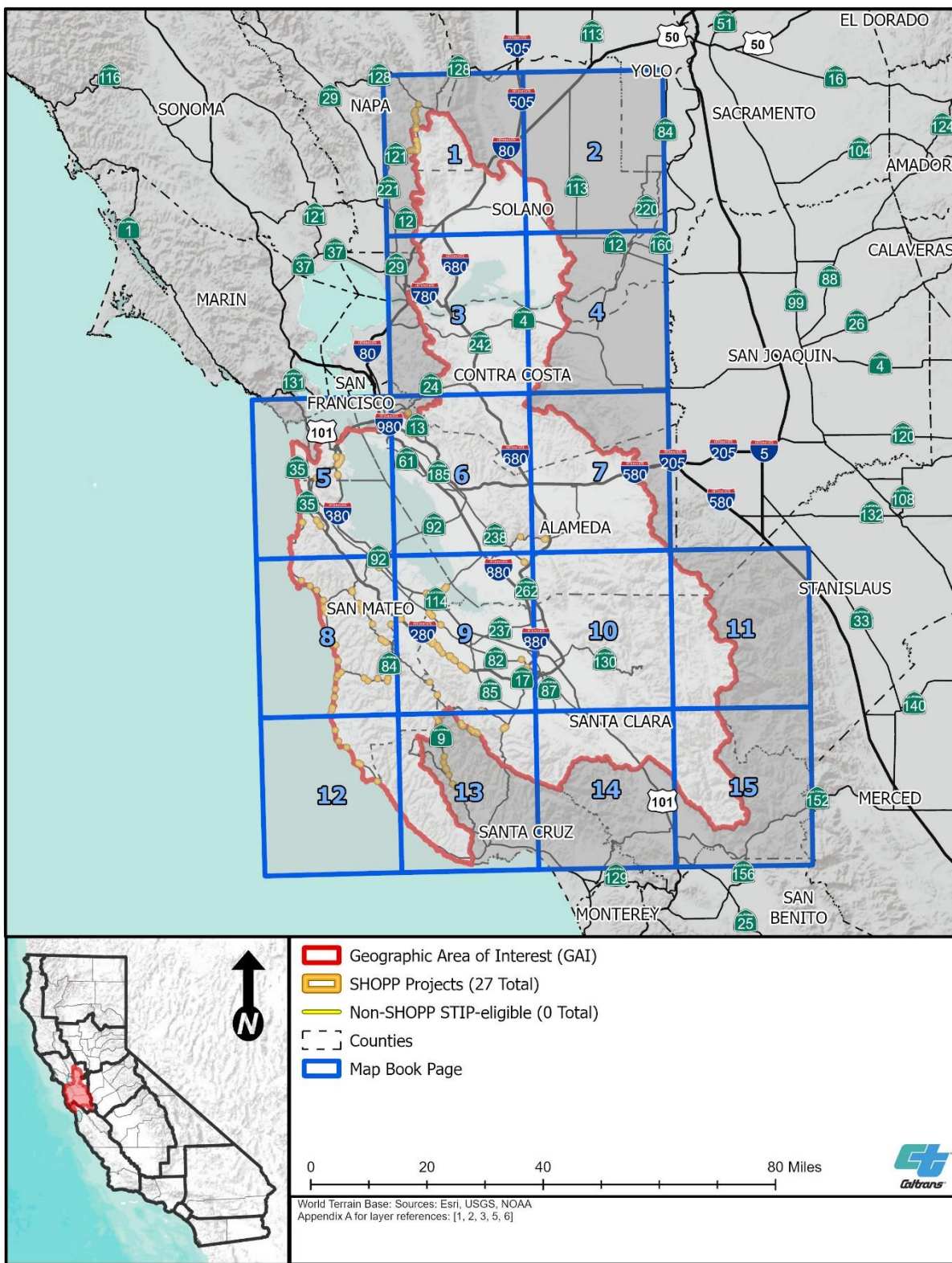
APPENDIX I: AQUATIC RESOURCE LOCATIONS

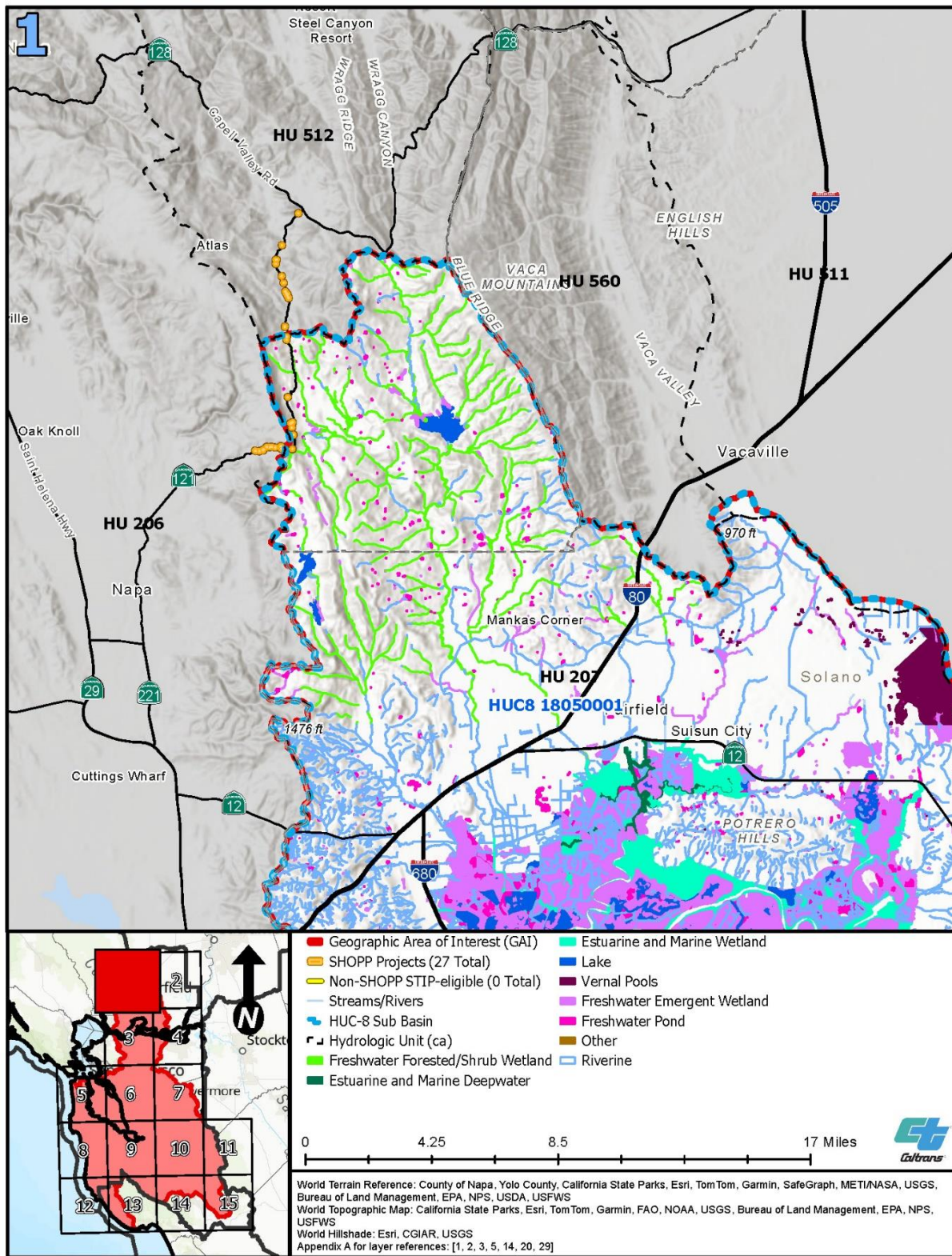
Aquatic resource locations are shown by HUC-8 sub-basin and HU in the following maps, which also include major landmarks for perspective. These locations were excerpted from the SAMNA Reporting Tool's water and wetland layers (Caltrans 2023a, 2023b). HUs are described in Appendix G, *Hydrologic Units*, which includes a crosswalk table of HUC-8 subbasins and HUs. These 15 maps correspond with the land cover maps in Appendix E, *Land Cover Types*.

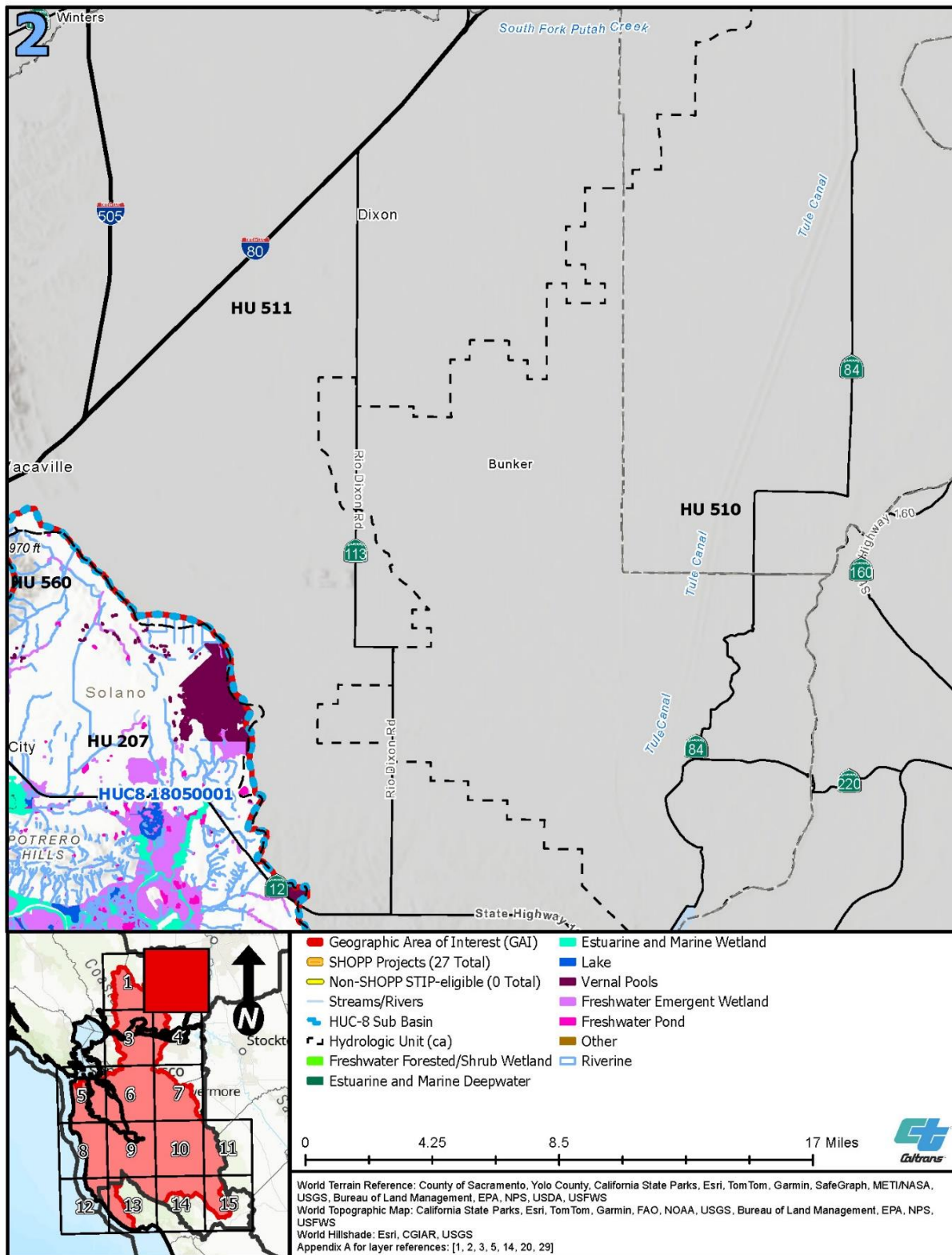
Few sources of information are known to be available that can be used to describe existing and relevant wetland, riparian, and littoral resources. The FWS (2021) National Wetlands Inventory and the San Francisco Estuary Institute's (2018) California Aquatic Resource Inventory are the only known datasets that include the distribution, extent, and types of aquatic resources within the GAI, and the SAMNA Reporting Tool relies on them (Caltrans 2023a, 2023b).

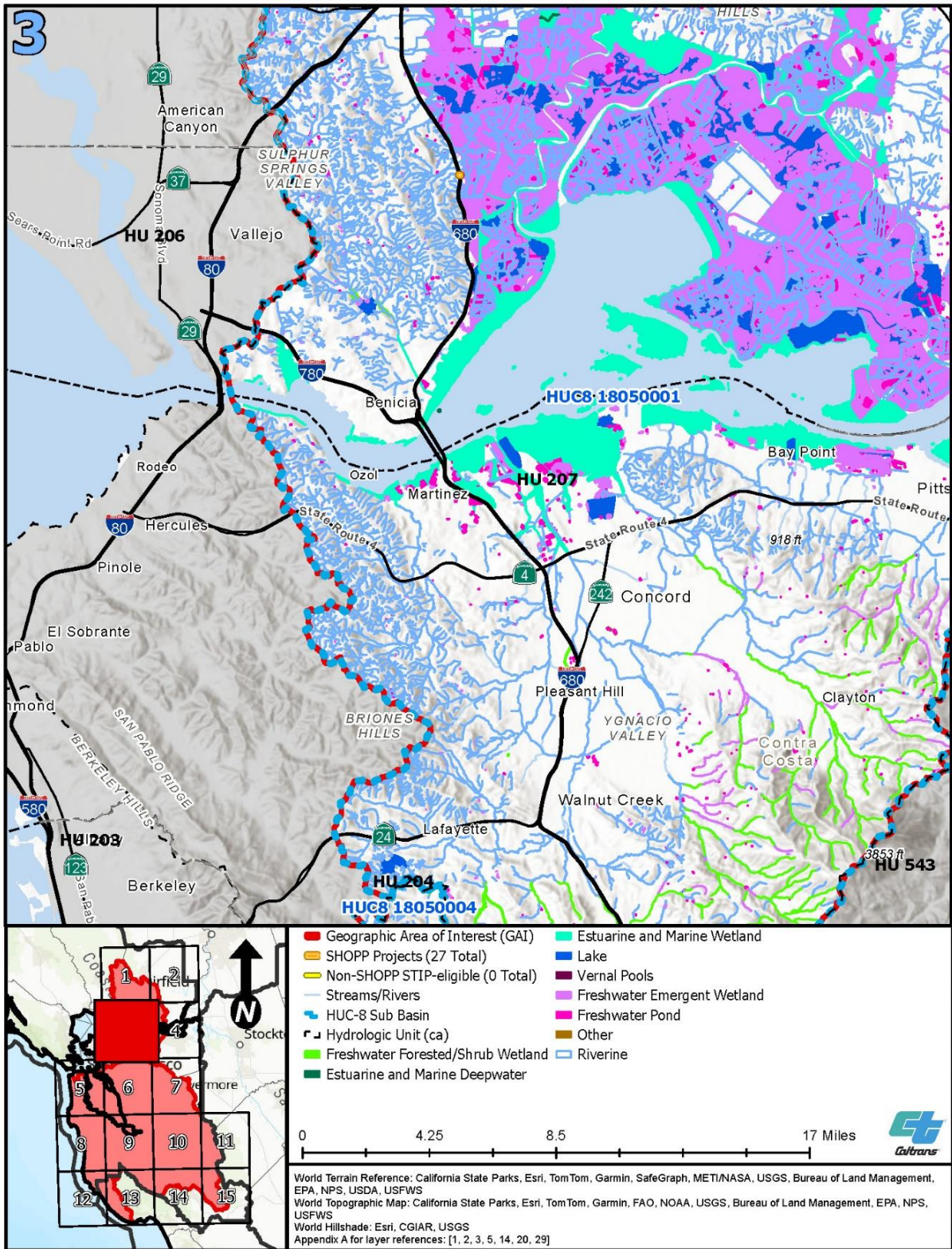
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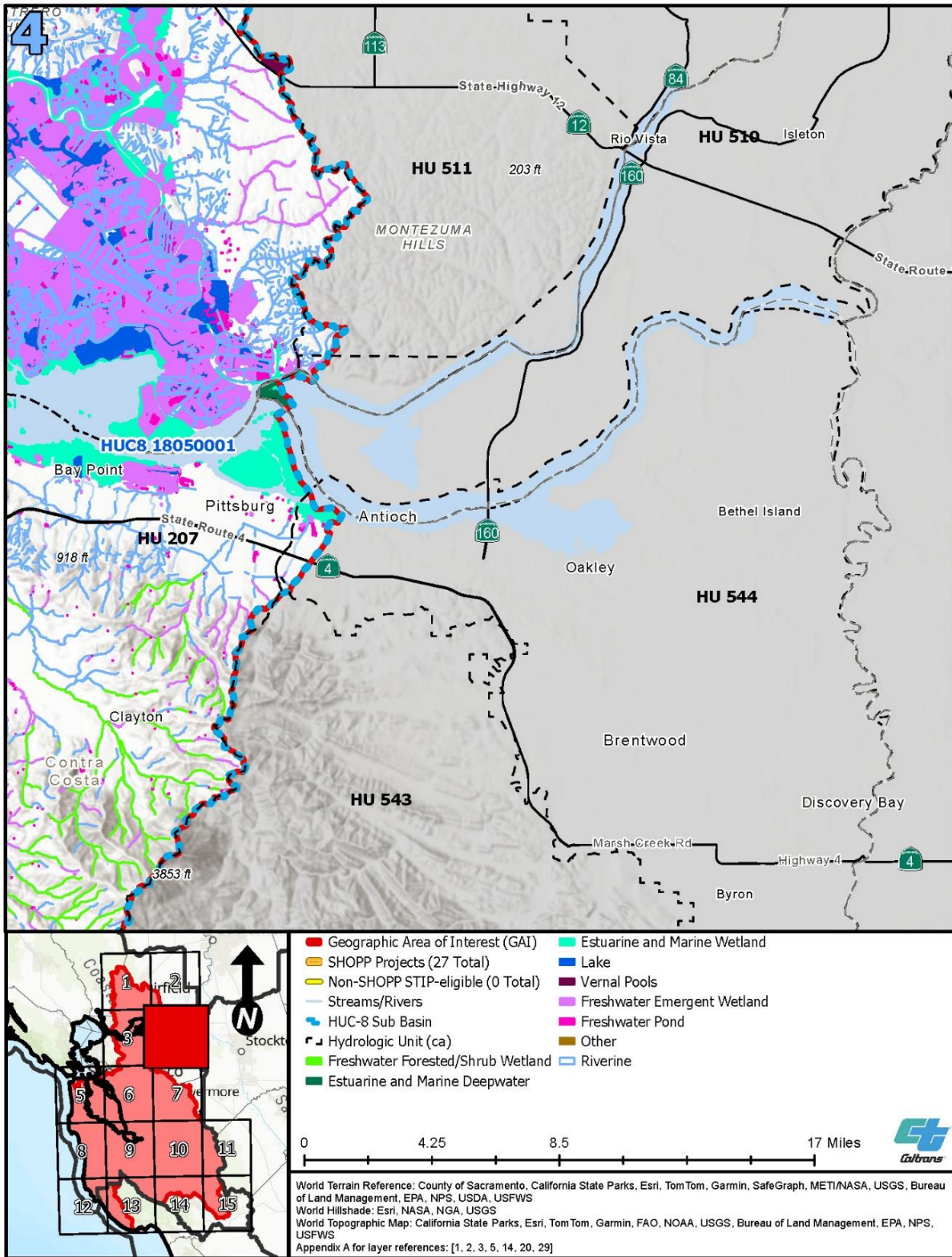
- Caltrans (California Department of Transportation). 2023a. "Waters_D04/D05 in Caltrans District 4 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2022/2023" (data file). Accessed November 13, 2023. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- . 2023b. "Wetlands_D04/D05 in Caltrans District 4 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2022/2023" (data file). Accessed November 13, 2023. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>
- FWS (U.S. Fish and Wildlife Service). 2021. "National Wetlands Inventory. Wetlands Mapper." Accessed December 27, 2023. <https://www.fws.gov/wetlands/data/mapper.html>.
- San Francisco Estuary Institute. 2018. "California Aquatic Resource Inventory (CARI)." Accessed December 19, 2023. <https://www.sfei.org/cari#sthash.SnPvzyAU.dpbs>.

