



ADVANCE MITIGATION PROGRAM
Aliso-San Onofre, Newport Bay, Santa Ana,
and Seal Beach Sub-basins and Five
Watersheds Within the San Gabriel Sub-basin
Regional Advance Mitigation
Needs Assessment
Appendices

Version 1.0

Establishing Caltrans' Need for Advance Mitigation
for the Aliso-San Onofre, Newport Bay, Santa Ana, and Seal Beach
Sub-basins and Five Watersheds Within the San Gabriel Sub-basin,
forecast fiscal years 2023/24 to 2032/33

California Department of Transportation – District 12

July 2026

This page is intentionally left blank.

APPENDICES

Appendix A – GIS Sources

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

Appendix C – Local Coastal Programs

Appendix D – Land Cover Types

Appendix E – Complete SAMNA Species Results

Appendix F – Hydrologic Units

Appendix G – List of 303(d) Impaired Waters

Appendix H – Aquatic Resource Locations

This page is intentionally left blank.

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 12 RAMNA GIS Sources

ID	GIS Layer	Source	Source Date	Download Date	Website
1	State Highway Network	Caltrans	8/1/2018	10/11/2018	https://gisdata-caltrans.opendata.arcgis.com/datasets/77f2d7ba94e040a78bfe36feb6279da_0/about
2	SHOPP	Caltrans	2023/2024 Q2	N/A	Caltrans System Planning
3	State Transportation Improvement Program (STIP)	California Transportation Commission	2023/2024 Q2	N/A	Caltrans System Planning
4	Ecoregion Section (GAI)	USDA Forest Service	1/26/2021	1/26/2021	https://data.fs.usda.gov/geodata/edw/datasets.php?xmlKeyword=Ecomap
5	Watershed Boundary Section	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	U.S. Bureau of Indian Affairs	5/16/2017	10/11/2018	https://biamaps.geoplatform.gov/BIA-OpenData/Data/
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
12	ACE Climate Resilience – ACE [ds2738]	CDFW	2/22/2018	10/17/2018	https://data.cnra.ca.gov/dataset/terrestrial-climate-change-resilience-ace-ds2738

ID	GIS Layer	Source	Source Date	Download Date	Website
13	Vegetation D07/D08/D11/D12 in Caltrans District 12 Geospatial Data for the Advance Mitigation Needs Assessment	SAMNA	1/1/2017	3/24/2021	https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation
14	Wetlands D07/D08/D11/D12 in Caltrans District 12 Geospatial Data for the Advance Mitigation Needs Assessment	SAMNA	1/1/2017	3/24/2021	https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation
15	USFWS 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://data.ca.gov/dataset/essential-connectivity-areas-california-essential-habitat-connectivity-cehc-ds620
17	Natural Landscape Blocks – CEHC	CDFW	10/1/2017	10/17/2018	https://services2.arcgis.com/Uq9r85Potqm3MfRV/ArcGIS/rest/services/biosds621_fpu/FeatureServer/0
18	Potential Riparian Connections – CEHC	CDFW	3/1/2010	10/17/2018	https://gis.data.ca.gov/datasets/CDFW::potential-riparian-connections-cehc-ds622/explore?location=37.324177%2C-119.243579%2C6
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://gispublic.waterboards.ca.gov/portalservices/rest/services/Hydrology/CalWater_Boundaries/MapServer
21	Coastal Zone and LCP	CCC	12/15/2021	12/12/2023	https://www.coastal.ca.gov/maps/czb/ https://www.coastal.ca.gov/maps/lcp/
22	Terrestrial Connectivity – ACE [ds2734]	CDFW	8/28/2019	9/25/2019	https://map.dfg.ca.gov/metadata/ds2734.html?5.80.28

ID	GIS Layer	Source	Source Date	Download Date	Website
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	CDFW	10/3/2019	12/15/2019	https://nrm.dfg.ca.gov/pad/home
26	Terrestrial Biodiversity Summary – ACE [ds2739]	CDFW	10/26/2017	7/3/2019	https://map.dfg.ca.gov/metadata/ds2739.html?5.80.28l
27	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 Hydrography Dataset Plus	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://www.fire.ca.gov/Home/What-We-Do/Fire-Resource-Assessment-Program/GIS-Mapping-and-Data-Analytics
31	Vernal Pools – ACE [ds2732]	CDFW	2/13/2020	1/29/2021	https://data.ca.gov/dataset/vernal-pools-ace-ds27321
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://data.ca.gov/dataset/conservation-plan-boundaries-hcp-and-nccp-ds7601
34	Critical Habitat – Maps and GIS Data (West Coast Region)	NOAA	12/21/2021	4/4/2022	https://www.fisheries.noaa.gov/resource/map/critical-habitat-maps-and-gis-data-west-coast-region

ID	GIS Layer	Source	Source Date	Download Date	Website
35	Essential Fish Habitat – Habitat Areas of Particular Concern	NOAA	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	Critical Coastal Areas	CCC	11/27/2023	12/12/2023	https://www.coastal.ca.gov/water-quality/critical-coastal-areas/
38	RWQCB Boundaries	SWRCB	Not available	4/26/2021	https://www.waterboards.ca.gov/
39	Coastal Commission Boundaries	CCC	Not available	4/26/2021	https://www.coastal.ca.gov/
40	USFWS Boundaries	FWS	Not available	4/26/2021	https://www.fws.gov/
41	RipZET ^a	SFEI	8/1/2024	8/5/2024	https://www.sfei.org/projects/ripzet

^a Data were used for tables, but not for figures, in this RAMNA.

This page is intentionally left blank.

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 2023/24 to 2032/33 (Caltrans 2024a). 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 68 SHOPP transportation projects in 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 pavement projects. See Table 1 of Caltrans (2024b) 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 12 SHOPP transportation projects that are planned in the GAI during the planning period covered by this RAMNA and 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). 2024a. *State Highway Operation & Protection Program Ten-Year Project Book 2023/24–2032/33*. Quarter 2, Fiscal Year 2023/34. January. Accessed November 13, 2024. <https://dot.ca.gov/-/media/dot-media/programs/asset-management/documents/2024-q2-project-book-combined-a11y.pdf>.
- . 2024b. *Statewide Advance Mitigation Needs Assessment Report*. State Highway Operation and Protection Program. Ten-Year Project Book. Second Quarter 2023/2024 Fiscal Year. September. Sacramento, California. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.

Table B-1. SHOPP Transportation Projects Planned in 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
16850	San Gabriel	Southern California Coast	2024/25	7	Los Angeles	1	0	0	Bridge – Health
16850	San Gabriel	Southern California Coast	2024/25	12	Los Angeles	1	0	0	Bridge – Health
22326	San Gabriel	Southern California Mountains and Valleys	2031/32	7	Los Angeles	2	79.3	81.5	Drainage
22324	San Gabriel	Southern California Coast	2030/31	7	Los Angeles	10	21	40.3	Drainage
21997	San Gabriel	Southern California Mountains and Valleys	2026/27	7	Los Angeles	10	42.36	48.265	Pavement
22324	San Gabriel	Southern California Mountains and Valleys	2030/31	7	Los Angeles	10	21	40.3	Drainage
18313	San Gabriel	Southern California Mountains and Valleys	2028/29	7	Los Angeles	39	18.36	22.17	Proactive Safety
18314	San Gabriel	Southern California Mountains and Valleys	2023/24	7	Los Angeles	39	20.66	20.66	Proactive Safety
23960	San Gabriel	Southern California Mountains and Valleys	2030/31	7	Los Angeles	39	R31.25	R31.25	Bridge
21998	San Gabriel	Southern California Coast	2029/30	7	Los Angeles	57	R4.52	R12.303	Pavement
21998	San Gabriel	Southern California Mountains and Valleys	2029/30	7	Los Angeles	57	R4.52	R12.303	Pavement
21471	San Gabriel	Southern California Coast	2027/28	7	Los Angeles	66	R0.12	R49.1	Drainage
21471	San Gabriel	Southern California Mountains and Valleys	2027/28	7	Los Angeles	66	R0.12	R49.1	Drainage

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route ^a	Begin Mile ^a	End Mile ^a	Activity
20258	San Gabriel	Southern California Coast	2029/30	7	Los Angeles	91	6.012	R20.741	Pavement
23541	San Gabriel	Southern California Coast	2030/31	7	Los Angeles	91	R16.9	R16.97	Bridge – Health
22321	San Gabriel	Southern California Coast	2032/33	7	Los Angeles	105	R0.3	R16.5	Drainage
21997	Santa Ana	Southern California Mountains and Valleys	2026/27	7	Los Angeles	10	42.36	48.265	Pavement
18504	Santa Ana	Southern California Mountains and Valleys	2028/29	7	Los Angeles	60	R25.3	R30.45	Pavement
23773	Aliso-San Onofre	Southern California Coast	2030/31	12	Orange	1	R0.129	10.5	Pavement
20632	Aliso-San Onofre	Southern California Coast	2025/26	12	Orange	5	0.5	10	Pavement
21826	Aliso-San Onofre	Southern California Coast	2023/24	12	Orange	5	9.6	10.4	Reactive Safety
22135	Aliso-San Onofre	Southern California Coast	2024/25	12	Orange	5	10	21.3	Pavement
20619	Aliso-San Onofre	Southern California Coast	2026/27	12	Orange	74	0	11.5	Pavement
22030	Aliso-San Onofre	Southern California Coast	2027/28	12	Orange	241	14.545	27.8	Pavement
23779	Newport Bay	Southern California Coast	2031/32	12	Orange	1	17.5	25.9	Pavement
22966	Newport Bay	Southern California Coast	2024/25	12	Orange	5	21.3	R25.8	Pavement
22968	Newport Bay	Southern California Coast	2024/25	12	Orange	5	R25.8	30.3	Pavement