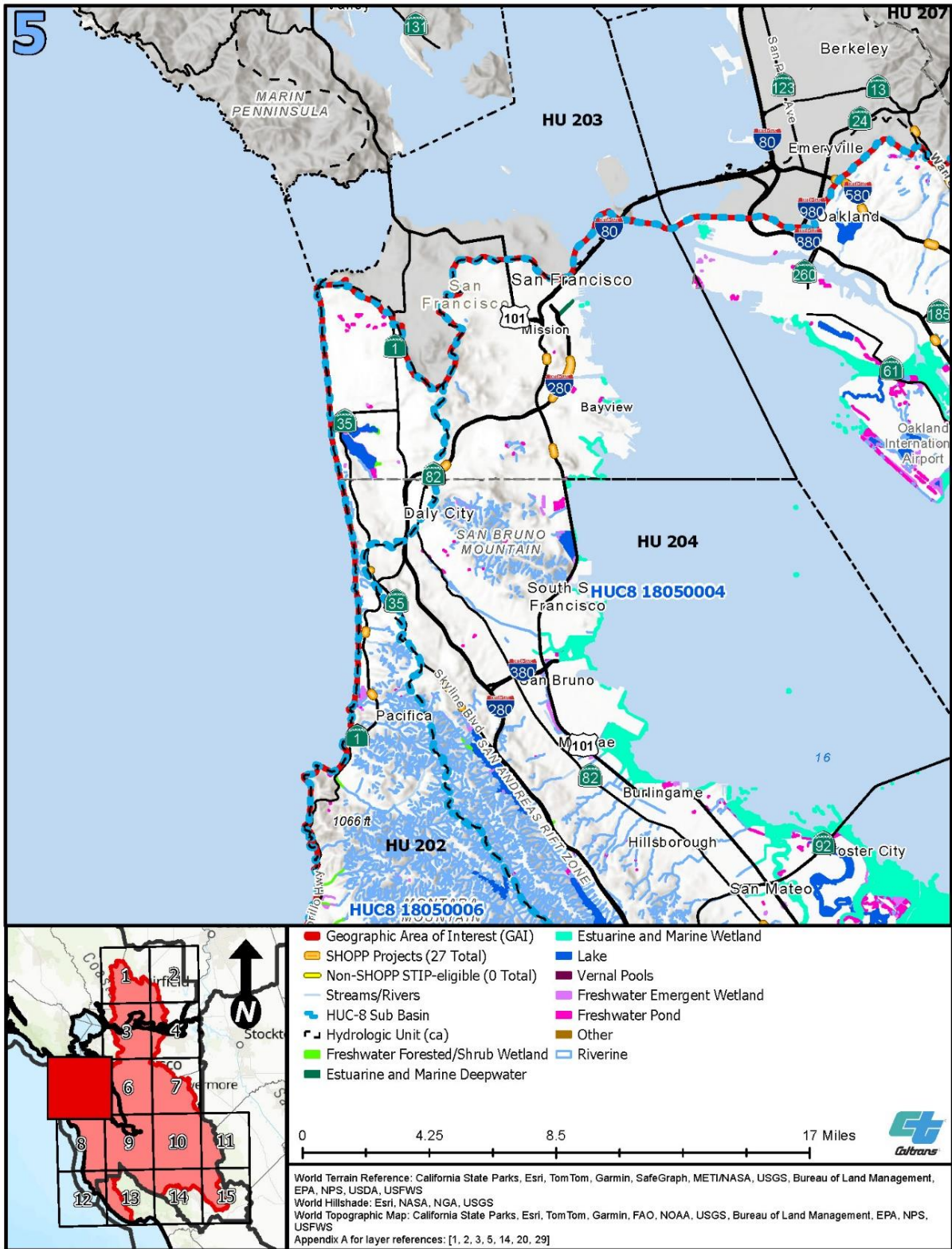


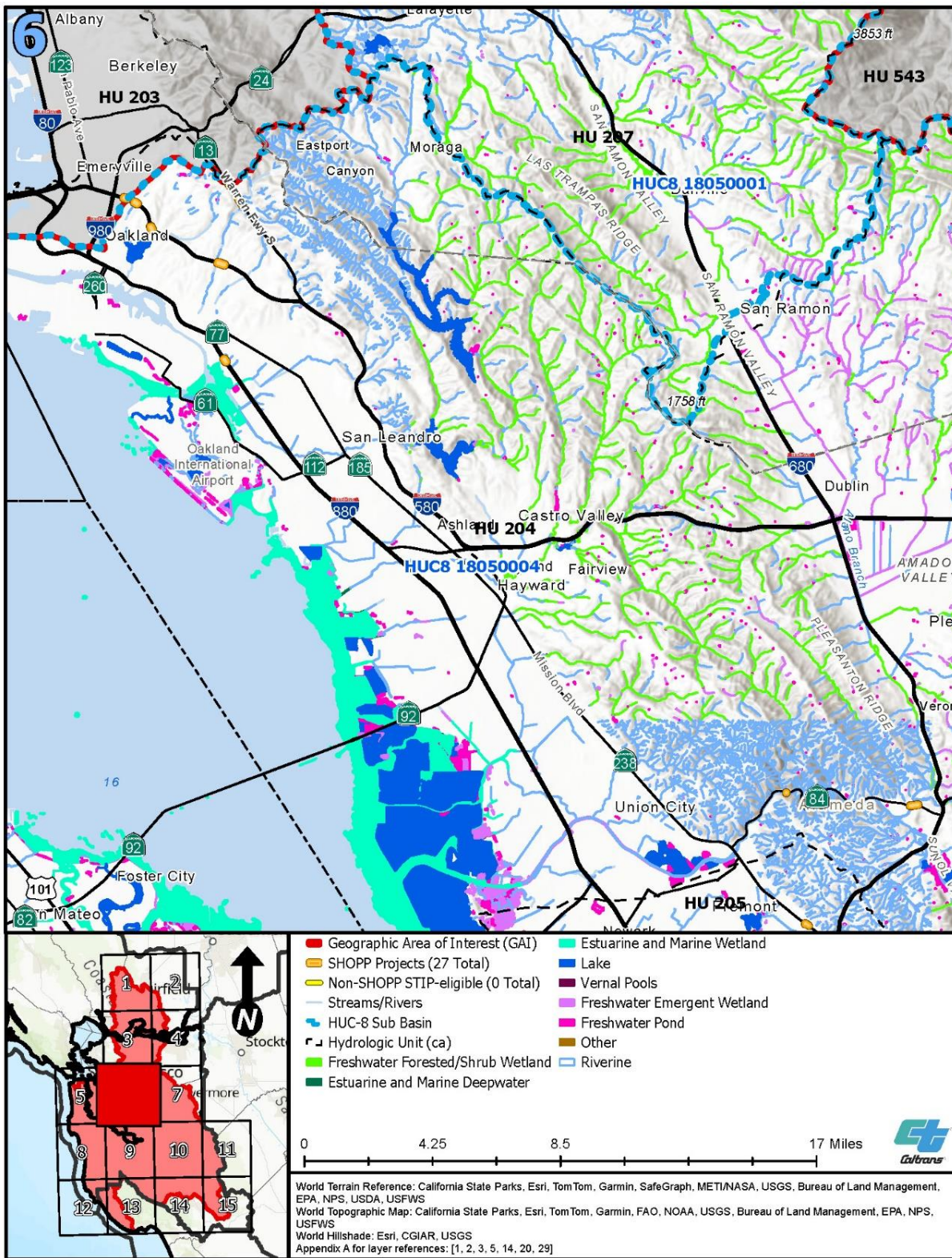


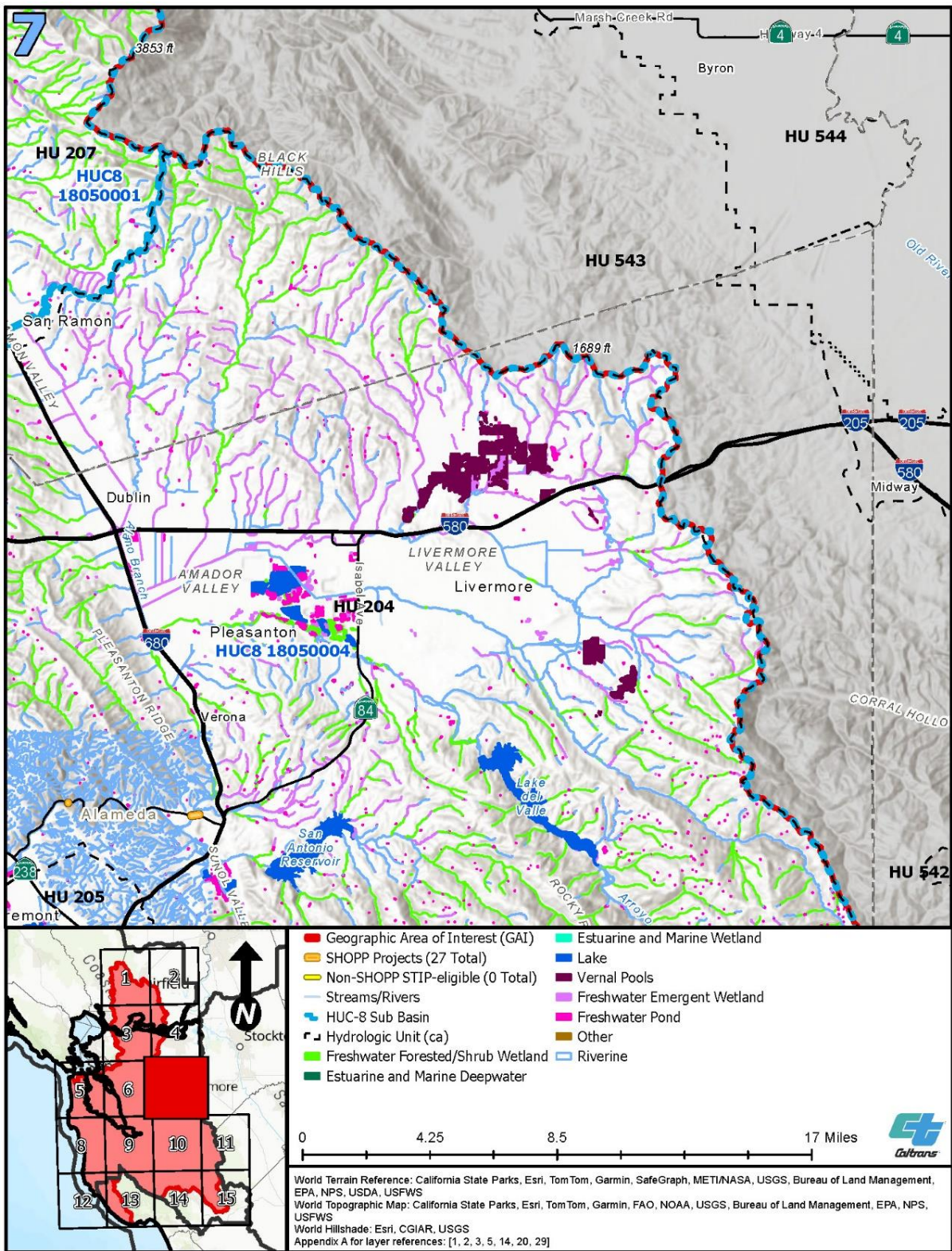


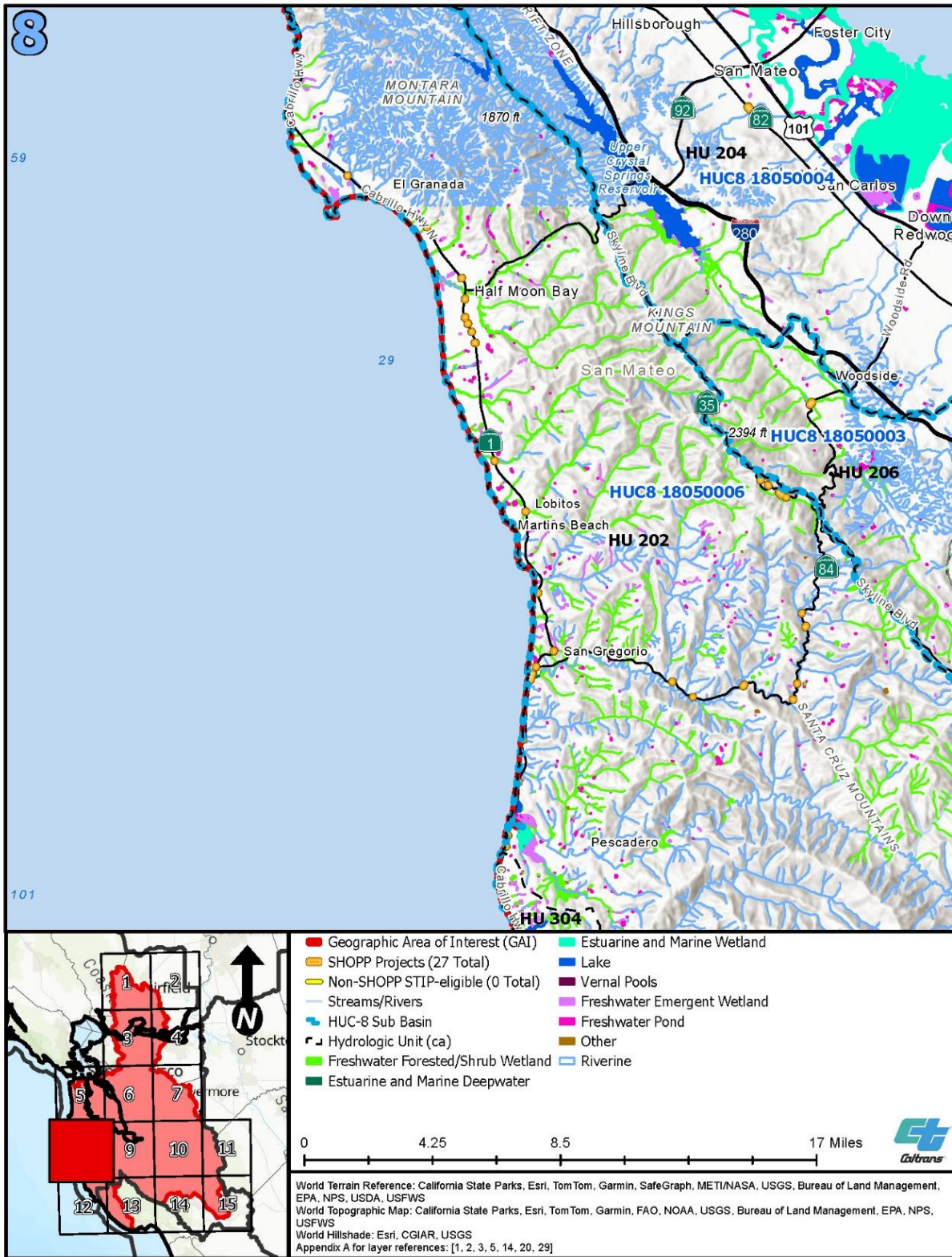


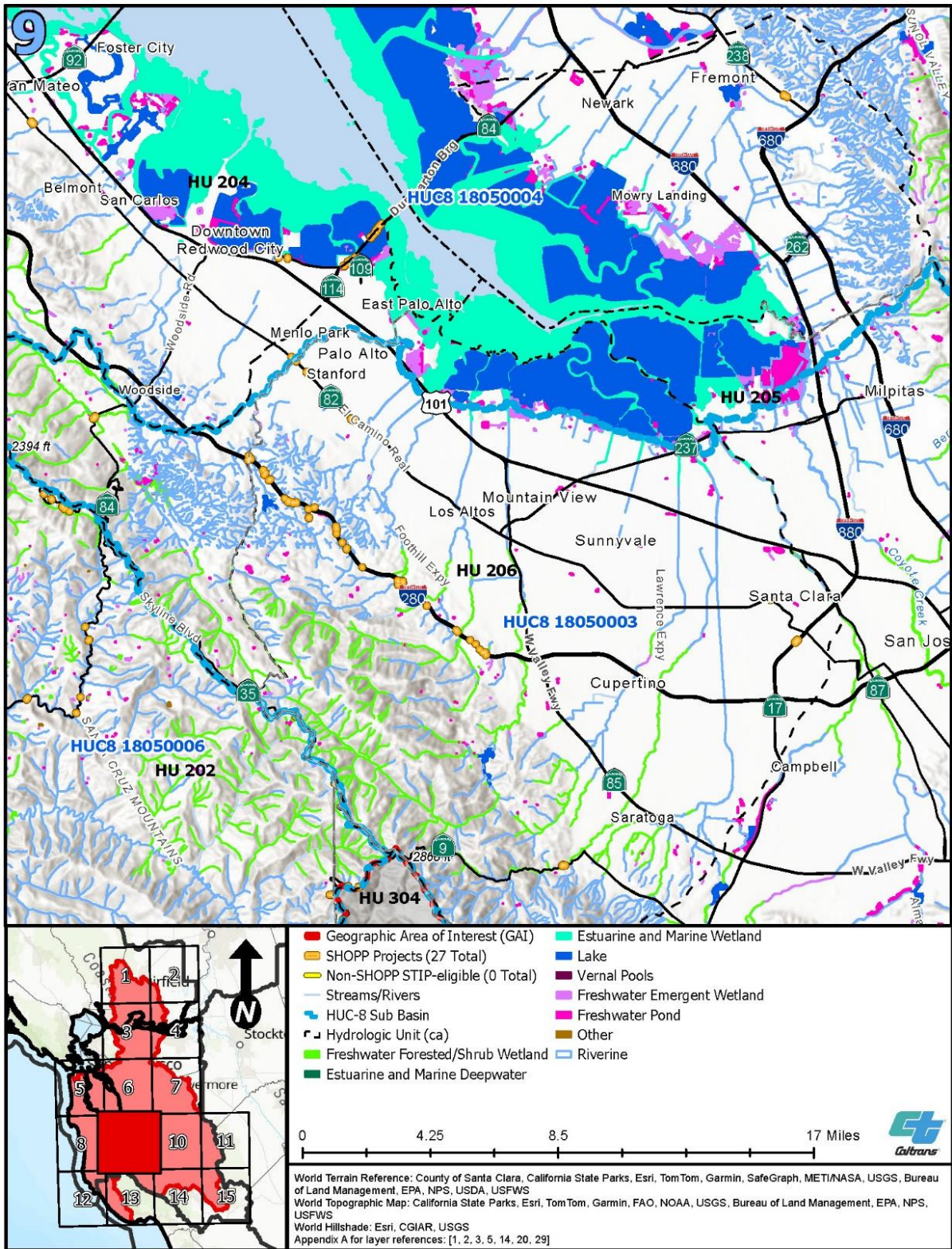


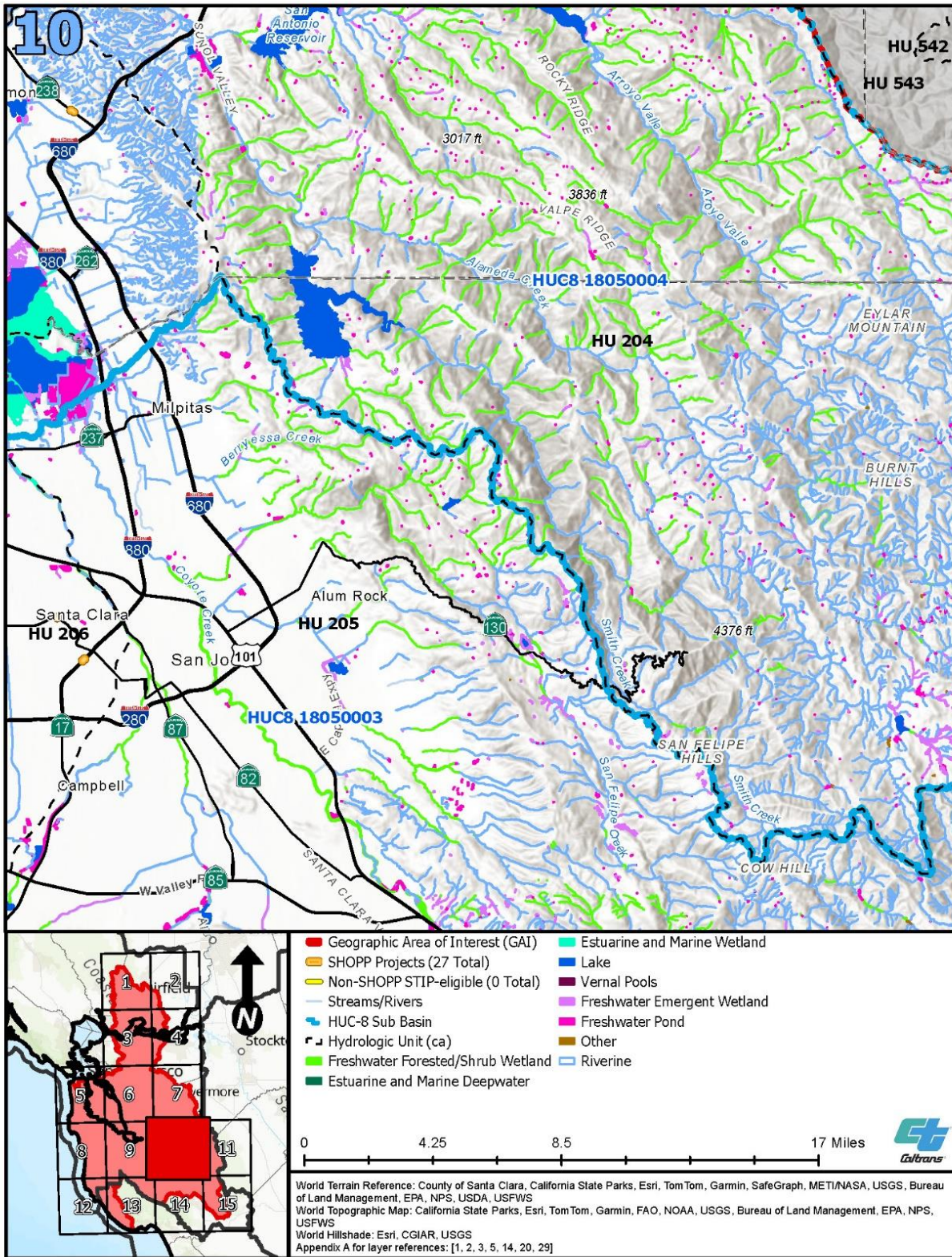


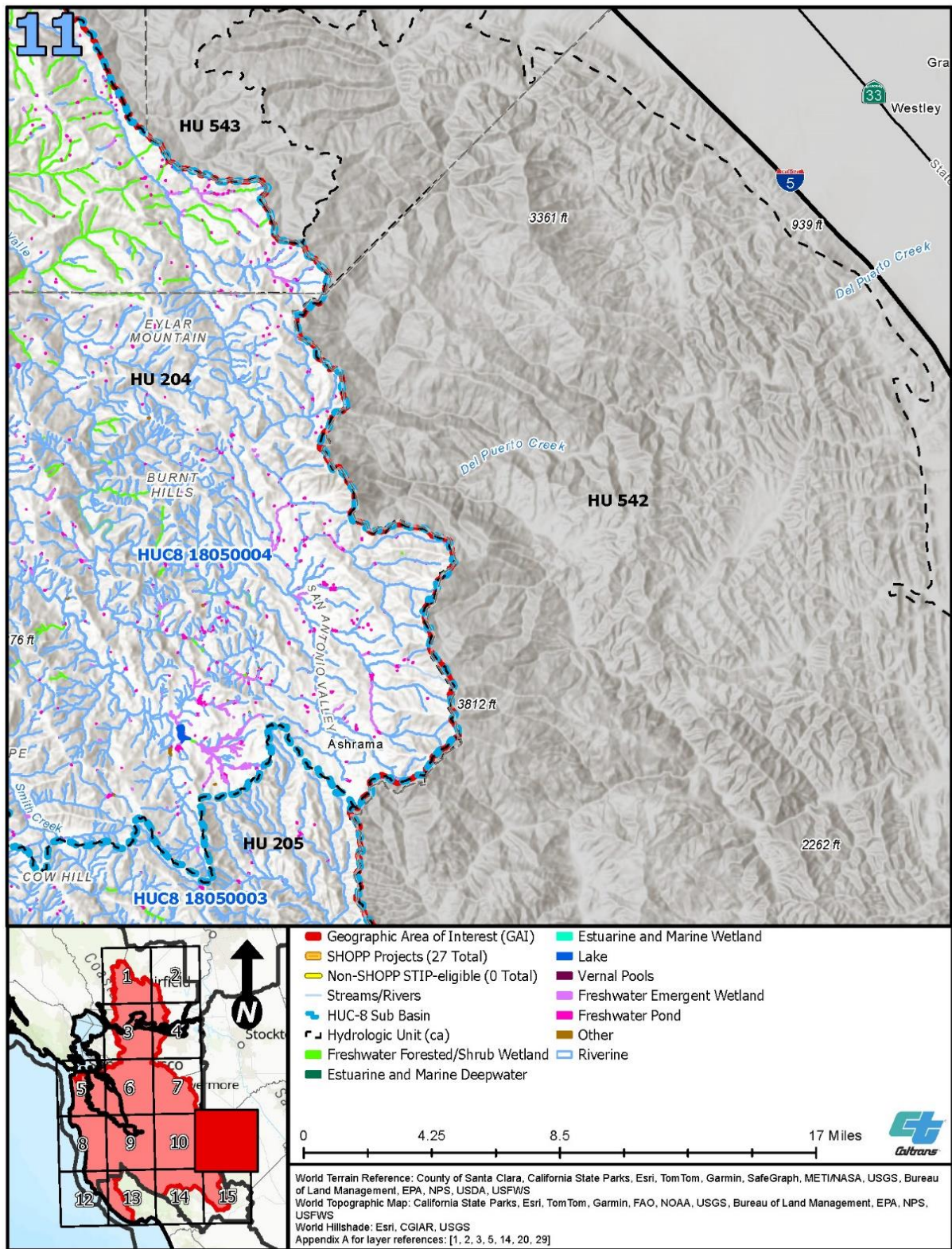


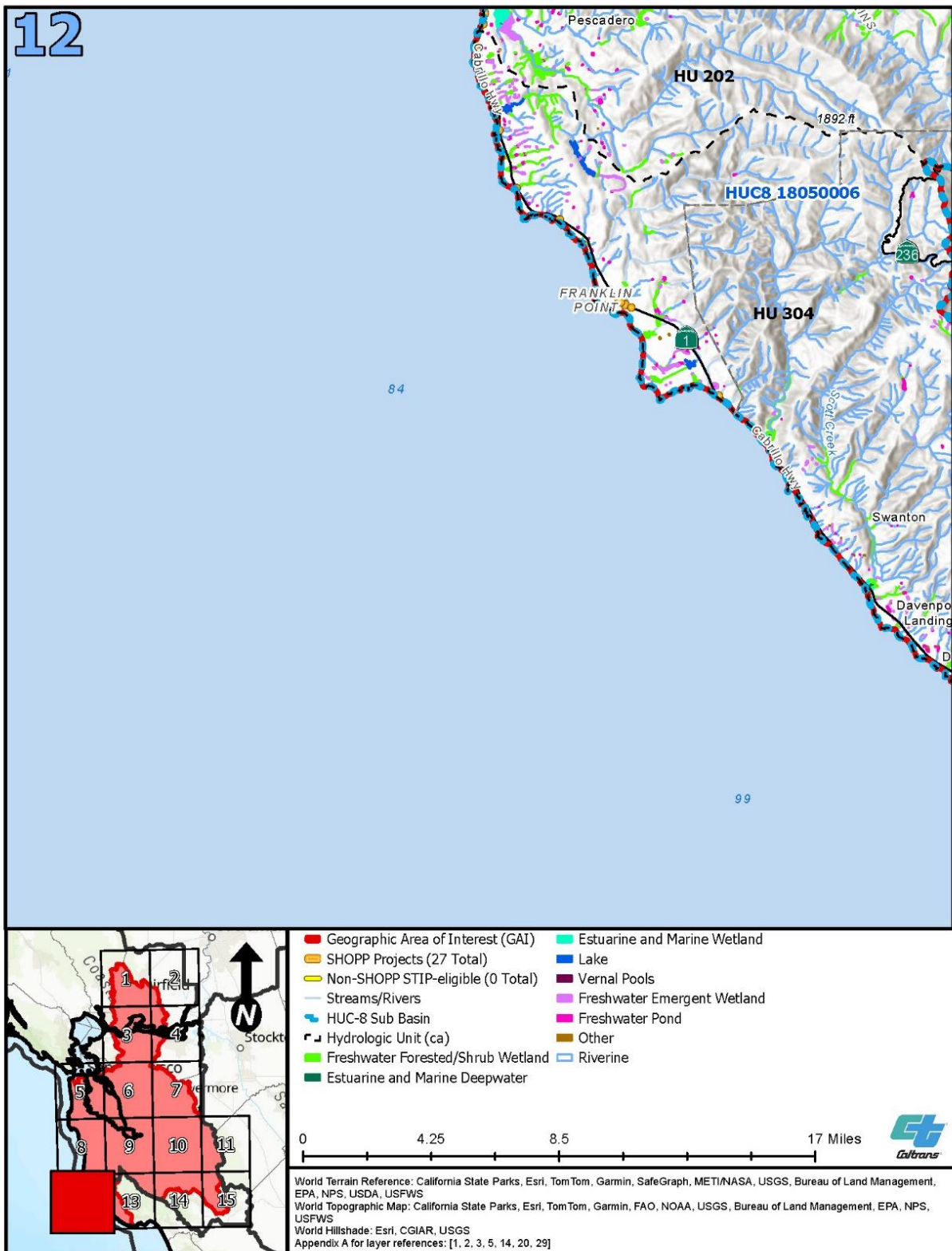


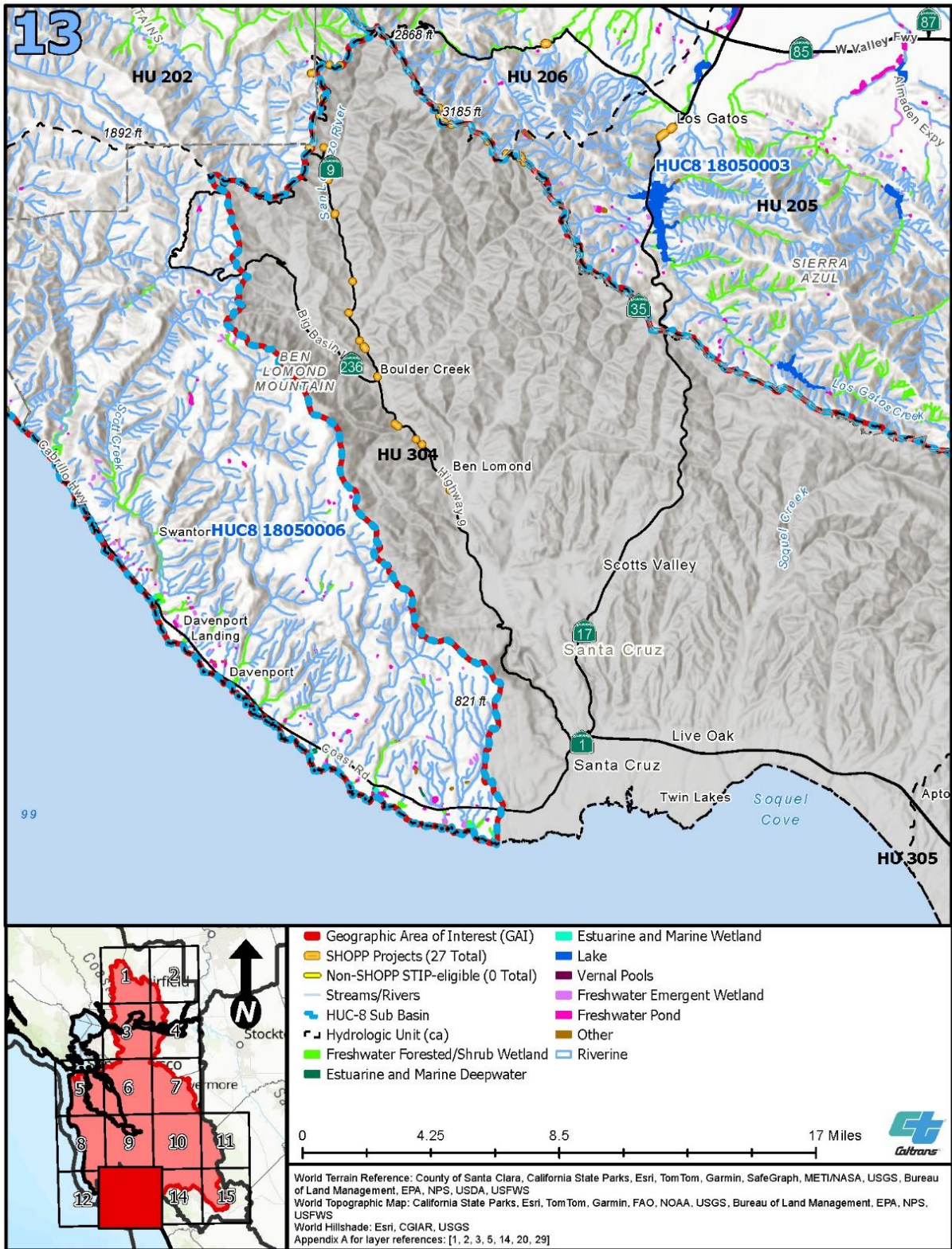


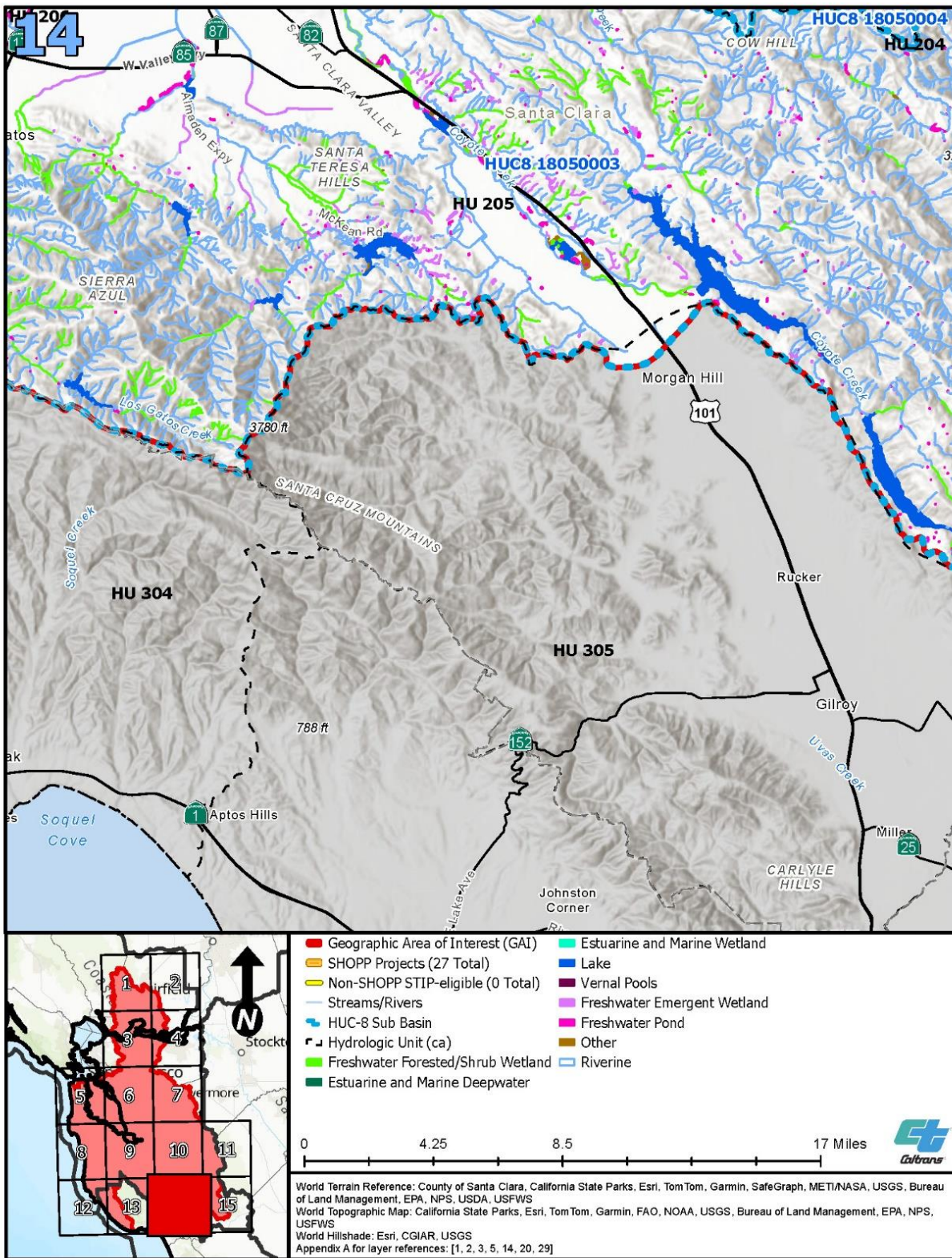


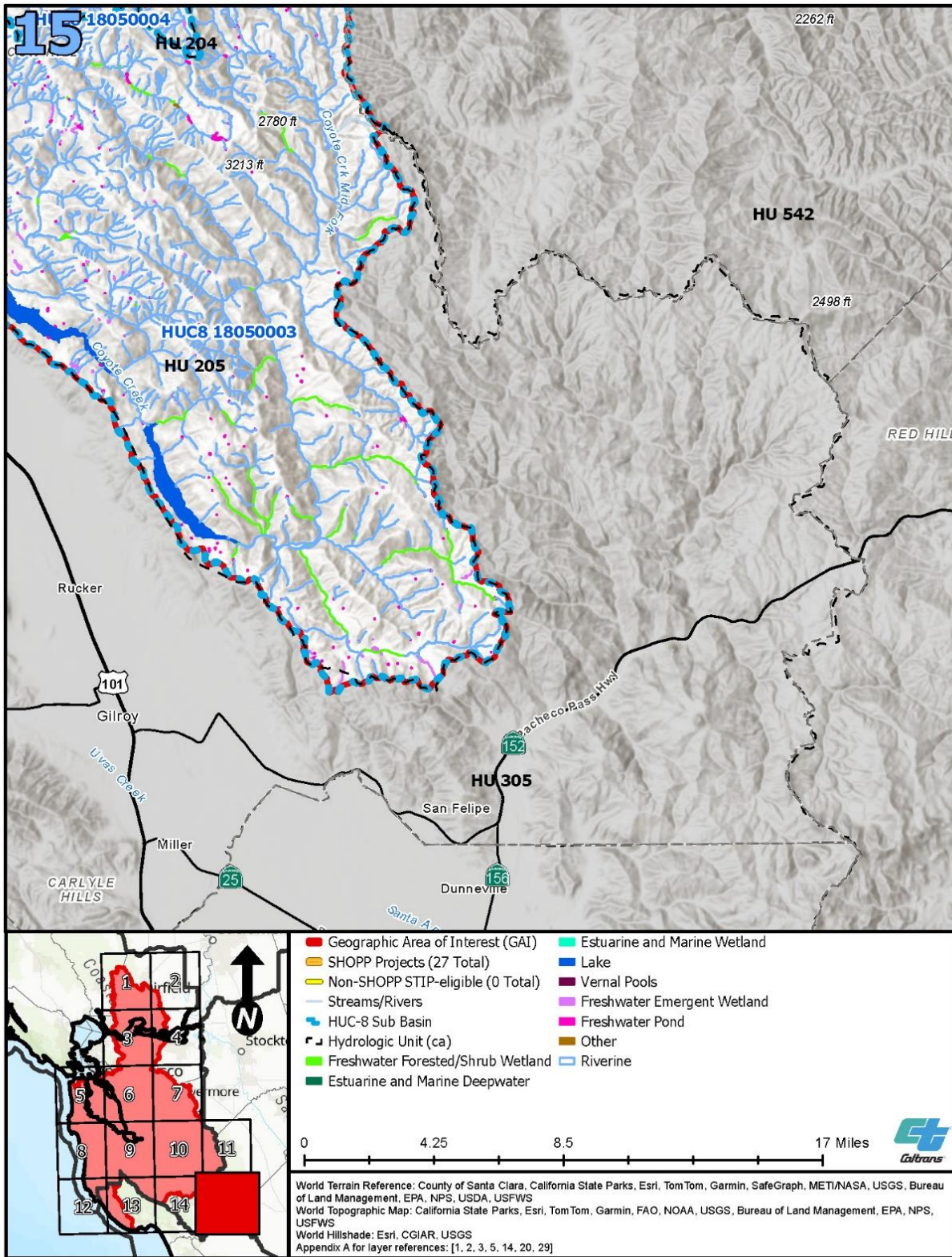












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APPENDIX J: CONSERVATION AND MITIGATION BANK SERVICE AREAS

Conservation and mitigation bank service areas that overlap the GAI are identified and mapped below. Figures in this appendix are organized by the resource for which credits are available and are presented in the following order:

Service Areas for Species of Mitigation Need:

- Figure J-1. Alameda Whipsnake Bank Service Areas
- Figure J-2. California Red-legged Frog Bank Service Areas (Map 1)
- Figure J-3. California Red-legged Frog Bank Service Areas (Map 2)
- Figure J-4. California Tiger Salamander Bank Service Areas (Map 1)
- Figure J-5. California Tiger Salamander Bank Service Areas (Map 2)
- Figure J-6. California Tiger Salamander Bank Service Areas (Map 3)
- Figure J-7. California Tiger Salamander Bank Service Areas (Map 4)
- Figure J-8. Coho Salmon and Steelhead Bank Service Areas

Service Areas for Other Species and Resources:

- Figure J-9. Burrowing Owl Bank Service Areas
- Figure J-10. Callippe Silverspot Bank Service Areas
- Figure J-11. Chinook Salmon Bank Service Areas
- Figure J-12. Chinook Salmon and Green Sturgeon Bank Service Areas
- Figure J-13. Contra Costa Goldfields Bank Service Areas
- Figure J-14. Delta Smelt Bank Service Areas
- Figure J-15. Giant Garter Snake Bank Service Areas
- Figure J-16. Longfin Smelt Bank Service Areas
- Figure J-17. San Joaquin Kit Fox Bank Service Areas
- Figure J-18. Swainson's Hawk Bank Service Areas
- Figure J-19. Valley Elderberry Longhorn Beetle Bank Service Areas
- Figure J-20. Other Plant and Terrestrial Invertebrate Bank Service Areas
- Figure J-21. Aquatic Resources and Vernal Pool Bank Service Areas (Map 1)
- Figure J-22. Aquatic Resources and Vernal Pool Bank Service Areas (Map 2)
- Figure J-23. Aquatic Resources and Vernal Pool Bank Service Areas (Map 3)
- Figure J-24. Aquatic Resources and Vernal Pool Bank Service Areas (Map 4)
- Figure J-25. Aquatic Resources and Vernal Pool Bank Service Areas (Map 5)
- Figure J-26. Aquatic Resources and Vernal Pool Bank Service Areas (Map 6)

Because individual conservation and mitigation banks often offer credits for more than one species or resource, which may have separate service areas, the same bank may be found on multiple maps.

Refer to Table 4-3 in Chapter 4, *Existing Mitigation Opportunities*, for a full list of conservation and mitigation banks within the GAI.

Figure J-1. Alameda Whipsnake Bank Service Areas

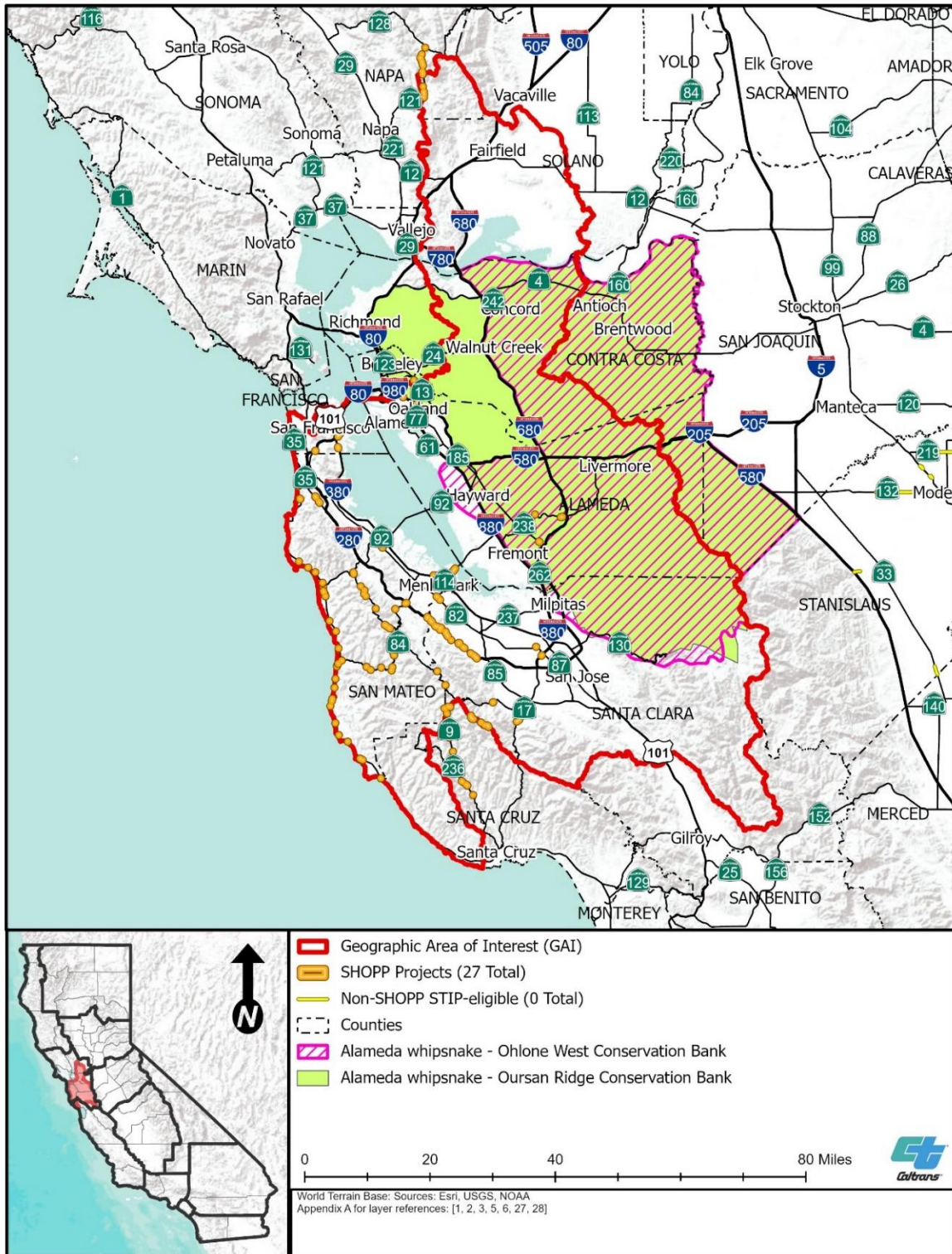


Figure J-2. California Red-legged Frog Bank Service Areas (Map 1)

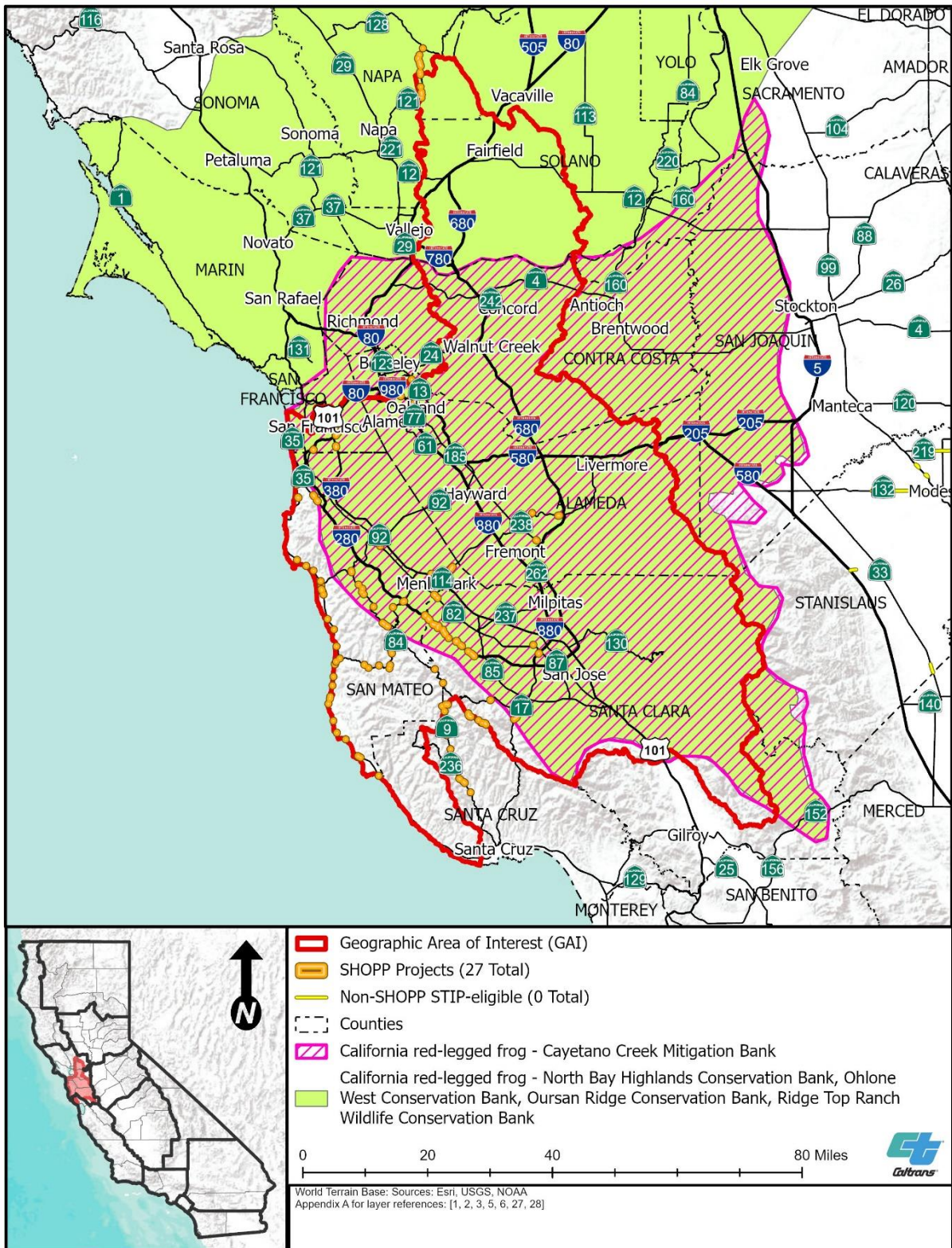


Figure J-3. California Red-legged Frog Bank Service Areas (Map 2)