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route ^a	Begin Mile ^a	End Mile ^a	Activity
24064	Newport Bay	Southern California Coast	2028/29	12	Orange	5	21.1	21.3	Protective Betterments
21718	Newport Bay	Southern California Coast	2023/24	12	Orange	22	R11.6	R12.5	Reactive Safety
23357	Newport Bay	Southern California Coast	2031/32	12	Orange	22	0	R13.1	Drainage
18833	Newport Bay	Southern California Coast	2023/24	12	Orange	55	0.2	R17.8	Pavement
23661	Newport Bay	Southern California Coast	2028/29	12	Orange	55	T2.3	R6.4	Pavement
24200	Newport Bay	Southern California Coast	2029/30	12	Orange	55	R6.4	R17.8	Bridge – Health
24669	Newport Bay	Southern California Coast	2032/33	12	Orange	133	9	10.5	Drainage
22030	Newport Bay	Southern California Coast	2027/28	12	Orange	241	14.545	27.8	Pavement
18944	San Gabriel	Southern California Coast	2027/28	12	Orange	57	10.8R	R22.5	Bridge – Health
22260	San Gabriel	Southern California Coast	2024/25	12	Orange	57	15.9	15.9	Reactive Safety
24262	San Gabriel	Southern California Coast	2029/30	12	Orange	57	15	R22.55	Bridge – Health
18944	San Gabriel	Southern California Mountains and Valleys	2027/28	12	Orange	57	10.8R	R22.5	Bridge – Health
24262	San Gabriel	Southern California Mountains and Valleys	2029/30	12	Orange	57	15	R22.55	Bridge – Health
22230	San Gabriel	Southern California Coast	2023/24	12	Orange	91	R0.0	4.759	Pavement

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route ^a	Begin Mile ^a	End Mile ^a	Activity
22231	San Gabriel	Southern California Coast	2023/24	12	Orange	91	4.759	6.423	Pavement
22232	San Gabriel	Southern California Coast	2023/24	12	Orange	91	6.432	R9.223	Pavement
24161	San Gabriel	Southern California Coast	2032/33	12	Orange	91	R0.0	R9.8	Drainage
23777	San Gabriel	Southern California Coast	2032/33	12	Orange	605	R0.0	R1.6	Pavement
21718	Santa Ana	Southern California Coast	2023/24	12	Orange	22	R11.6	R12.5	Reactive Safety
23357	Santa Ana	Southern California Coast	2031/32	12	Orange	22	0	R13.1	Drainage
20638	Santa Ana	Southern California Coast	2026/27	12	Orange	39	0	8.5	Pavement
24200	Santa Ana	Southern California Coast	2029/30	12	Orange	55	R6.4	R17.8	Bridge – Health
18944	Santa Ana	Southern California Coast	2027/28	12	Orange	57	10.8R	R22.5	Bridge – Health
20919	Santa Ana	Southern California Coast	2029/30	12	Orange	57	10.734R	15	Pavement
22234	Santa Ana	Southern California Coast	2023/24	12	Orange	91	R10.778	R18.905	Mobility – TMS
24157	Santa Ana	Southern California Coast	2029/30	12	Orange	91	R9.8	R18.905	Pavement
20791	Santa Ana	Southern California Coast	2024/25	12	Orange	405	11.4	16.9	Pavement
23780	Seal Beach	Southern California Coast	2032/33	12	Orange	1	25.9	33.7	Pavement
21950	Seal Beach	Southern California Coast	2025/26	12	Orange	5	30.3	44.382	Pavement
21719	Seal Beach	Southern California Coast	2023/24	12	Orange	22	R0.9	R9.4	Reactive Safety
22828	Seal Beach	Southern California Coast	2025/26	12	Orange	22	R0.9	R1.9	Reactive Safety
23357	Seal Beach	Southern California Coast	2031/32	12	Orange	22	0	R13.1	Drainage

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route ^a	Begin Mile ^a	End Mile ^a	Activity
20638	Seal Beach	Southern California Coast	2026/27	12	Orange	39	0	8.5	Pavement
18944	Seal Beach	Southern California Coast	2027/28	12	Orange	57	10.8R	R22.5	Bridge – Health
20919	Seal Beach	Southern California Coast	2029/30	12	Orange	57	10.734R	15	Pavement
24262	Seal Beach	Southern California Coast	2029/30	12	Orange	57	15	R22.55	Bridge – Health
21638	Aliso-San Onofre	Southern California Mountains and Valleys	2023/24	8	Riverside	74	5.7	11.8	Reactive Safety
22150	Santa Ana	Southern California Mountains and Valleys	2025/26	8	Riverside	15	30	33	Drainage
23644	Santa Ana	Southern California Mountains and Valleys	2025/26	8	Riverside	15	38.95	39.4	Reactive Safety
21127	Santa Ana	Southern California Mountains and Valleys	2032/33	8	Riverside	91	R0.0	10	Pavement
24347	Santa Ana	Southern California Mountains and Valleys	2028/29	8	Riverside	91	9.5	10.5	Mobility – Operational Improvements
21621	Santa Ana	Southern California Mountains and Valleys	2030/31	8	Riverside	215	0	45.3	Pavement
24550	San Gabriel	Southern California Mountains and Valleys	2030/31	8	San Bernardino	74	0.18	50.29	Proactive Safety
17775	Santa Ana	Southern California Mountains and Valleys	2028/29	8	San Bernardino	10	R24.3	R24.3	Bridge – Health
18015	Santa Ana	Southern California Mountains and Valleys	2028/29	8	San Bernardino	10	10	21	Pavement
19683	Santa Ana	Southern California Mountains and Valleys	2023/24	8	San Bernardino	15	2.4	2.4	Bridge

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route ^a	Begin Mile ^a	End Mile ^a	Activity
19097	Santa Ana	Southern California Mountains and Valleys	2023/24	8	San Bernardino	18	34	44.3	Drainage
20076	Santa Ana	Southern California Mountains and Valleys	2027/28	8	San Bernardino	18	R17.8	31.7	Pavement
20077	Santa Ana	Southern California Mountains and Valleys	2026/27	8	San Bernardino	18	31.65	49.3	Pavement
24304	Santa Ana	Southern California Mountains and Valleys	2027/28	8	San Bernardino	38	7	46.6	Drainage
24464	Santa Ana	Southern California Mountains and Valleys	2030/31	8	San Bernardino	38	49.5	59.438	Pavement
23291	Santa Ana	Southern California Mountains and Valleys	2030/31	8	San Bernardino	60	R2.45	R2.61	Mobility – Operational Improvements
14065	Santa Ana	Southern California Mountains and Valleys	2023/24	8	San Bernardino	66	21.3	21.3	Proactive Safety
22815	Santa Ana	Mojave Desert	2025/26	8	San Bernardino	138	T16.25	R17.3	Reactive Safety
23287	Santa Ana	Southern California Mountains and Valleys	2027/28	8	San Bernardino	142	2.152	2.494	Mobility – Operational Improvements
23281	Santa Ana	Southern California Mountains and Valleys	2024/25	8	San Bernardino	210	1.2	1.6	Reactive Safety
24350	Santa Ana	Southern California Mountains and Valleys	2029/30	8	San Bernardino	210	1.85	3.1	Mobility – Operational Improvements

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route ^a	Begin Mile ^a	End Mile ^a	Activity
21621	Santa Ana	Southern California Mountains and Valleys	2030/31	8	San Bernardino	215	0	45.3	Pavement
23282	Aliso-San Onofre	Southern California Coast	2032/33	11	San Diego	5	R52.6	R58.1	Pavement

Source: Caltrans (2024a)

Notes: R = right

^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: 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 in the GAI are listed by HUC-8 in Table C-1. Certified LCPs were excerpted from the CCC's LCP area maps by county (CCC 2021). Maps that show zoomed-in views of LCP areas, segments, ADCs, and other UAs within the coastal zone in the GAI are provided after Table C-1. 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 2024a, 2024b).