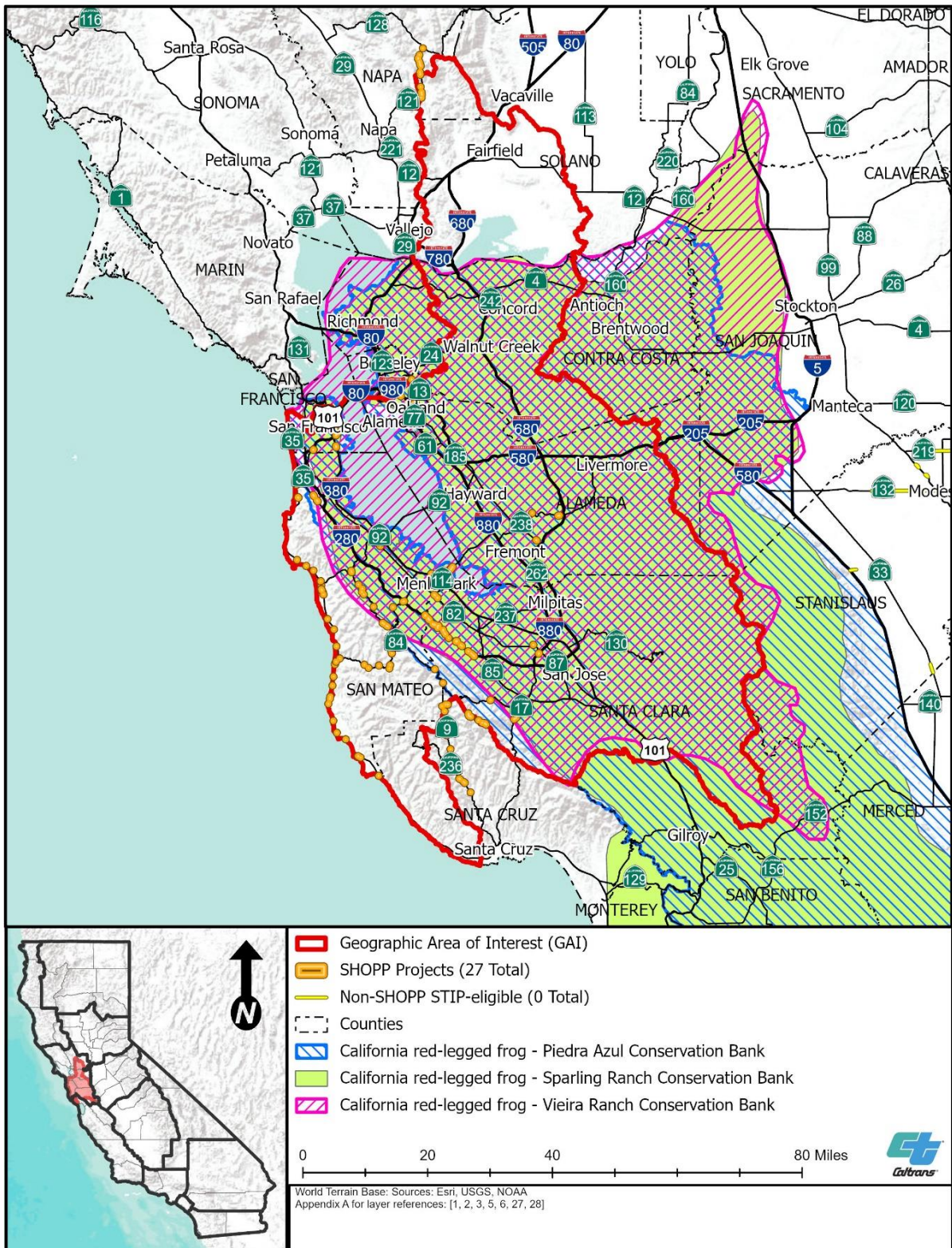


Figure J-4. California Tiger Salamander Bank Service Areas (Map 1)

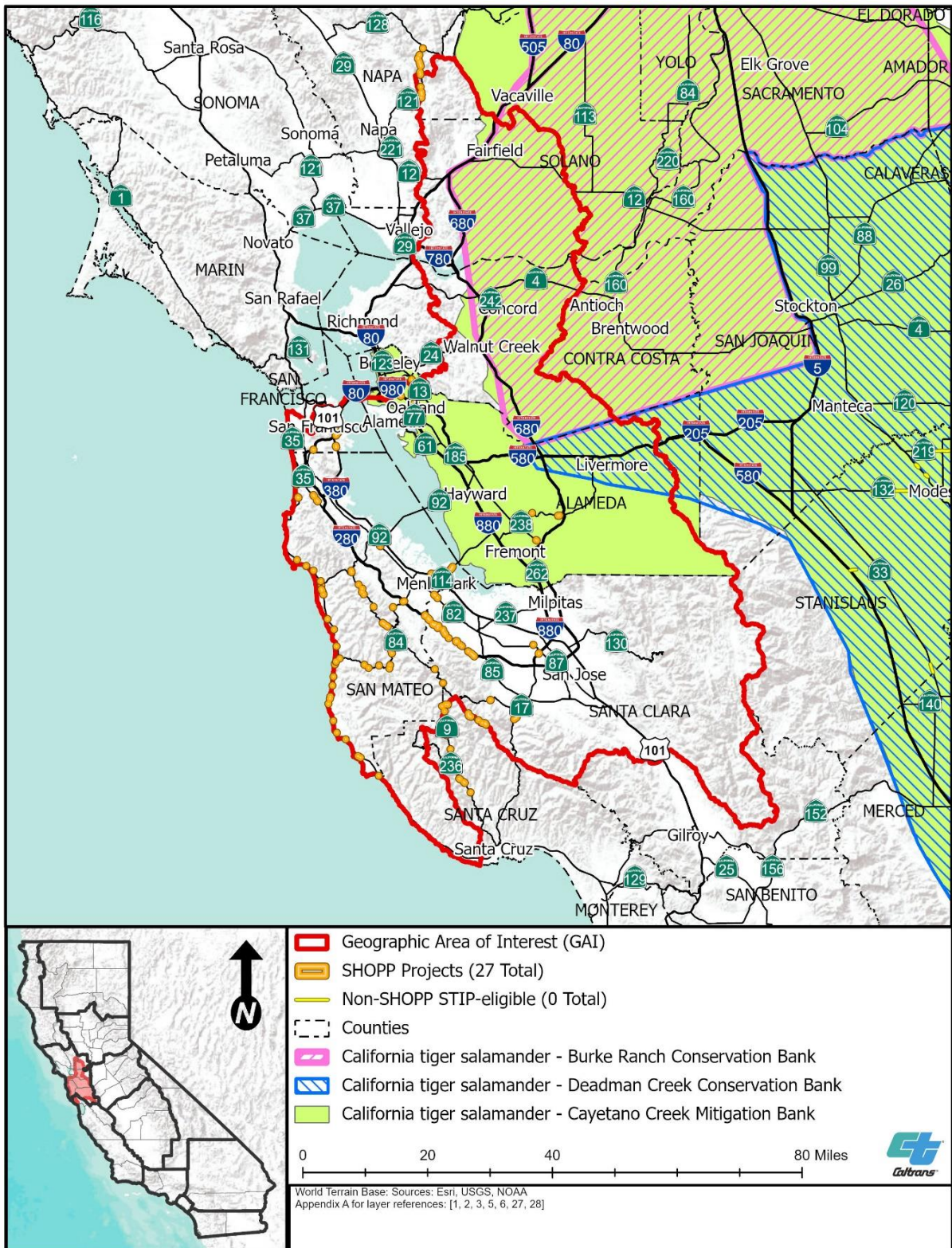


Figure J-5. California Tiger Salamander Bank Service Areas (Map 2)

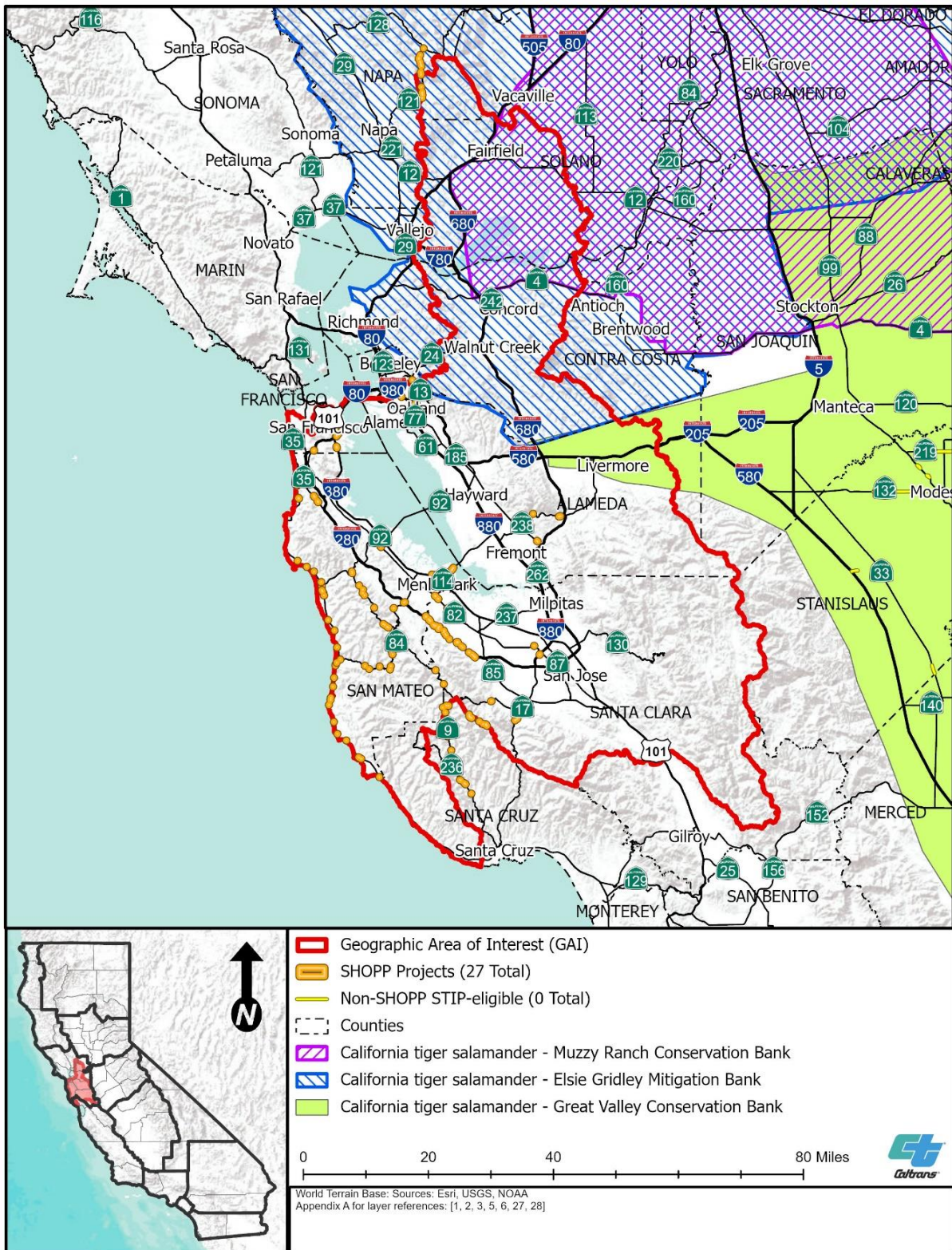


Figure J-7. California Tiger Salamander Bank Service Areas (Map 4)

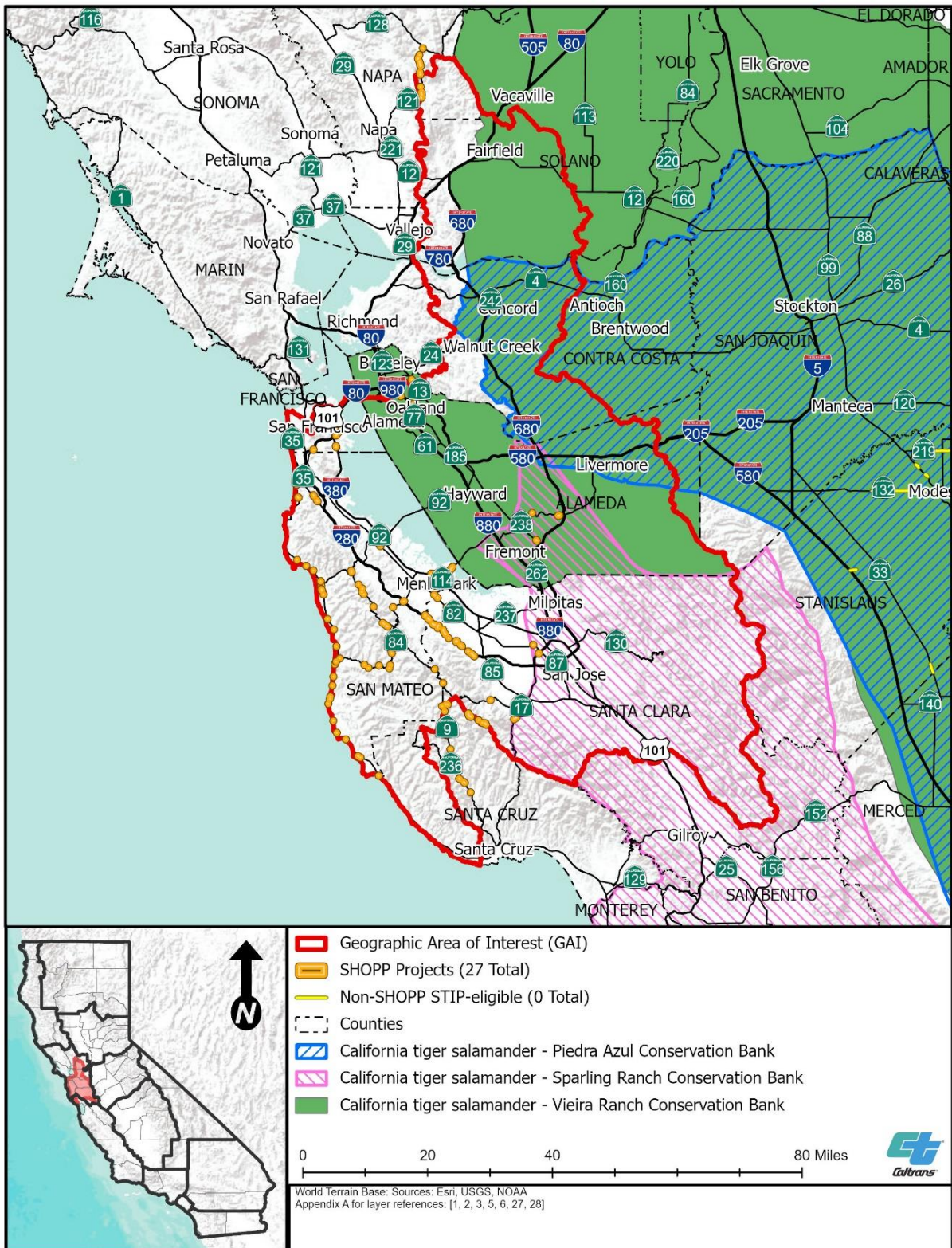


Figure J-8. Coho Salmon and Steelhead Bank Service Areas

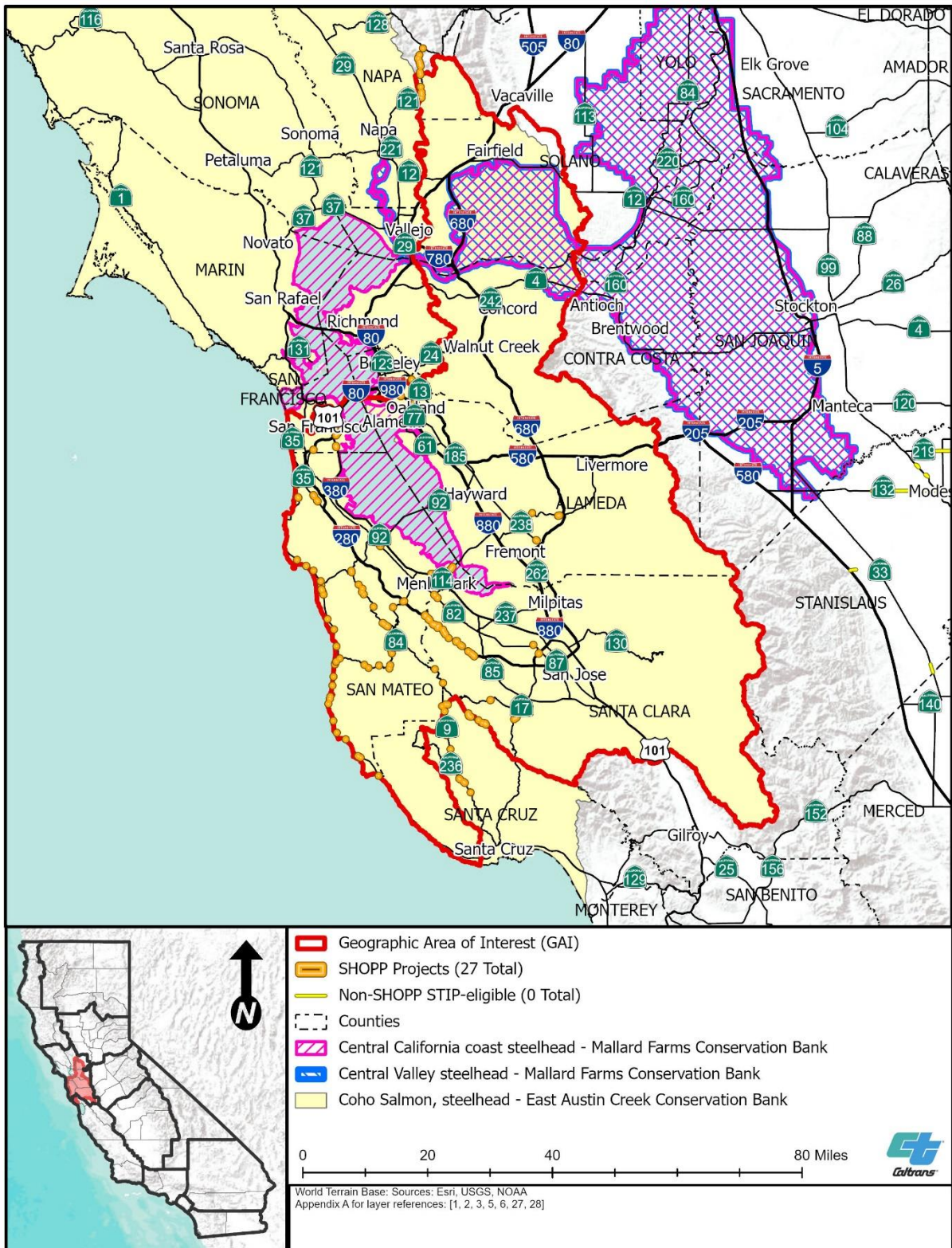


Figure J-9. Burrowing Owl Bank Service Areas

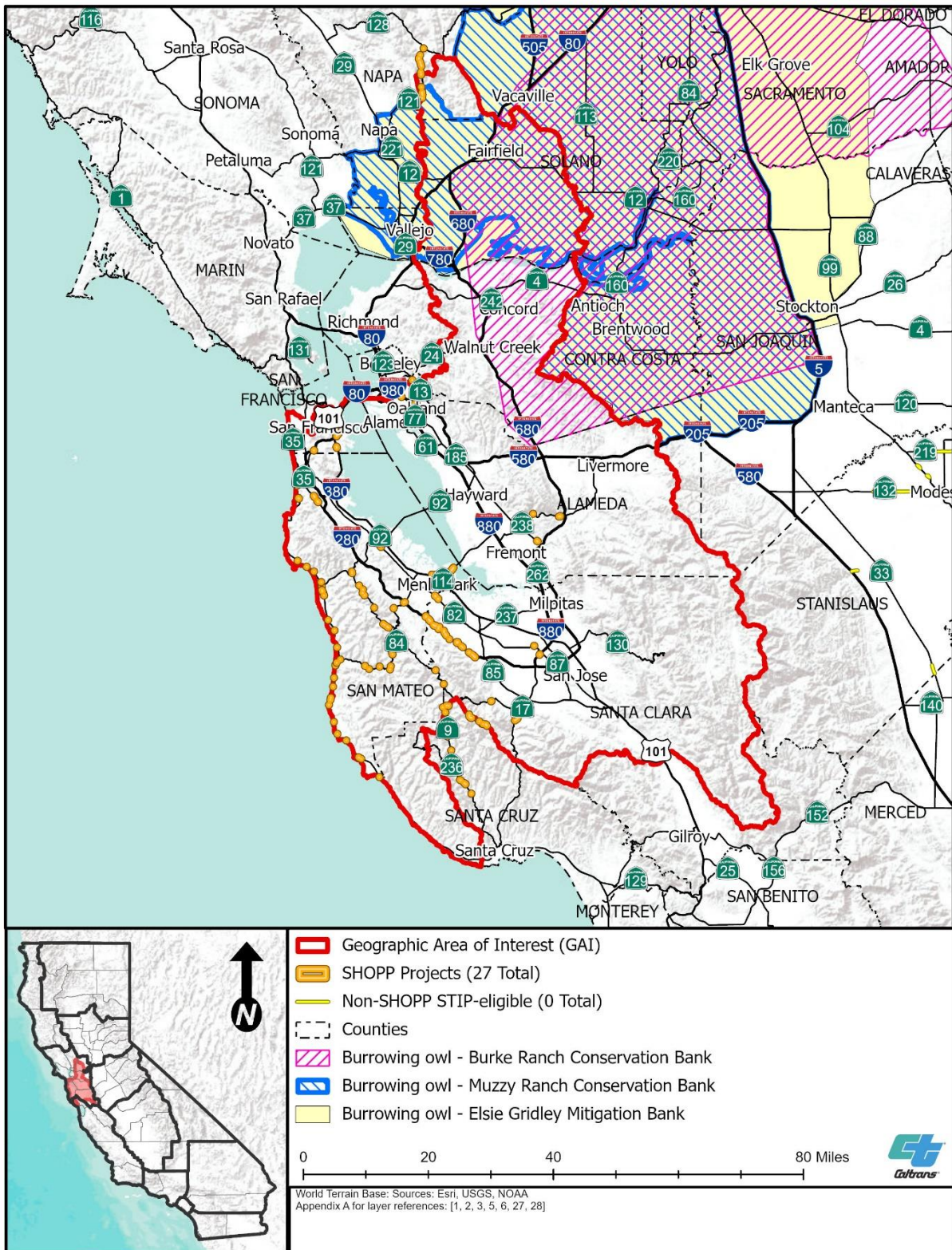


Figure J-10. Callippe Silverspot Bank Service Areas

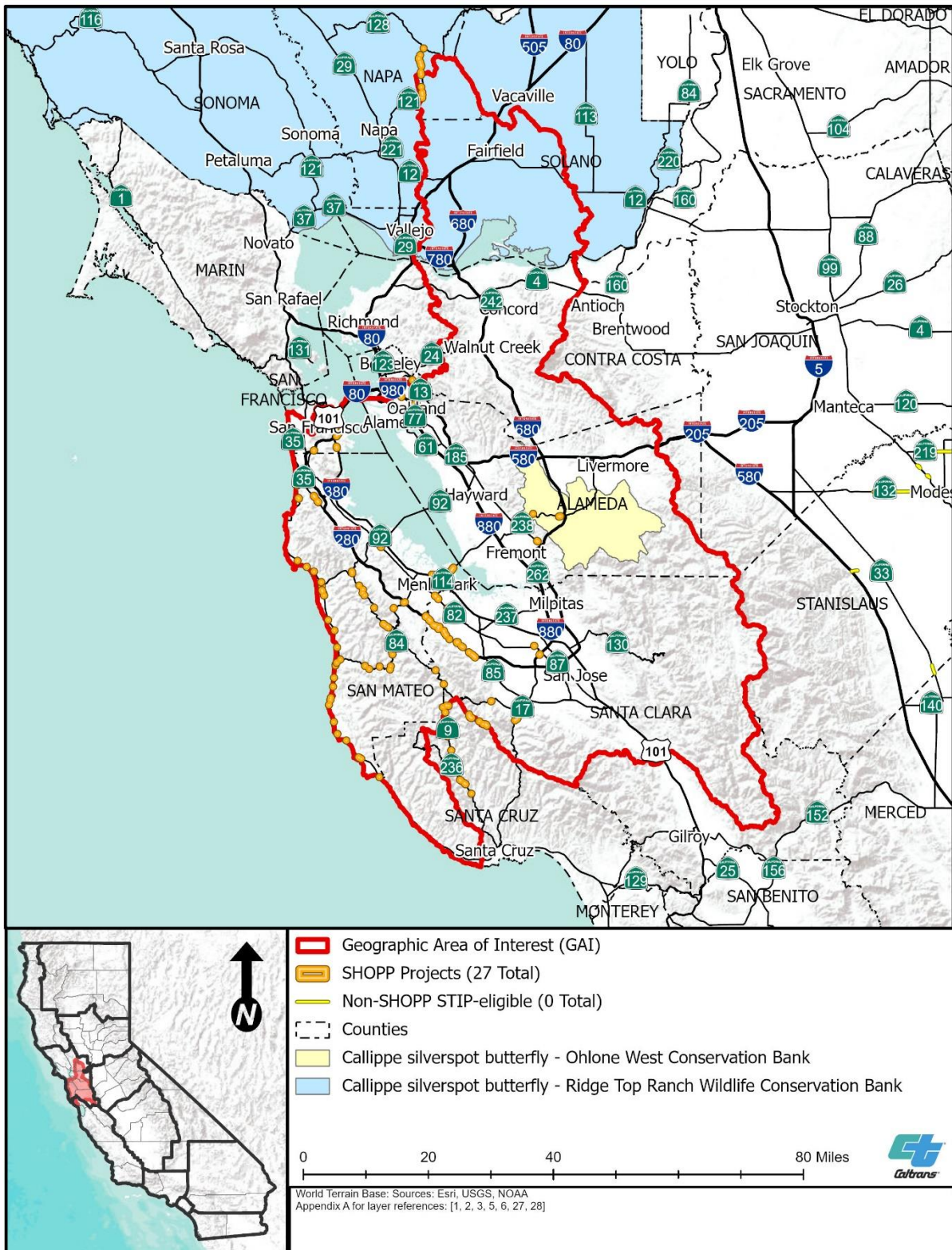


Figure J-11. Chinook Salmon Bank Service Areas

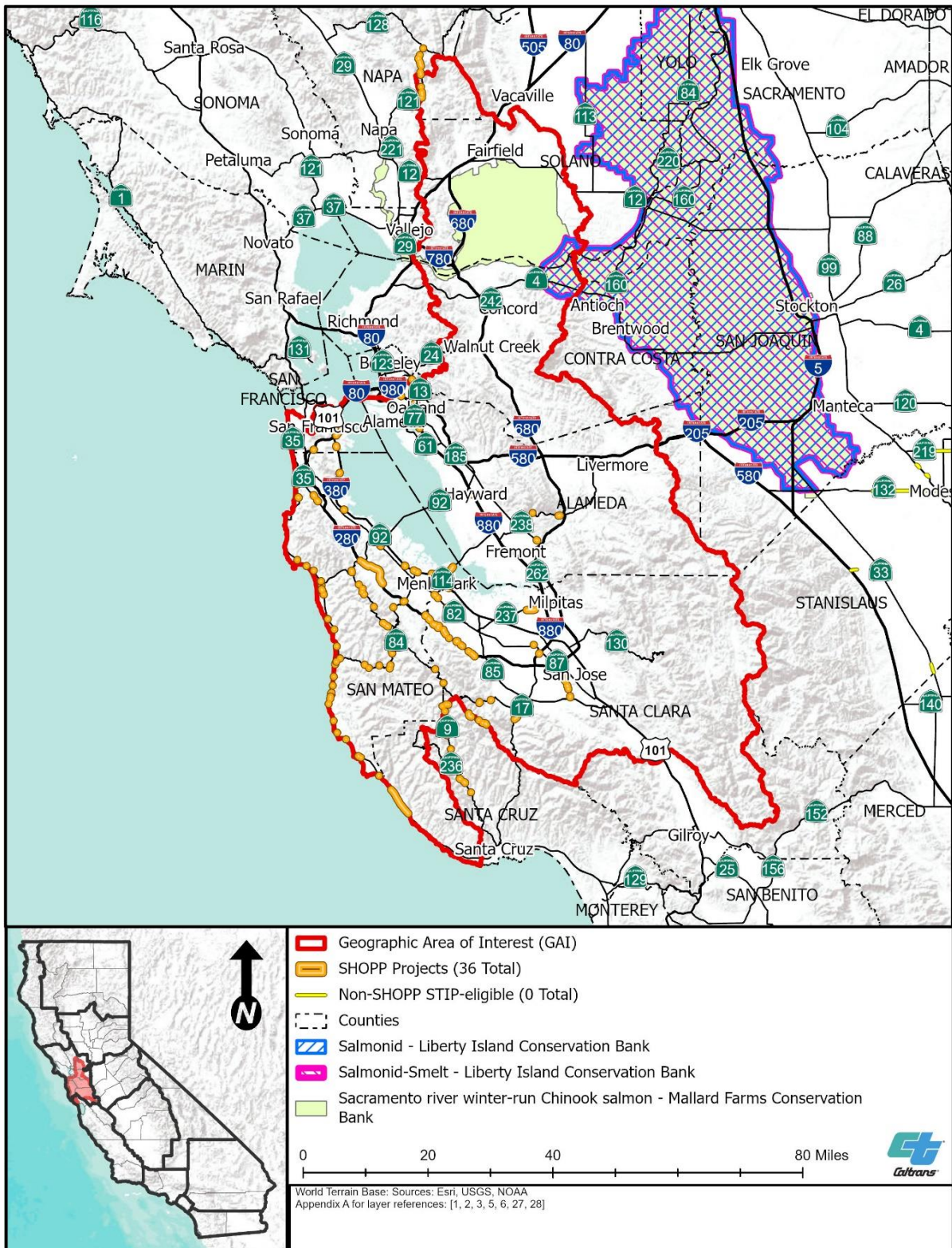


Figure J-12. Chinook Salmon and Green Sturgeon Service Areas

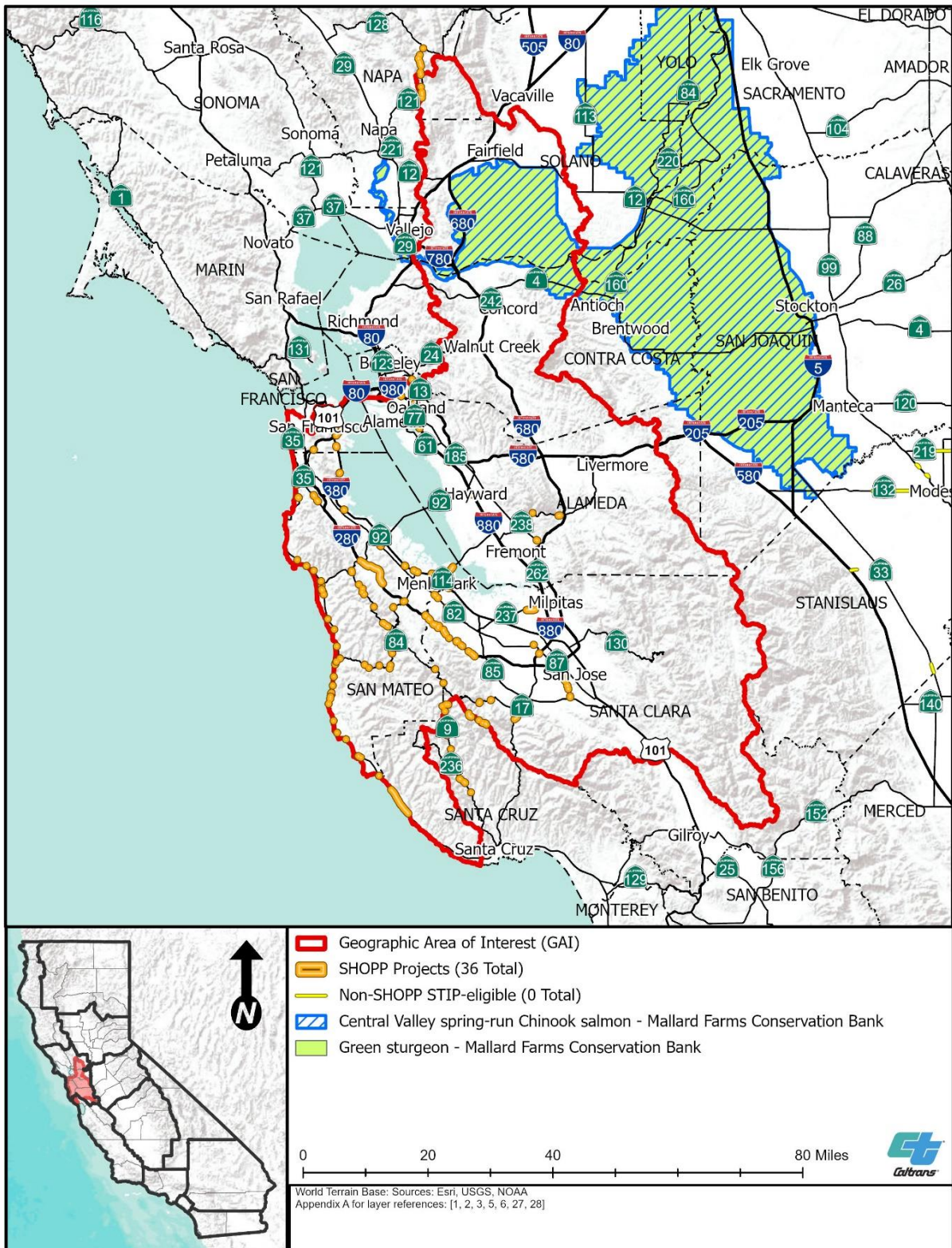


Figure J-14. Delta Smelt Bank Service Areas

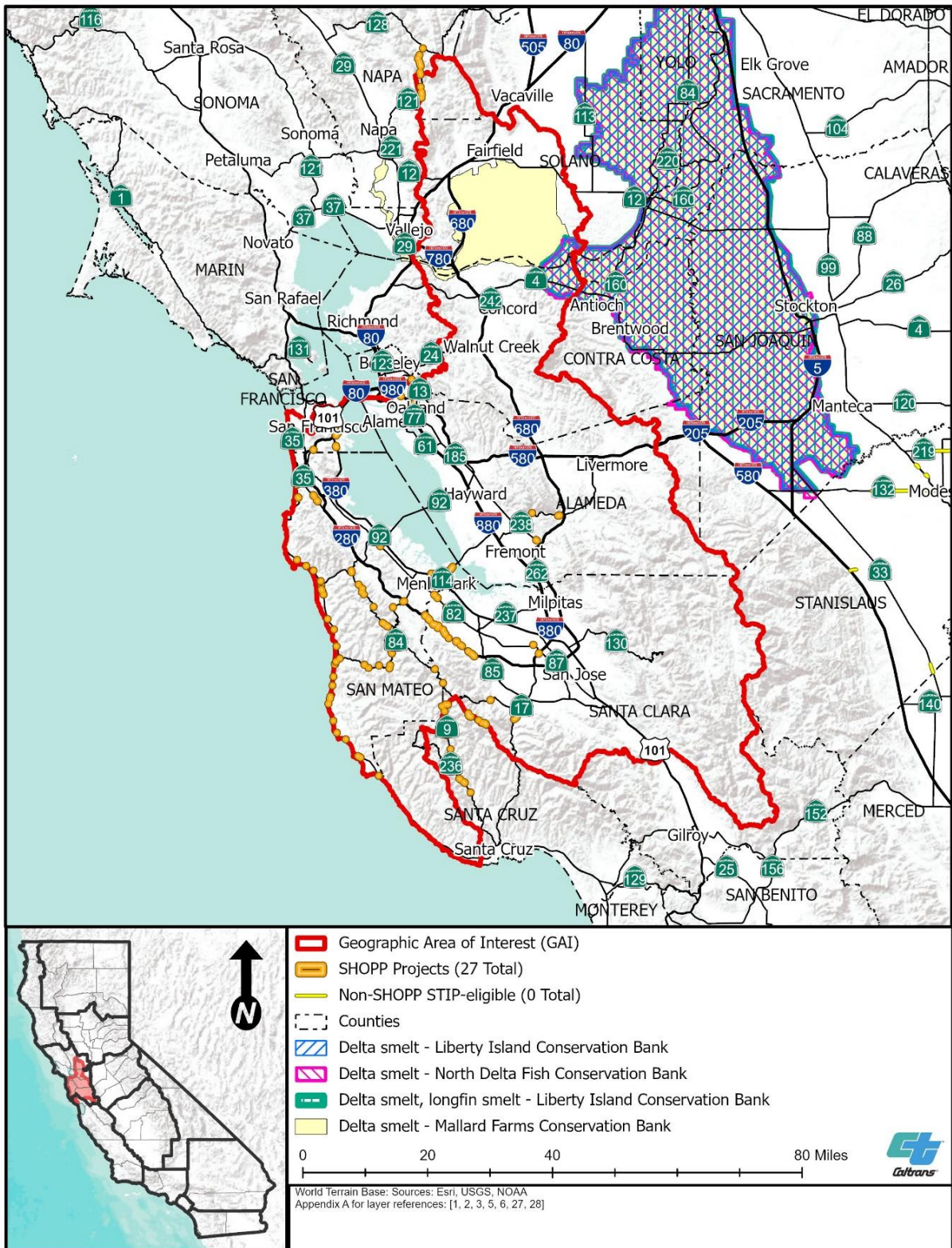