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 use, industrial use, 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 (California Department of Transportation). 2024a. "Waters_D07/D08/D11/D12 in Caltrans District 12 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2023/2024" (data file). Accessed October 2, 2024. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- . 2024b. "Wetlands_D07/D08/D11/D12 in Caltrans District 12 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2023/2024" (data file). Accessed October 2, 2024. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- CCC (California Coastal Commission). 2021. "Maps: Local Coastal Program Areas." Accessed August 15, 2022. <https://www.coastal.ca.gov/maps/lcp/>.

Table C-1. Local Coastal Programs in the GAI

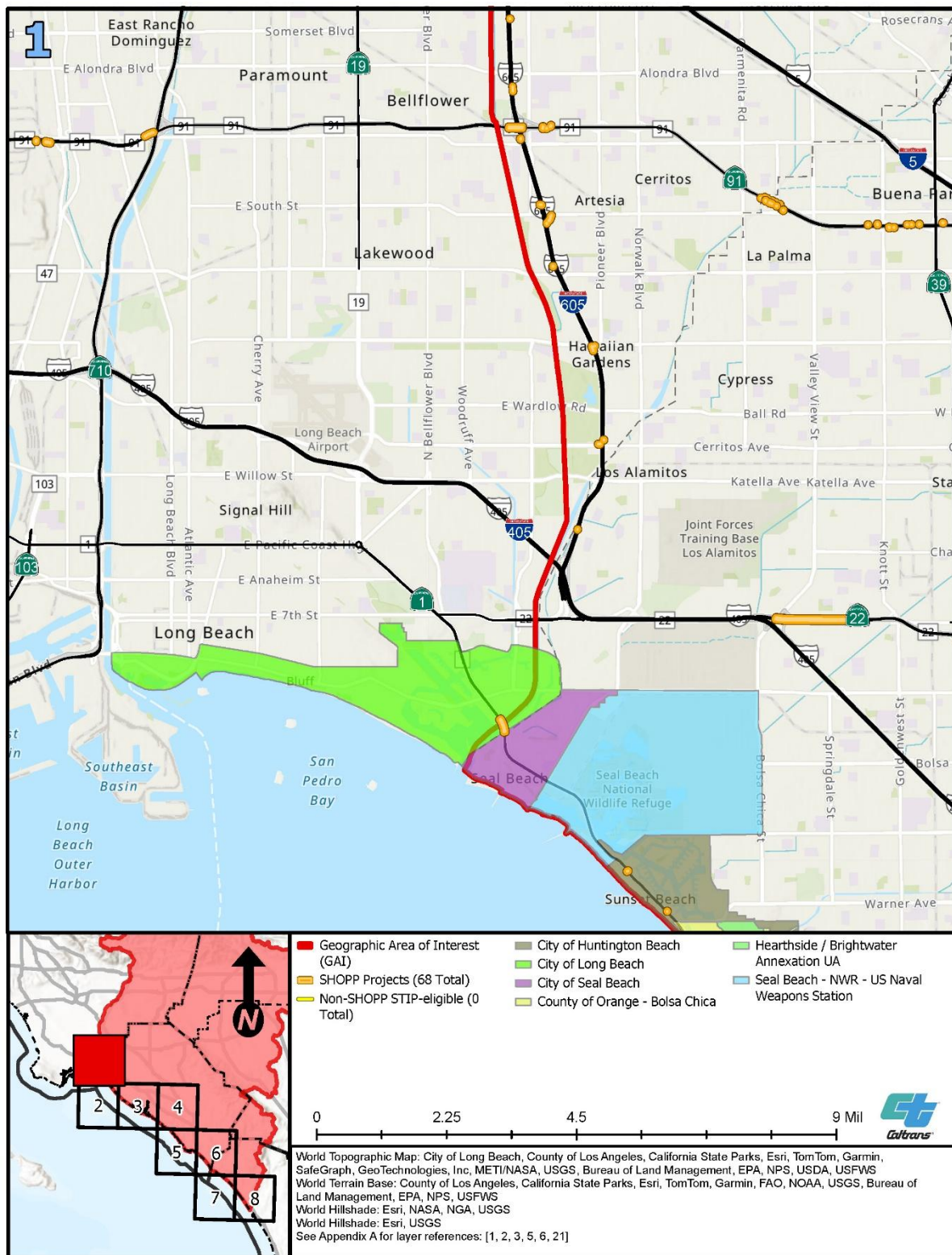
Mapbook Grid Number	HUC-8 Name	LCP Jurisdiction	LCP/LUP/General Plan Name	Description	Status	Segments/ Areas Identified on Maps	UAs and ADCs ^a	Federal or State Lands Not Included in LCP	Website	Total Acres of LCP ^b
1	Seal Beach	City of Long Beach	<i>City of Long Beach, California Local Coastal Program</i> (1980)	LCP for the City of Long Beach	Certified	City of Long Beach	None	None	https://www.longbeach.gov/lbcd/planning/advance/general-plan/	3,114
1, 2	Seal Beach	City of Seal Beach	<i>Draft City of Seal Beach Local Coastal Program Land Use Plan</i> (drafted 2023)	Draft LUP for the City of Seal Beach. Requires a 100-foot buffer zone around all ESHAs.	Uncertified	City of Seal Beach	None	Seal Beach – NWR – U.S. Naval Weapons Station	https://www.sealbeachca.gov/Departments/Departments/Community-Development/Local-Coastal-Plan-Project	977
1-3	Seal Beach	Orange County	N/A	N/A	Uncertified	Bolsa Chica	None	None	N/A	1,510
1-3	Seal Beach, Santa Ana	City of Huntington Beach	<i>City of Huntington Beach General Plan Coastal Element</i> (2001, amended 2012)	LCP for the City of Huntington Beach. Requires a 100-foot buffer zone from the landward edge of wetlands.	Certified	City of Huntington Beach	Hearthside/ Brightwater Annexation UA	None	https://www.huntingtonbeachca.gov/departments/community_development/planning_zoning/coastal_element.php	3,089
3	Seal Beach, Santa Ana	Orange County	N/A	N/A	Uncertified	Santa Ana River	None	None	N/A	69
3	Newport Bay	City of Costa Mesa	<i>2015–2035 General Plan</i> (2014, updated 2024)	General plan for the City of Costa Mesa	Uncertified	City of Costa Mesa	None	None	https://www.costamesaca.gov/government/departments-and-divisions/economic-and-development-services/planning/general-plan/2015-2035-general-plan	152
3, 4	Newport Bay	City of Newport Beach	<i>City of Newport Beach Local Coastal Program Coastal Land Use Plan</i> (2005, updated 2018)	Coastal Land Use Plan for the City of Newport Beach. Requires a minimum 50-foot buffer from terrestrial ESHAs and a minimum 100-foot buffer from wetlands. Requires mitigation ratios for impacts: 2:1 for coastal sage scrub, 3:1 for coastal sage scrub occupied by California coastal gnatcatcher or other rare species, 3:1 for rare vegetation community types, and 1:1 for southern mixed chaparral.	Certified	City of Newport Beach	Banning Ranch ADC	None	https://www.newportbeachca.gov/government/departments/community-development/planning-division/general-plan-codes-and-regulations/local-coastal-program/coastal-land-use-plan	5,193
3, 4	Newport Bay	County of Orange	<i>Santa Ana Heights Specific Plan</i> (1986, amended 2001)	Specific plan for Santa Ana Heights within Orange County	Uncertified	Santa Ana Heights	None	None	https://ocds.ocpublicworks.com/service-areas/oc-development-services/planning-development/community-plans	76
3, 4	Newport Bay	City of Irvine	<i>City of Irvine Local Coastal Program</i> (1986)	General plan for the City of Irvine	Certified	City of Irvine	None	None	https://www.cityofirvine.gov/community-development/current-general-plan	260