Figure J-15. Giant Garter Snake Bank Service Areas

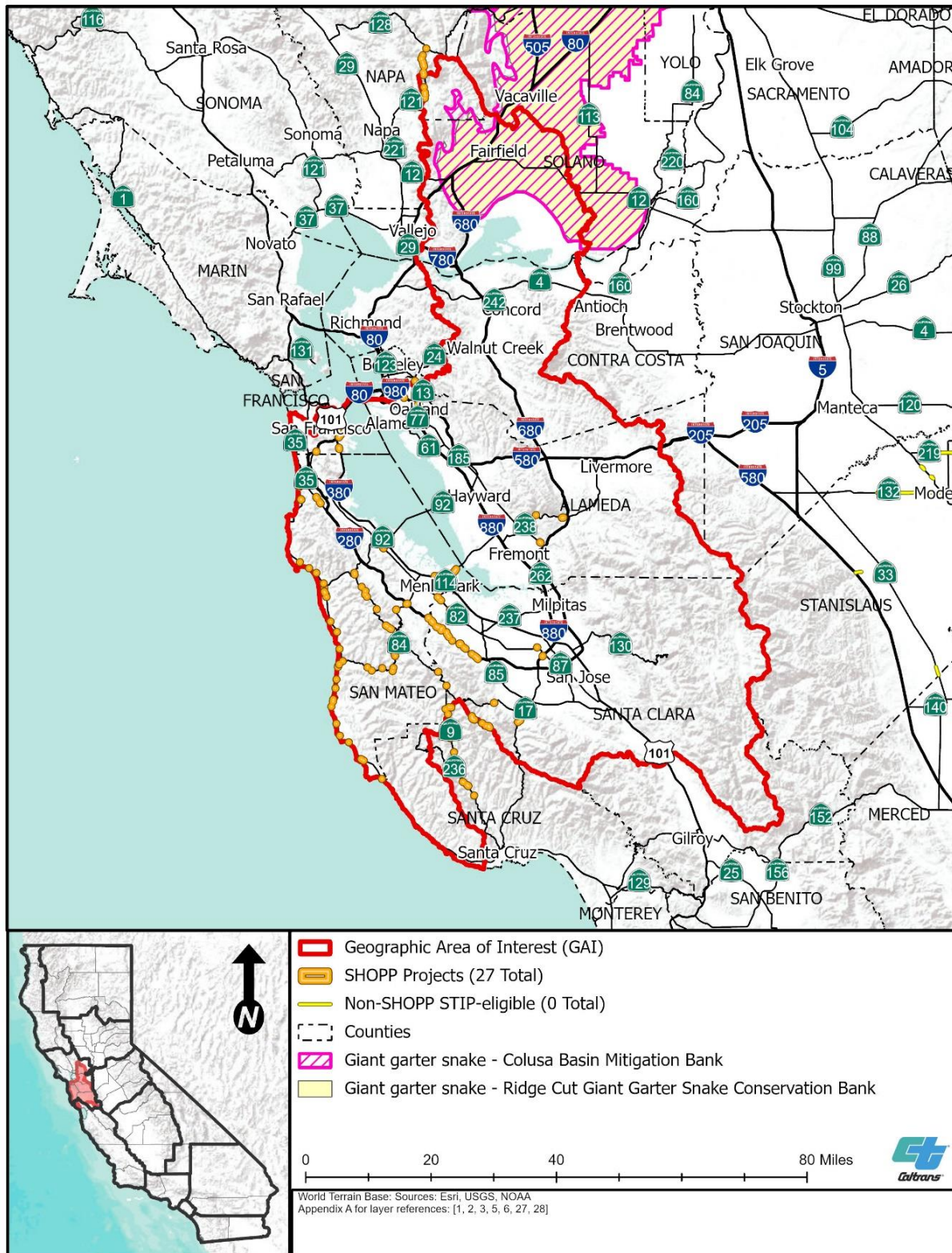


Figure J-17. San Joaquin Kit Fox Bank Service Areas

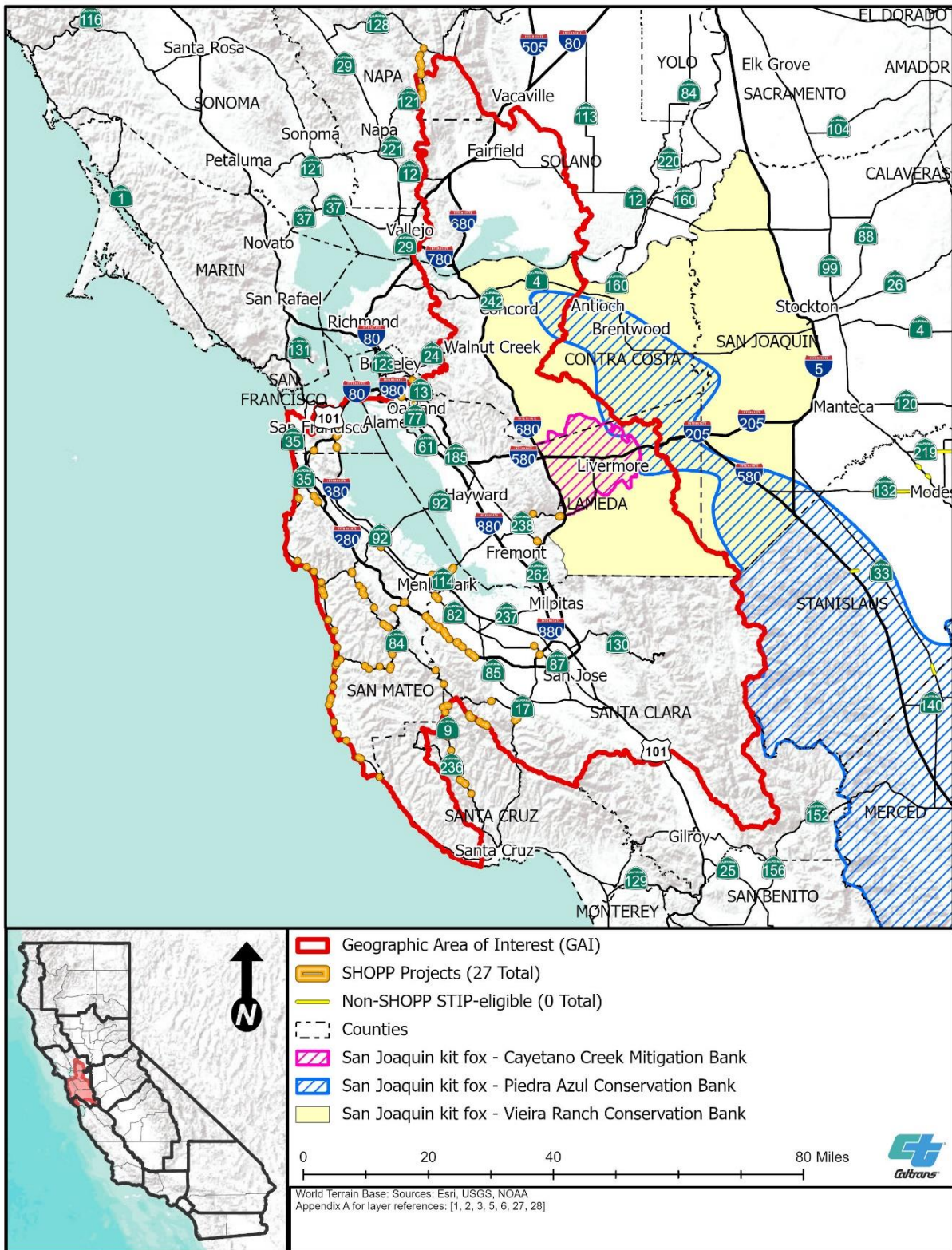


Figure J-18. Swainson's Hawk Bank Service Areas

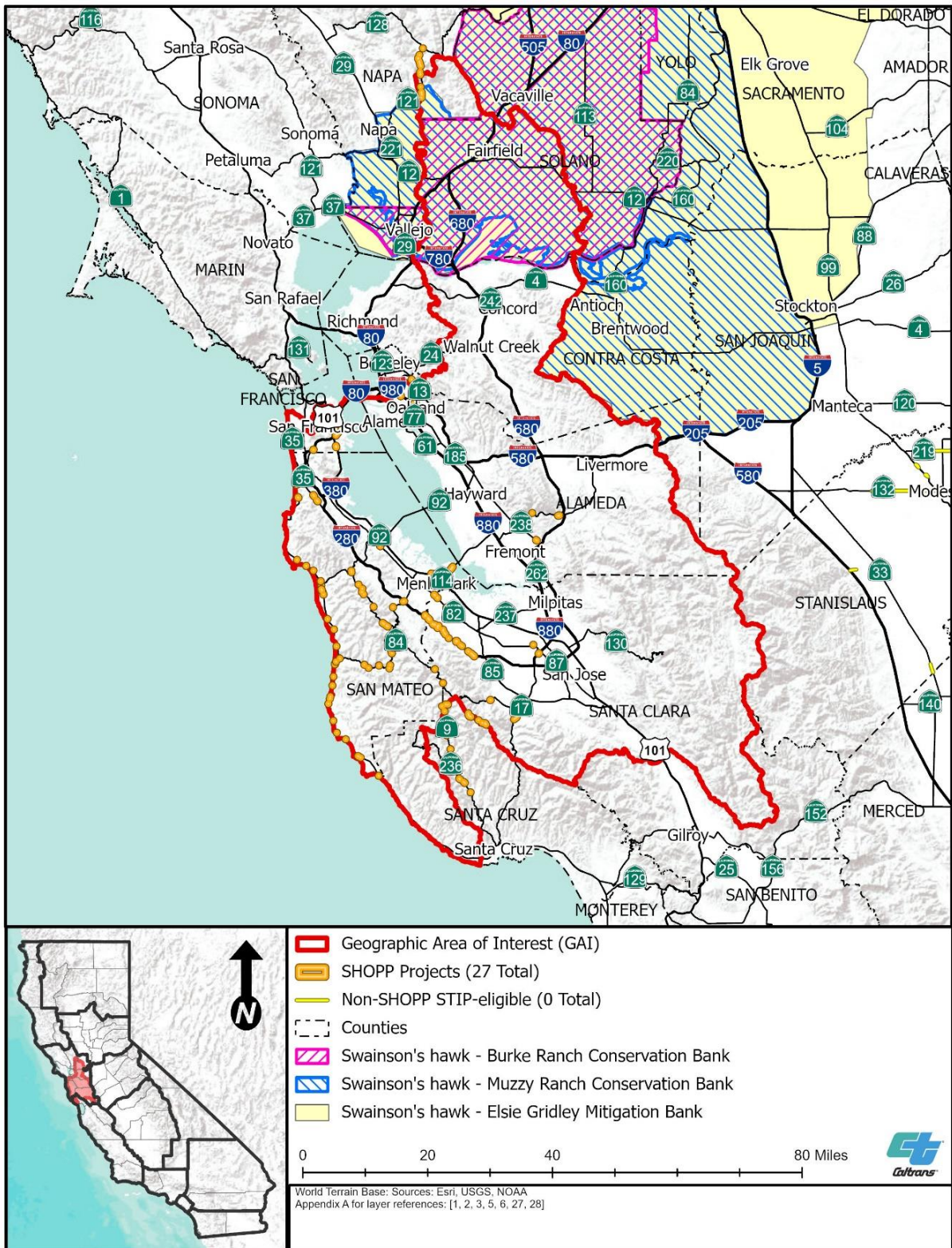


Figure J-19. Valley Elderberry Longhorn Beetle Bank Service Areas

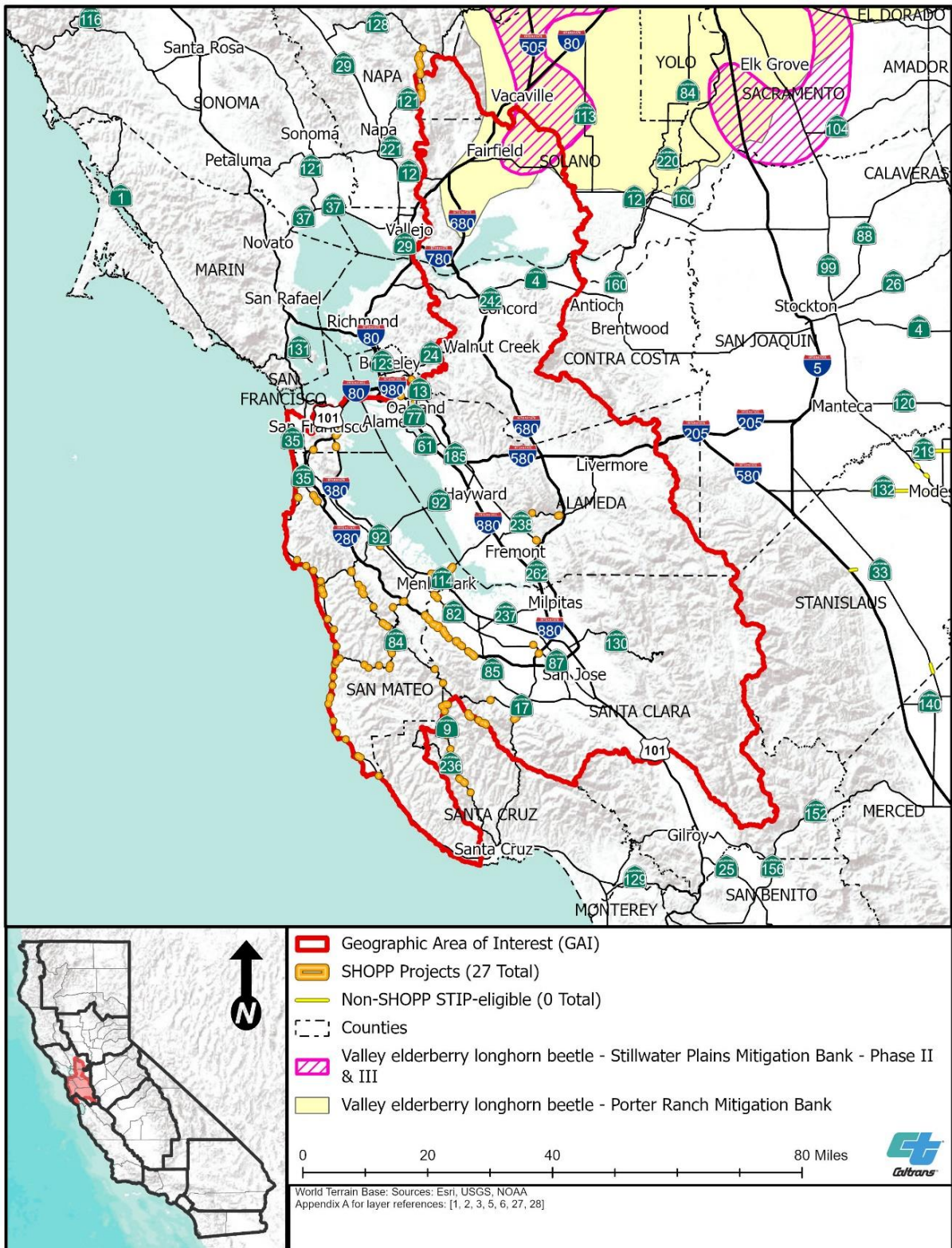


Figure J-20. Other Plant and Terrestrial Invertebrate Bank Service Areas

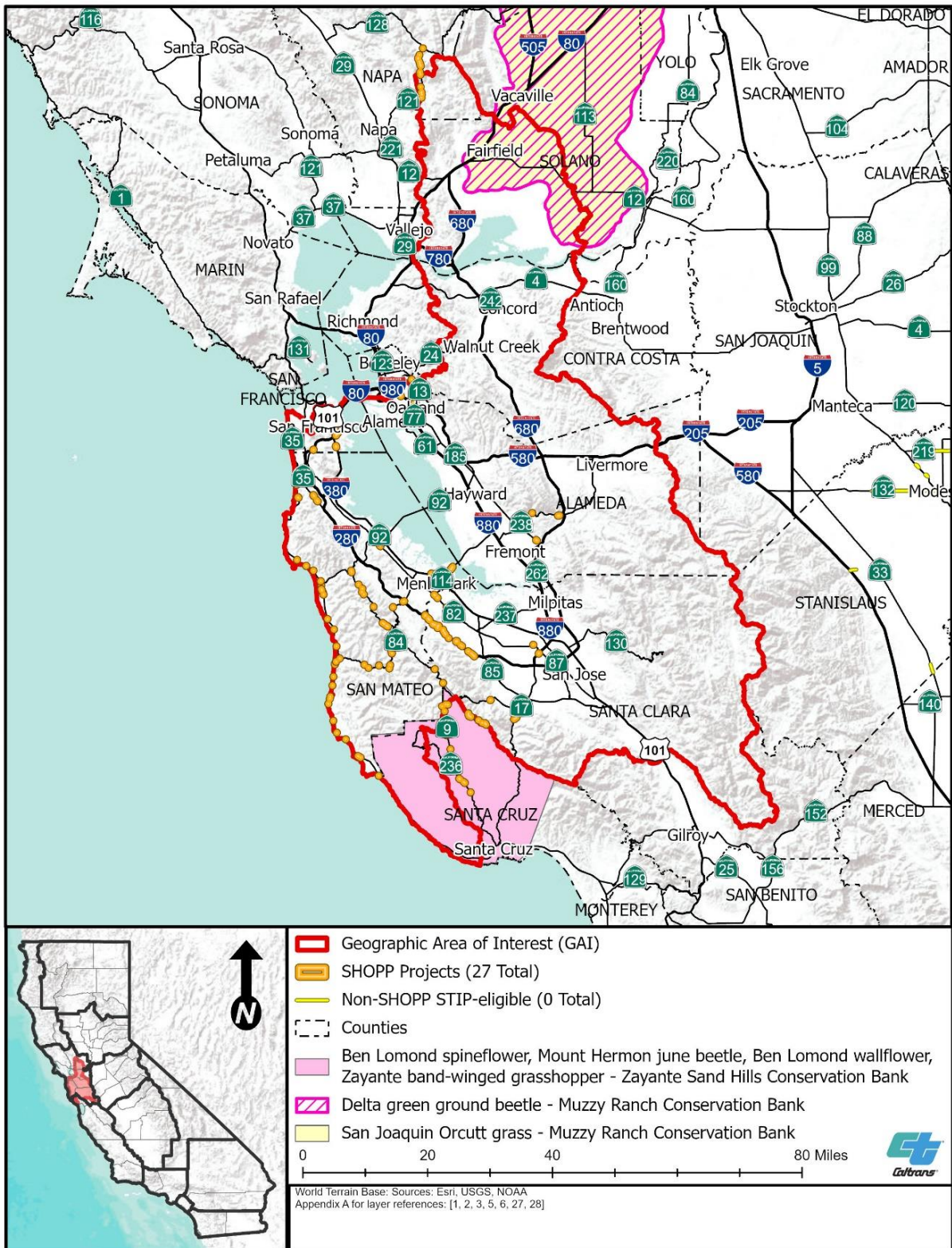


Figure J-21. Aquatic Resources and Vernal Pool Bank Service Areas (Map 1)