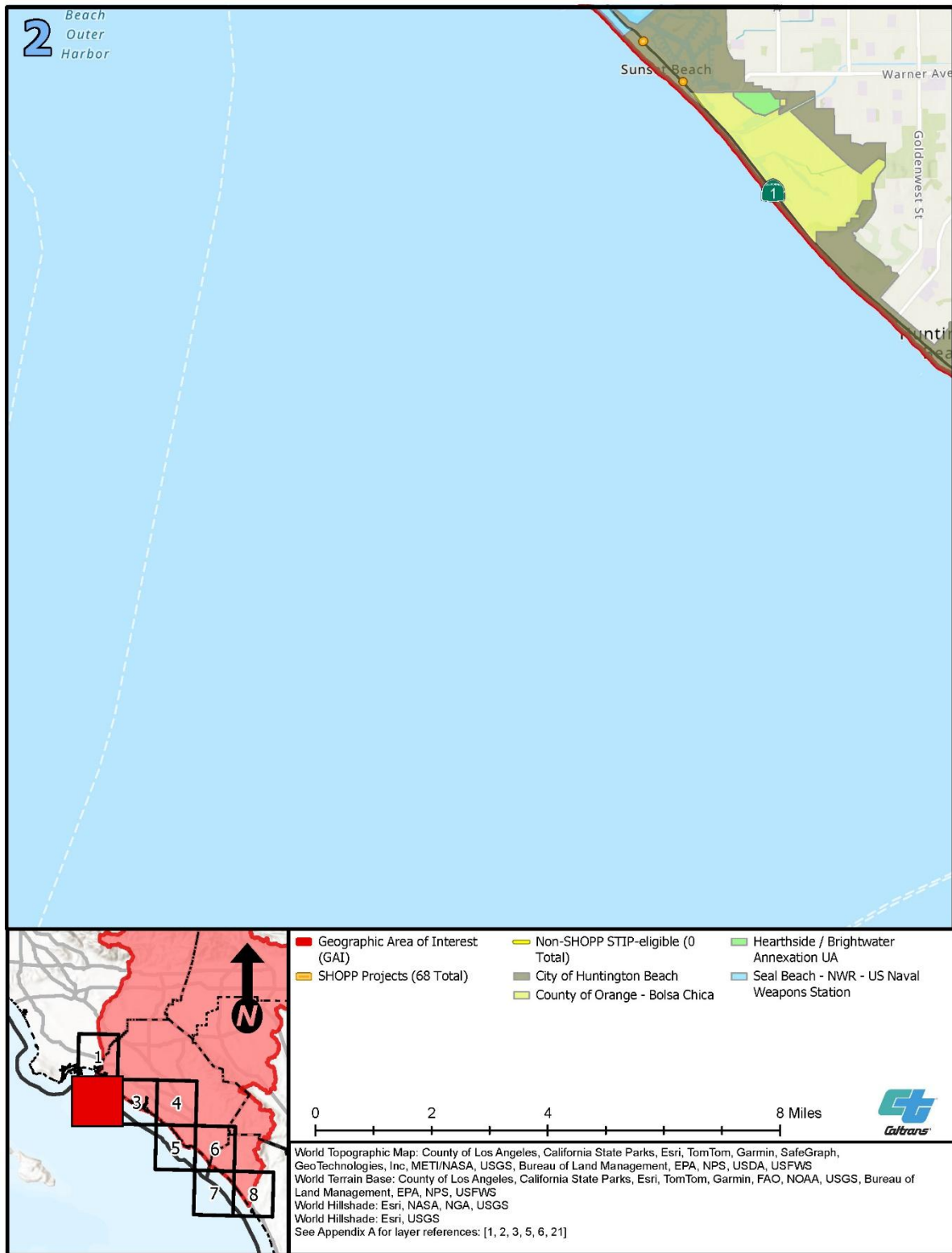
Mapbook Grid Number	HUC-8 Name	LCP Jurisdiction	LCP/LUP/General Plan Name	Description	Status	Segments/ Areas Identified on Maps	UAs and ADCs ^a	Federal or State Lands Not Included in LCP	Website	Total Acres of LCP ^b
3–5	Newport Bay	Orange County	<i>Newport Coast Local Coastal Program Second Amendment</i> (1997)	LCP for the Newport Coast segment within Orange County	Certified	Newport Coast	None	None	https://ocds.ocpublicworks.com/services/planning-development/community-plans	9,657
3–5	Newport Bay	Orange County	<i>Emerald Bay Local Coastal Program</i> (1989)	LCP for the Emerald Bay segment within Orange County	Certified	Emerald Bay	None	None	https://ocds.ocpublicworks.com/services/planning-development/community-plans	60
4, 5	Aliso-San Onofre	City of Laguna Beach	<i>Laguna Beach General Plan</i> (1993, updated 2022)	LCP for the City of Laguna Beach	Certified	City of Laguna Beach	Irvine Ranch ADC Hobo Canyon ADC Blue Lagoon ADC Irvine Cove ADC Three Arch Bay ADC	None	https://www.lagunabeachcity.net/government/departments/community-development/planning-zoning/land-use-plans/local-coastal-program	4,554
4, 5	Aliso-San Onofre	City of Aliso Viejo	<i>City of Aliso Viejo General Plan</i> (2004, updated 2014)	General plan for the City of Aliso Viejo	Uncertified	City of Aliso Viejo	None	None	https://avcity.org/300/General-Plan-Specific-Plans	447
4, 5	Aliso-San Onofre	Orange County	<i>Aliso Viejo and Aliso Creek Local Coastal Plan</i> (1983)	LCP for the Aliso Viejo and Aliso Creek segment of Orange County	Certified	Aliso Viejo	None	None	https://www.coastal.ca.gov/lcp/lcp-info/	2,166
4, 5	Aliso-San Onofre	City of Laguna Niguel	<i>City of Laguna Niguel General Plan</i> (1992)	LCP for the City of Laguna Niguel	Certified	City of Laguna Niguel	None	None	https://www.cityoflagunaniguel.org/132/General-Plan	1,120
5, 6	Aliso-San Onofre	City of Dana Point	<i>General Plan City of Dana Point</i> (1991)	LCP for the City of Dana Point	Certified	City of Dana Point	None	None	https://www.danapoint.org/City-Government/Community-Development/Planning/General-Plan/GPAC-Documents	2,030
5, 6	Aliso-San Onofre	City of San Clemente	<i>City of San Clemente Local Coastal Program Land Use Plan</i> (2018)	LUP for the City of San Clemente. Requires a 100-foot buffer from any wetland, riparian habitat, or ESHA. Requires mitigation for impacts as restoration in in-kind at a 4:1 for all wetlands, 3:1 for riparian habitat, and 4:1 for vernal pools.	Uncertified	City of San Clemente	Marblehead Coastal LUP ADC	None	https://www.sanclemente.gov/295/Coastal-Planning	1,617
6–8	San Diego	San Diego County	<i>County of San Diego Local Coastal Program Land Use Plan</i> (2018)	LCP for San Diego County.	Certified	San Diego County	None	San Diego County – U.S. Coast Guard Reservation CP San Diego County – U.S. Marine Corps Base (Pendleton)	https://www.sandiegocounty.gov/content/sdc/pds/advance/county-of-san-diego-local-coastal-program.html	3,920

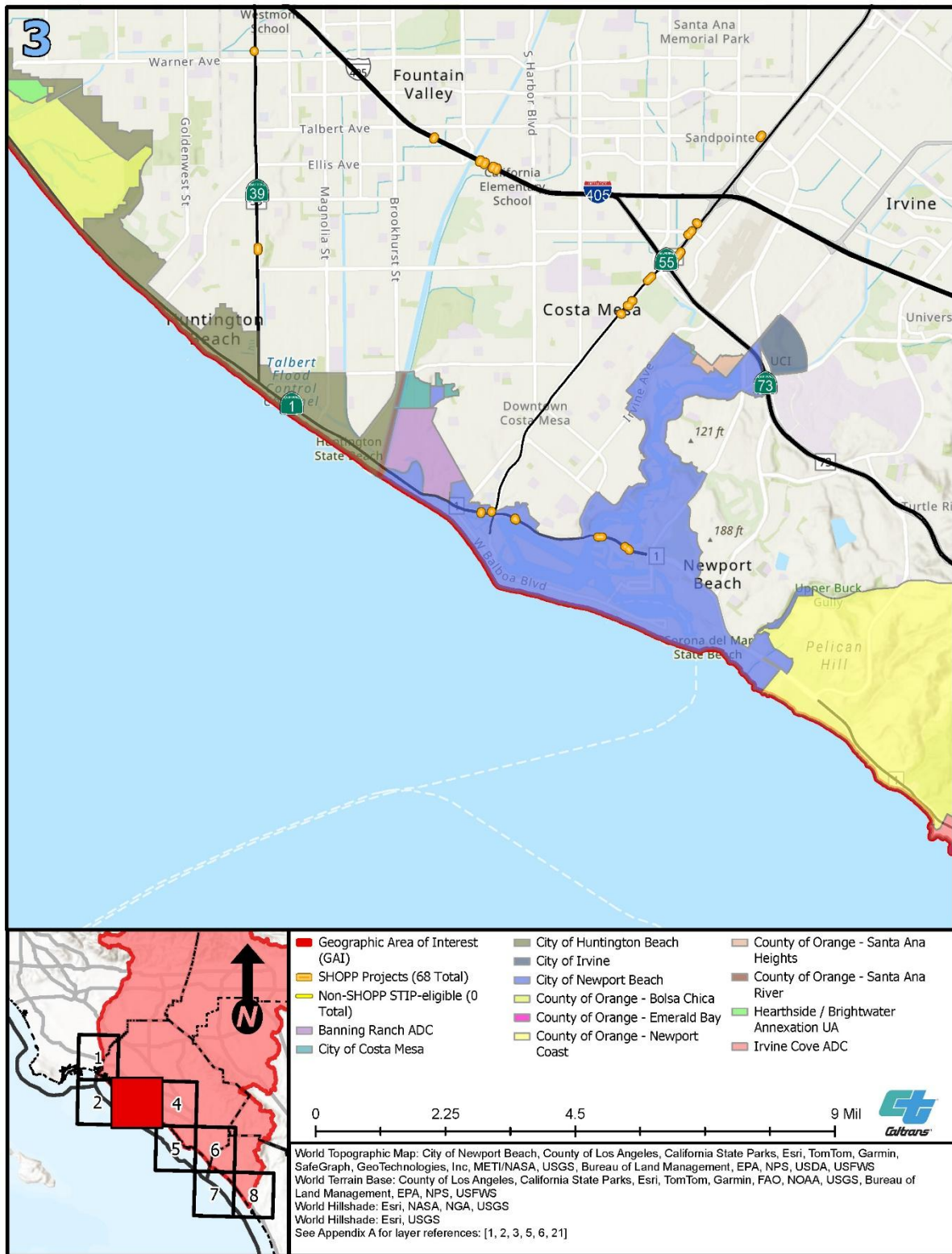
Source: CCC (2021)