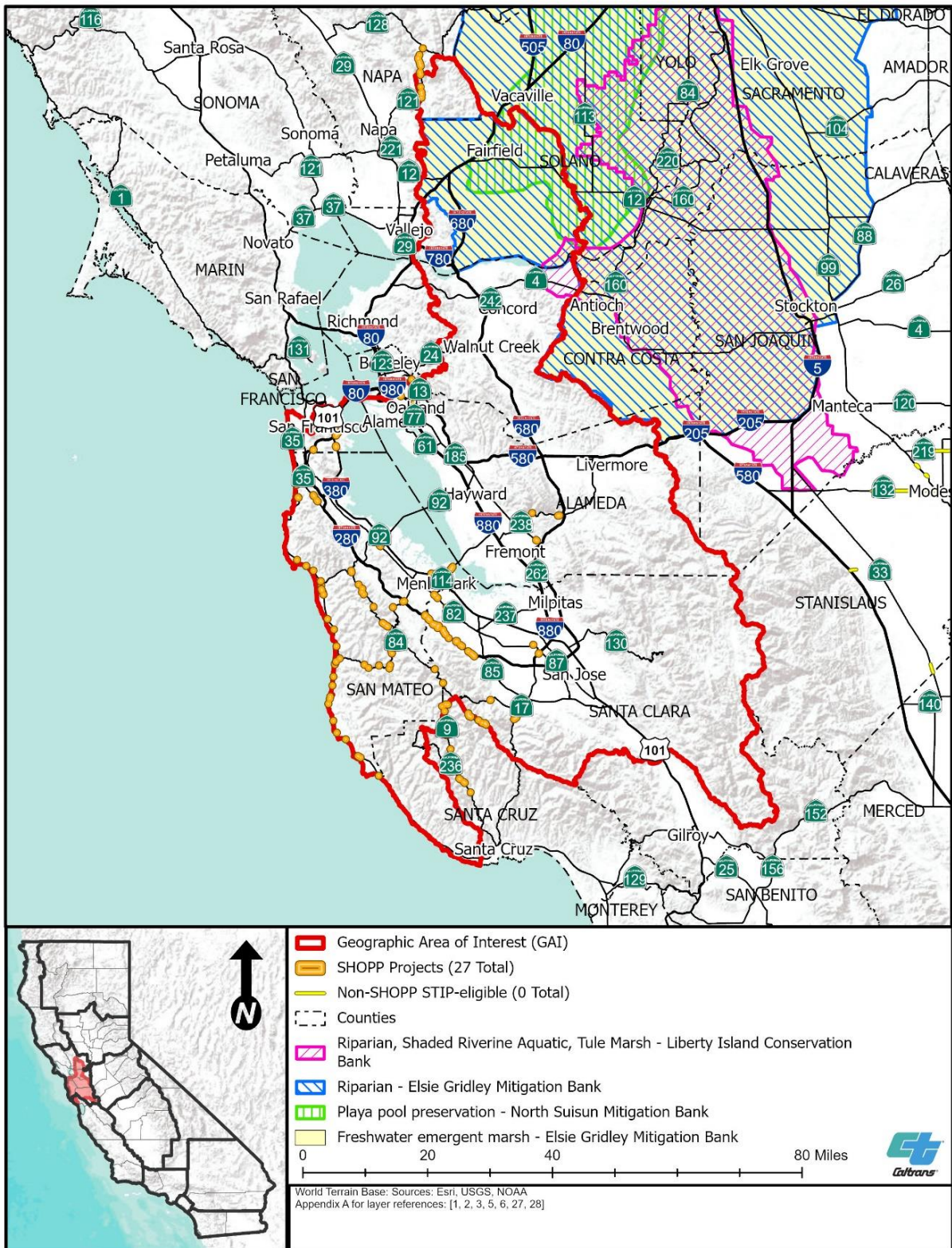


Figure J-22. Aquatic Resources and Vernal Pool Bank Service Areas (Map 2)

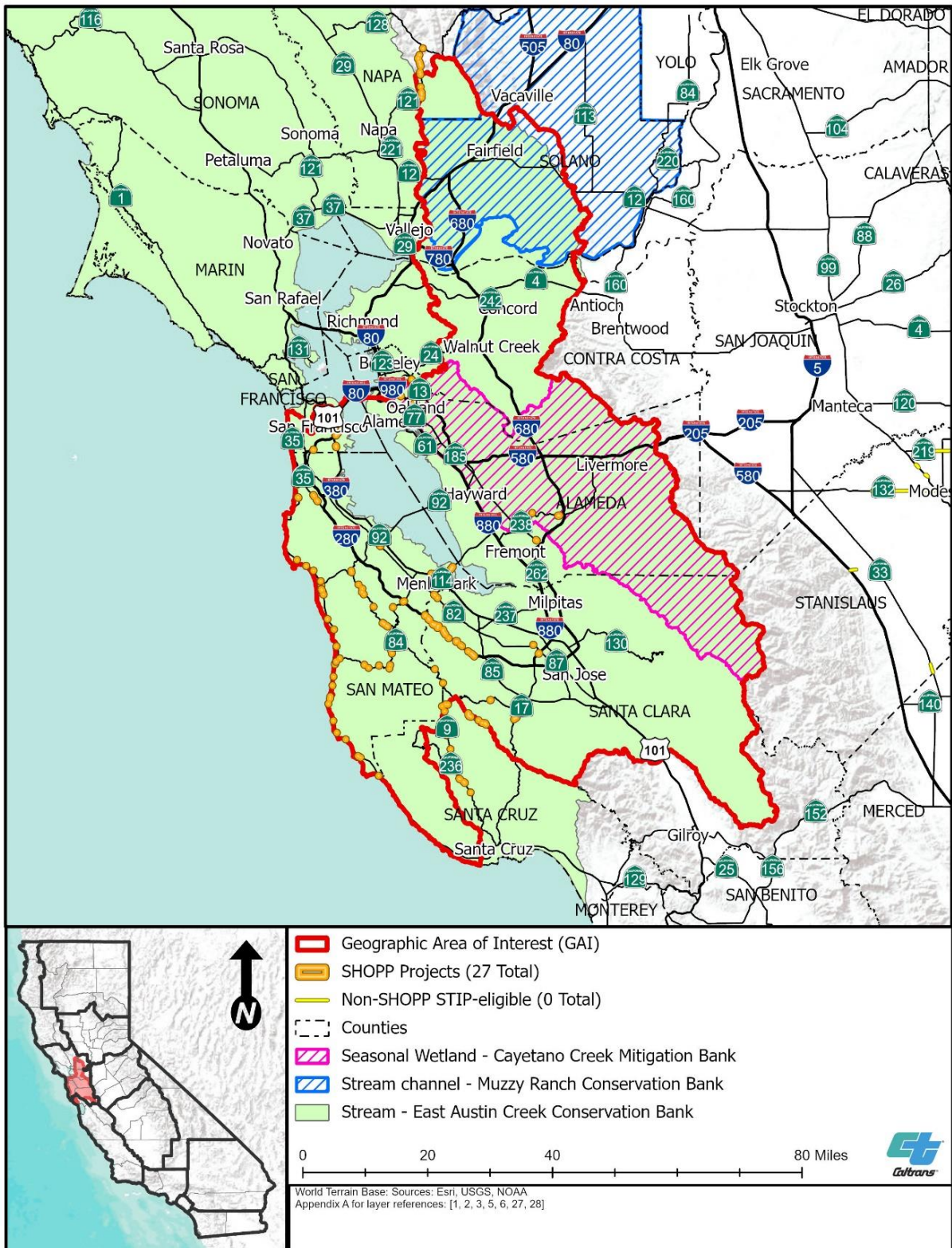


Figure J-23. Aquatic Resources and Vernal Pool Bank Service Areas (Map 3)

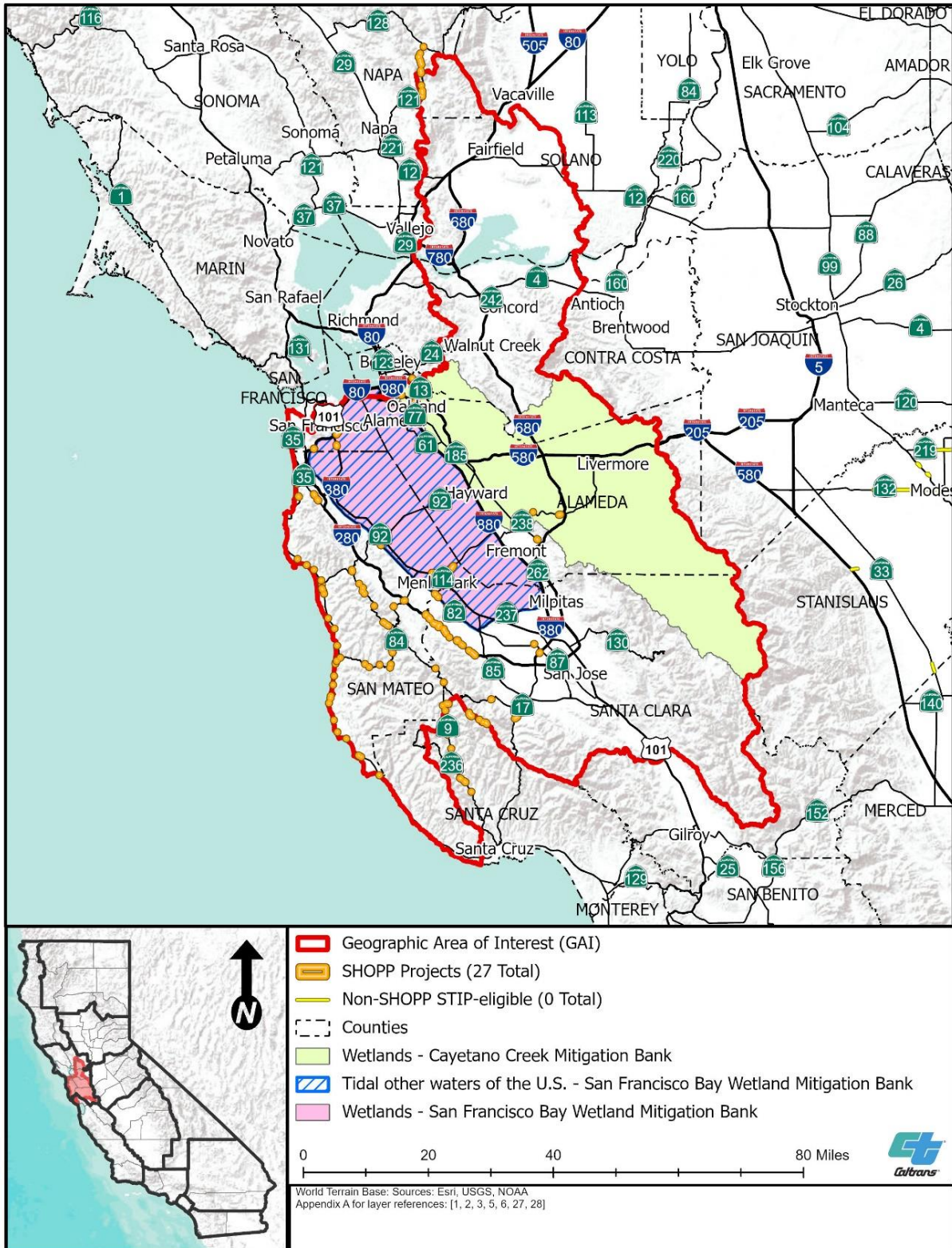


Figure J-24. Aquatic Resources and Vernal Pool Bank Service Areas (Map 4)

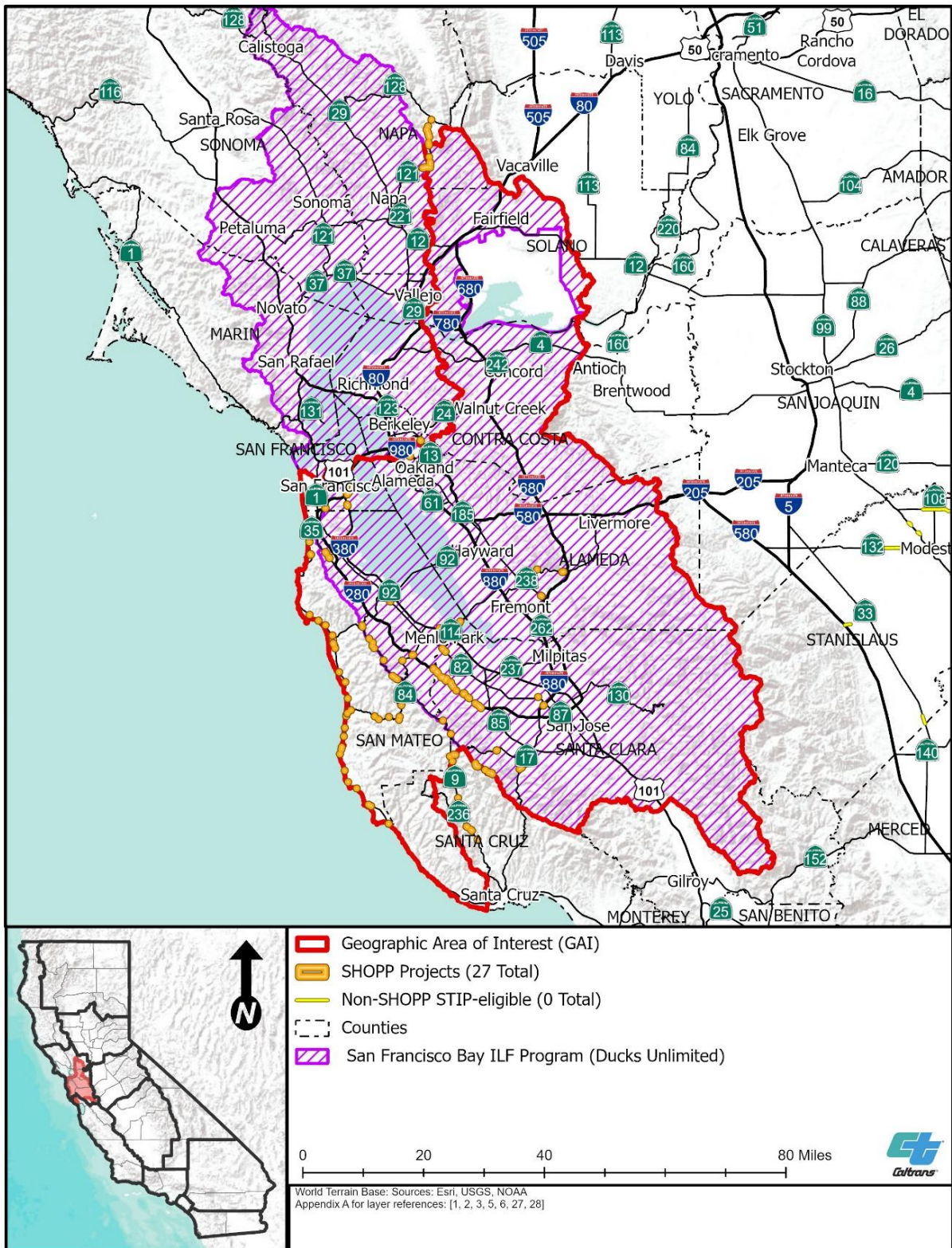


Figure J-26. Aquatic Resources and Vernal Pool Bank Service Areas (Map 6)