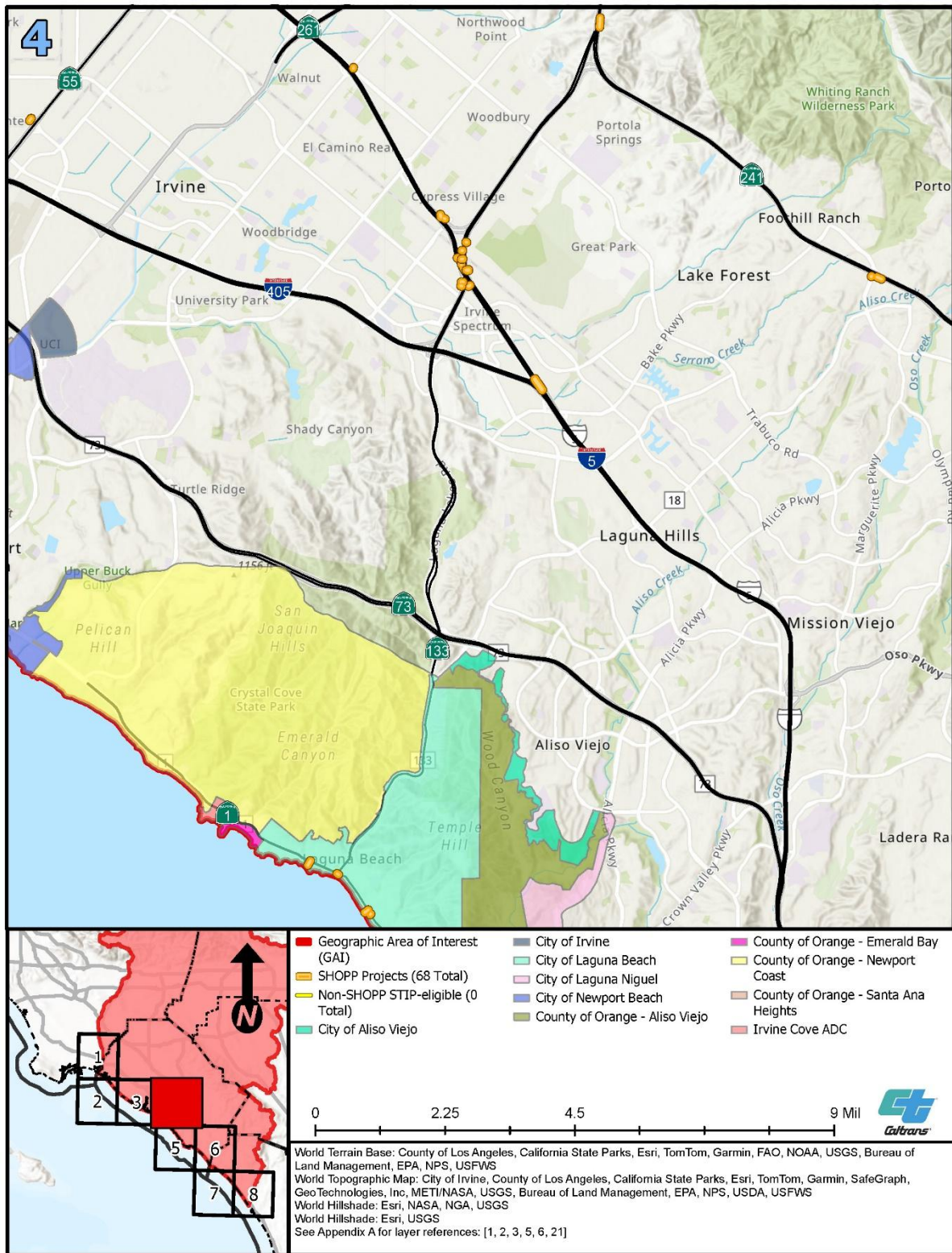
^a “ADC” refers to a geographic area that has not been officially segmented for purposes of LCP preparation and, during certification review of the LCP, was not certified. “UA” may be an area that was created through annexation or was subsequently identified but may not have been included in any LCP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

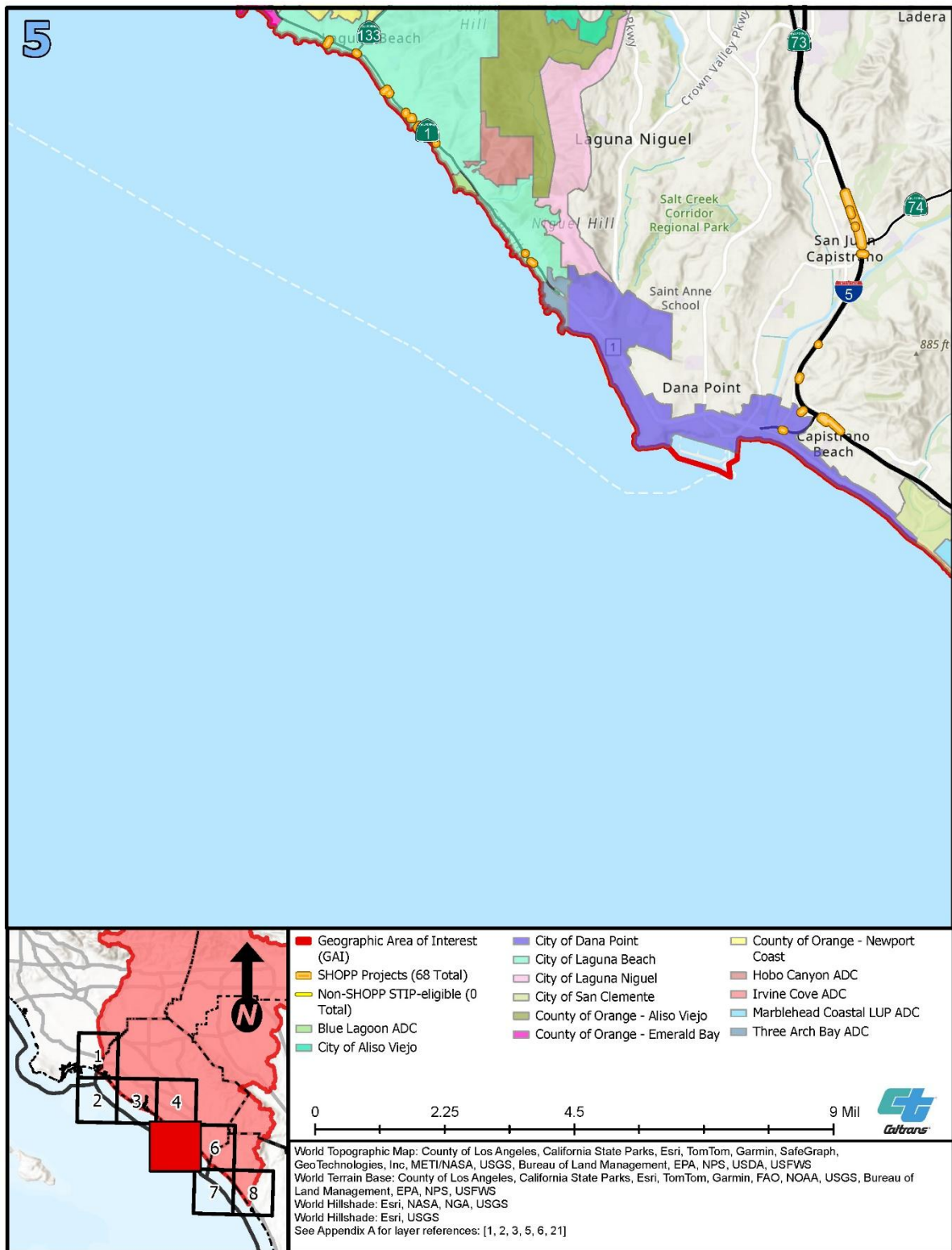
^b Each value was rounded to the nearest whole number and excludes acreage for ADCs, federal lands, and state lands.

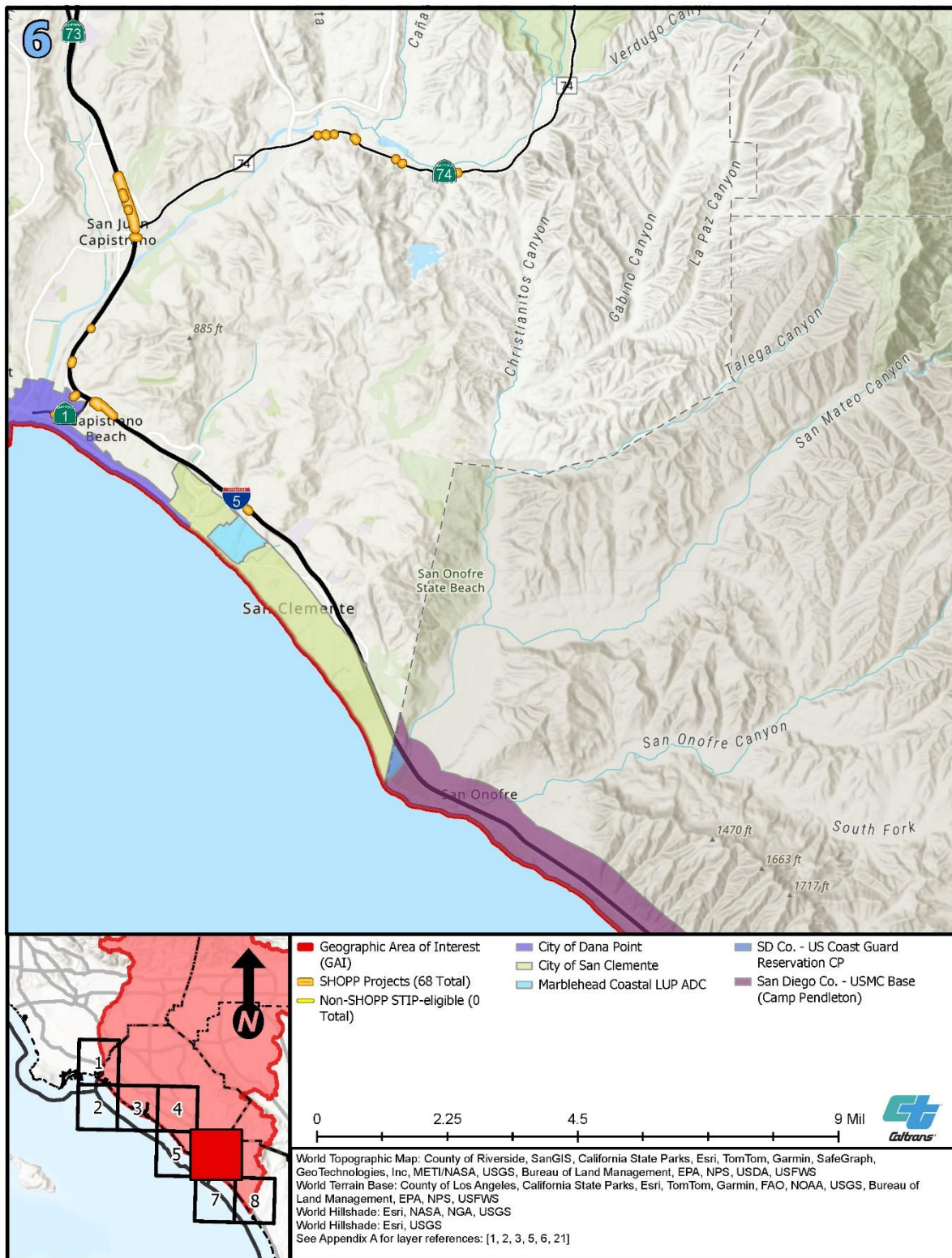


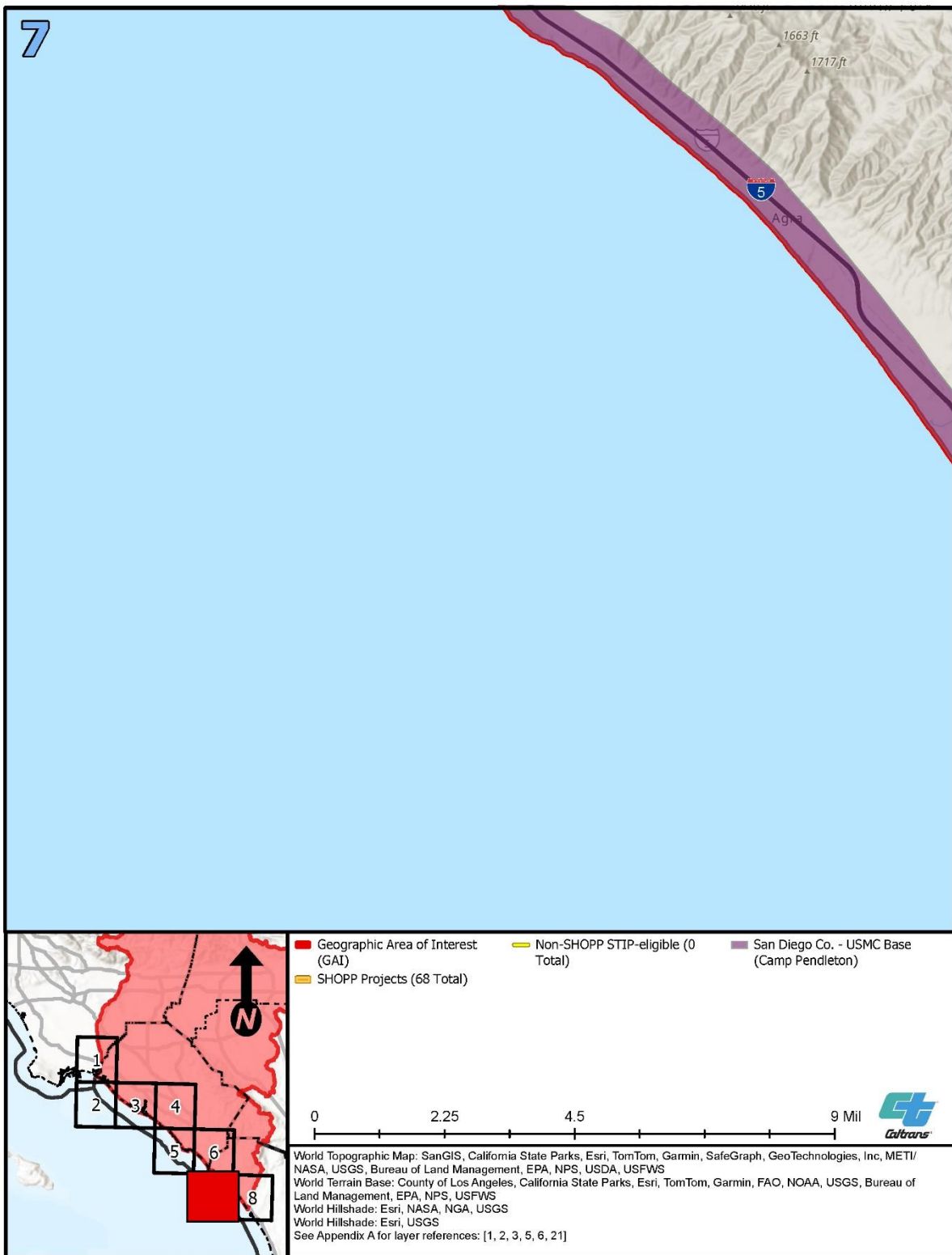


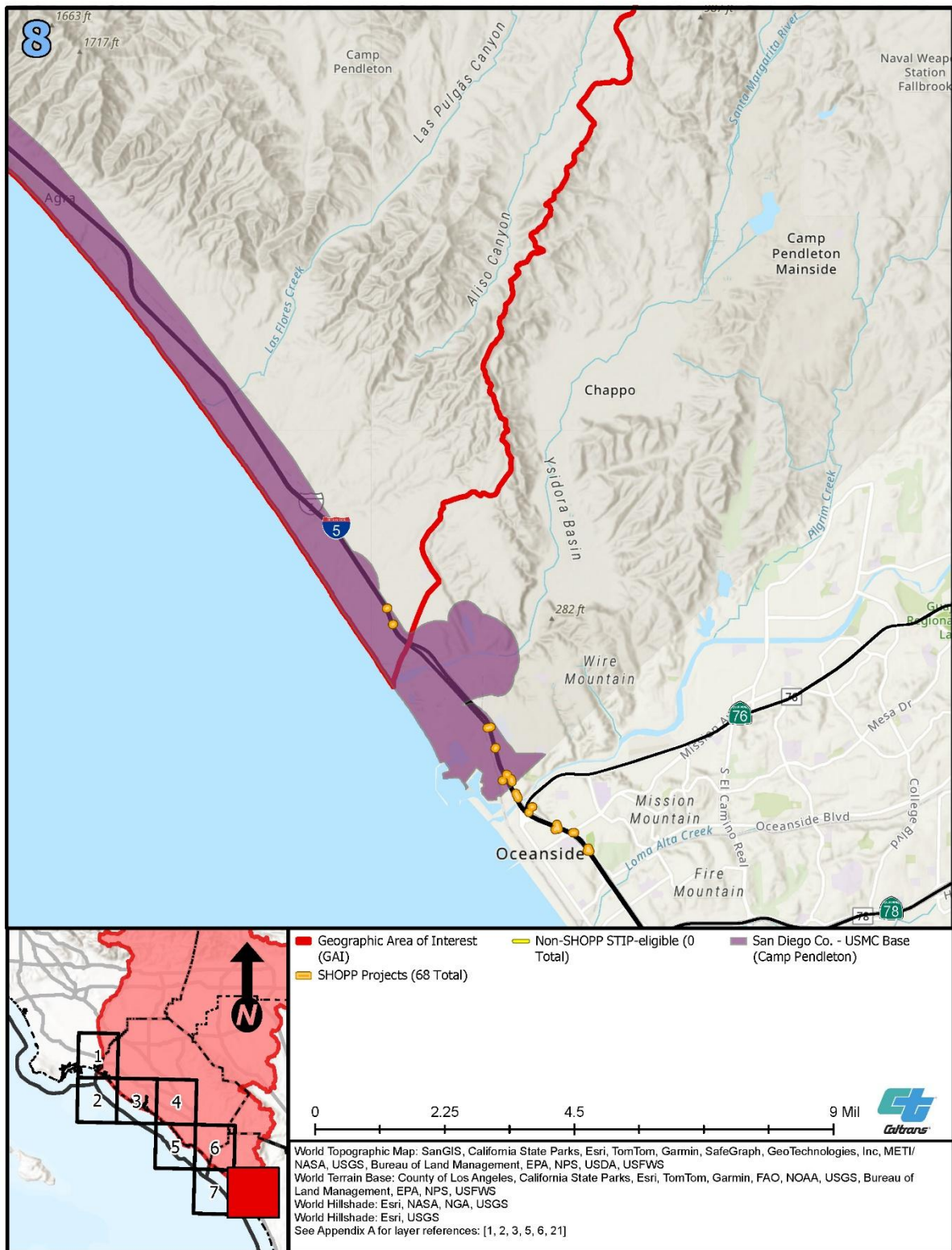












APPENDIX D: LAND COVER TYPES

Land cover types in 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 2024a, 2024b). A general description of each land cover type found in 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 Mojave Desert, Southern California Coast, and Southern California Mountains and Valleys Ecoregion Sections. Table D-1 indicates which habitat types occur in the three 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-5). These 14 maps correspond with the aquatic resources maps in Appendix H, *Aquatic Resource Locations*.

Tree-dominated Habitats: Tree-dominated habitats have at least 10 percent total tree canopy crown closure. In the GAI, tree-dominated habitats include closed-cone pine-cypress, coastal oak woodland, desert riparian, eastside pine, eucalyptus, Jeffrey pine, Joshua tree, juniper, lodgepole pine, montane hardwood, montane hardwood-conifer, montane riparian, palm oasis, pinyon-juniper, Ponderosa pine, Sierran mixed conifer, subalpine conifer, valley foothill riparian, and white fir, which are found in at least one of the three ecoregion sections.

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. In the GAI, shrub-dominated habitats include alkali desert scrub, chamise-redshank chaparral, coastal scrub, desert scrub, desert succulent shrub, desert wash, mixed chaparral, montane chaparral, and sagebrush, which are found in at least one of the three ecoregion sections.

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. In the GAI, herbaceous-dominated habitats include annual grassland, fresh emergent wetland, pasture, perennial grassland, saline emergent wetland, and wet meadow, which are found in at least one of the three ecoregion sections.

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. In the GAI, aquatic habitats include lacustrine and riverine, which are found in at least one of the three ecoregion sections.

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. In the GAI, developed habitats include cropland, deciduous orchards,

evergreen orchards, vineyards, and urban areas, which are found in at least one of the three ecoregion sections.

Non-vegetated Habitats: Non-vegetated habitats include barren areas, characterized by less than 2 percent cover by herbaceous species. In the GAI, non-vegetated habitats consist of barren areas, which are found in all three ecoregion sections.

References

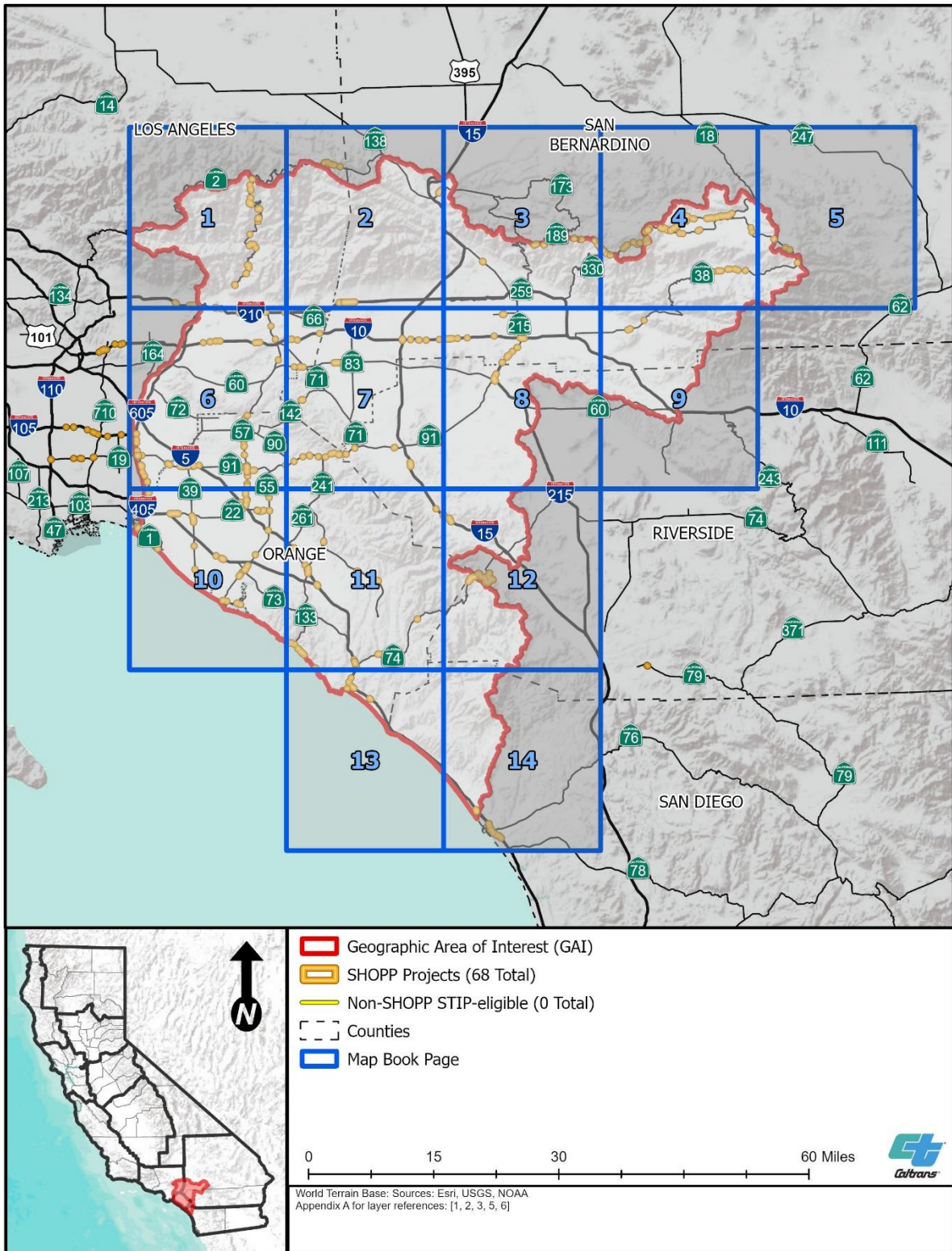
- Caltrans (California Department of Transportation). 2024a. "Vegetation_D07/D08/D11/D12 in Caltrans District 12 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2023/2024" (data file). Accessed October 2, 2024. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- . 2024b. *Statewide Advance Mitigation Needs Assessment Report*. State Highway Operation and Protection Program. Ten-Year Project Book. Second Quarter 2023/2024 Fiscal Year. September. Accessed November 13, 2024. Sacramento, California. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- 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 CDFW. Database Version 9.0.
- Mayer, Kenneth E., and William F. Laudenslayer, Jr., editors. 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 February 6, 2019. <https://www.wildlife.ca.gov/Data/CWHR/Wildlife-Habitats>.

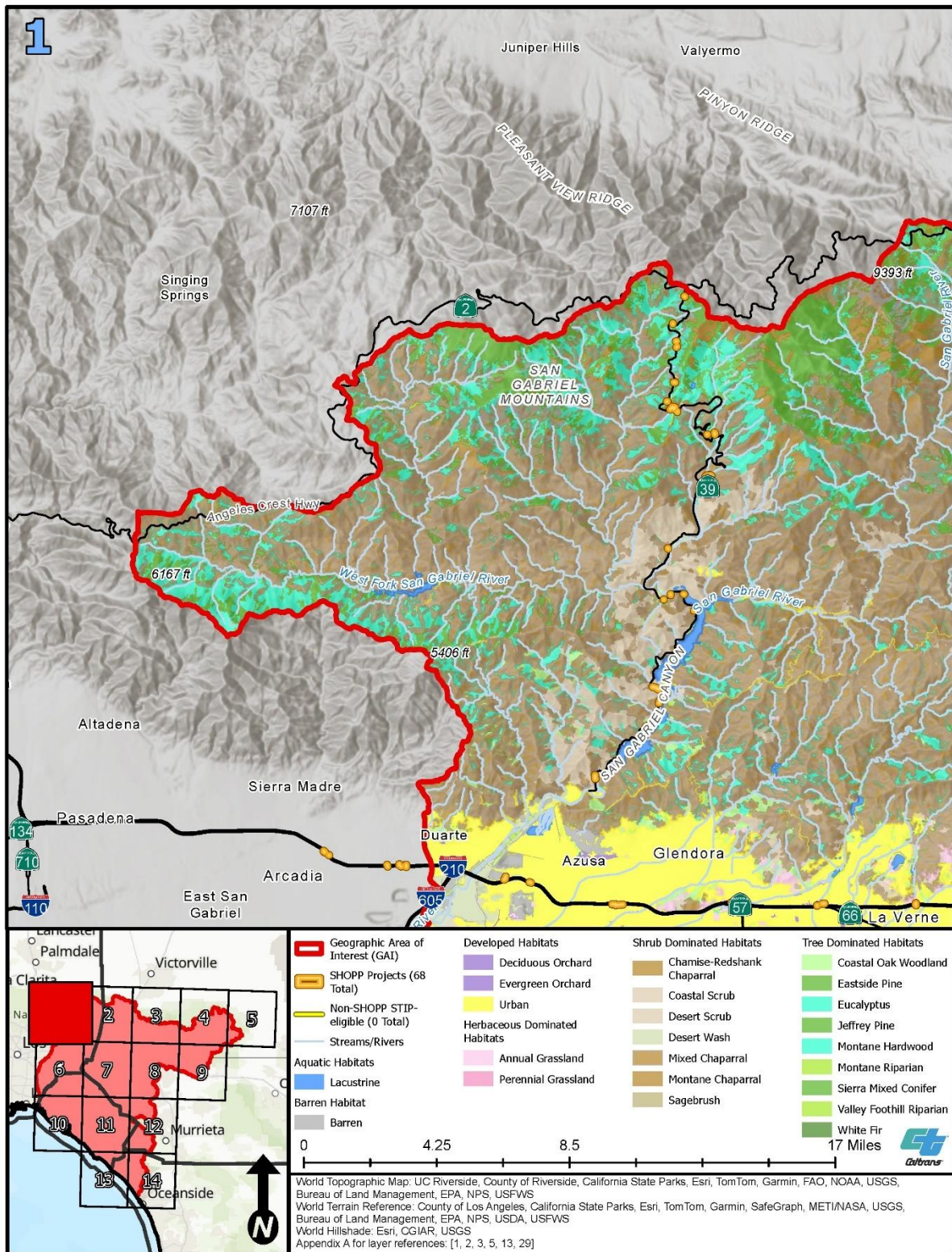
Table D-1. Land Cover Types in the GAI

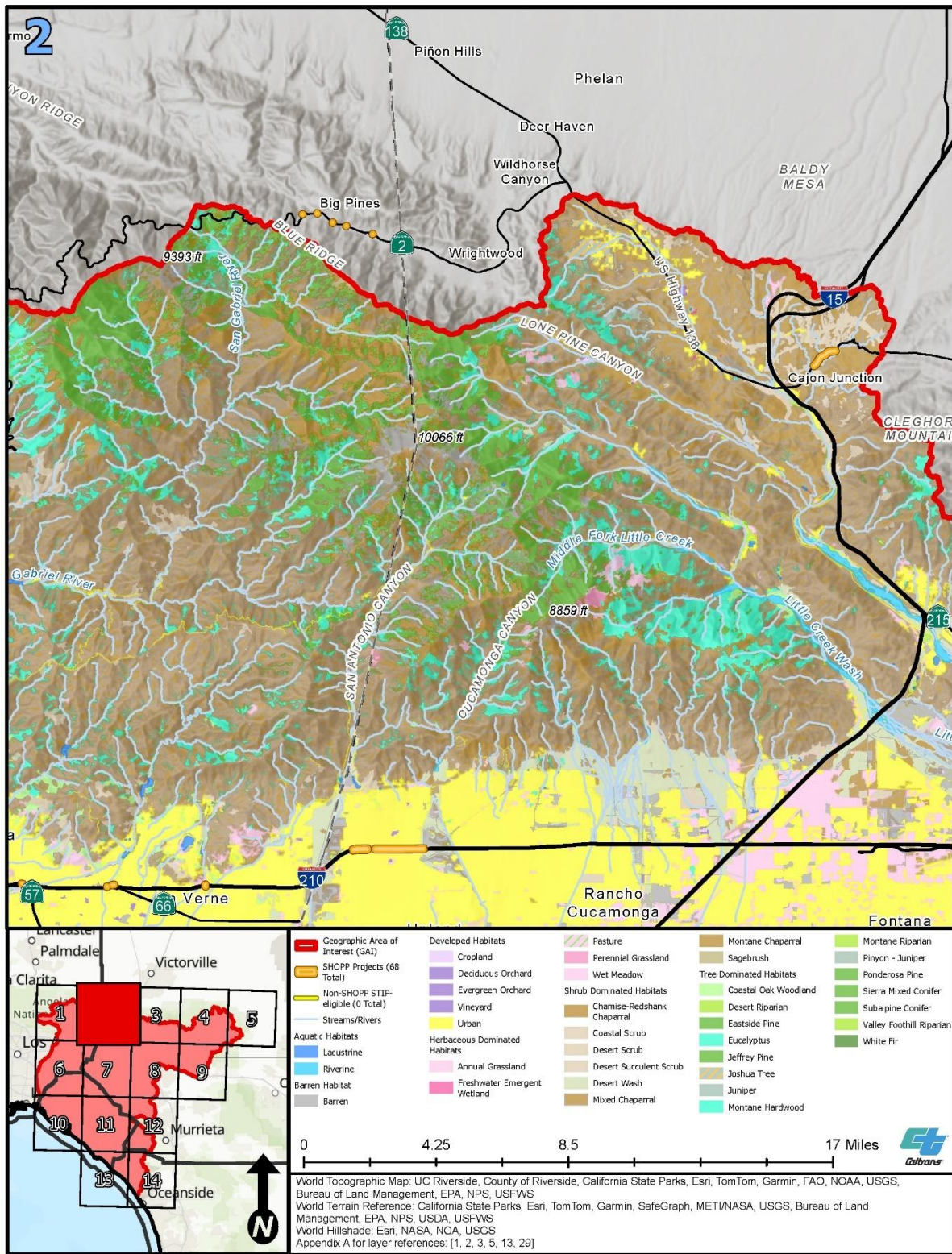
Land Cover Type	Mojave Desert Ecoregion Section	Southern California Coast Ecoregion Section	Southern California Mountains and Valleys Ecoregion Section
Tree-dominated Habitats	See below	See below	See below
Closed-Cone Pine-Cypress	Not present	Present	Present
Coastal Oak Woodland	Not present	Present	Present
Desert Riparian	Present	Not present	Present
Eastside Pine	Not present	Not present	Present
Eucalyptus	Not present	Present	Present
Jeffrey Pine	Not present	Not present	Present
Joshua Tree	Present	Not present	Not present
Juniper	Present	Not present	Present
Lodgepole Pine	Not present	Not present	Present
Montane Hardwood	Present	Present	Present
Montane Hardwood-Conifer	Present	Present	Present
Montane Riparian	Present	Present	Present
Palm Oasis	Not present	Not present	Present
Pinyon-Juniper	Present	Not present	Present
Ponderosa Pine	Not present	Not present	Present
Sierran Mixed Conifer	Present	Not present	Present
Subalpine Conifer	Not present	Not present	Present
Valley Foothill Riparian	Present	Present	Present
White Fir	Not present	Not present	Present
Shrub-dominated Habitats	See below	See below	See below
Alkali Desert Scrub	Not present	Not present	Present
Chamise-Redshank Chaparral	Present	Present	Present
Coastal Scrub	Present	Present	Present
Desert Scrub	Present	Not present	Present
Desert Succulent Shrub	Present	Not present	Not present
Desert Wash	Present	Present	Present
Mixed Chaparral	Present	Present	Present
Montane Chaparral	Not present	Not present	Present

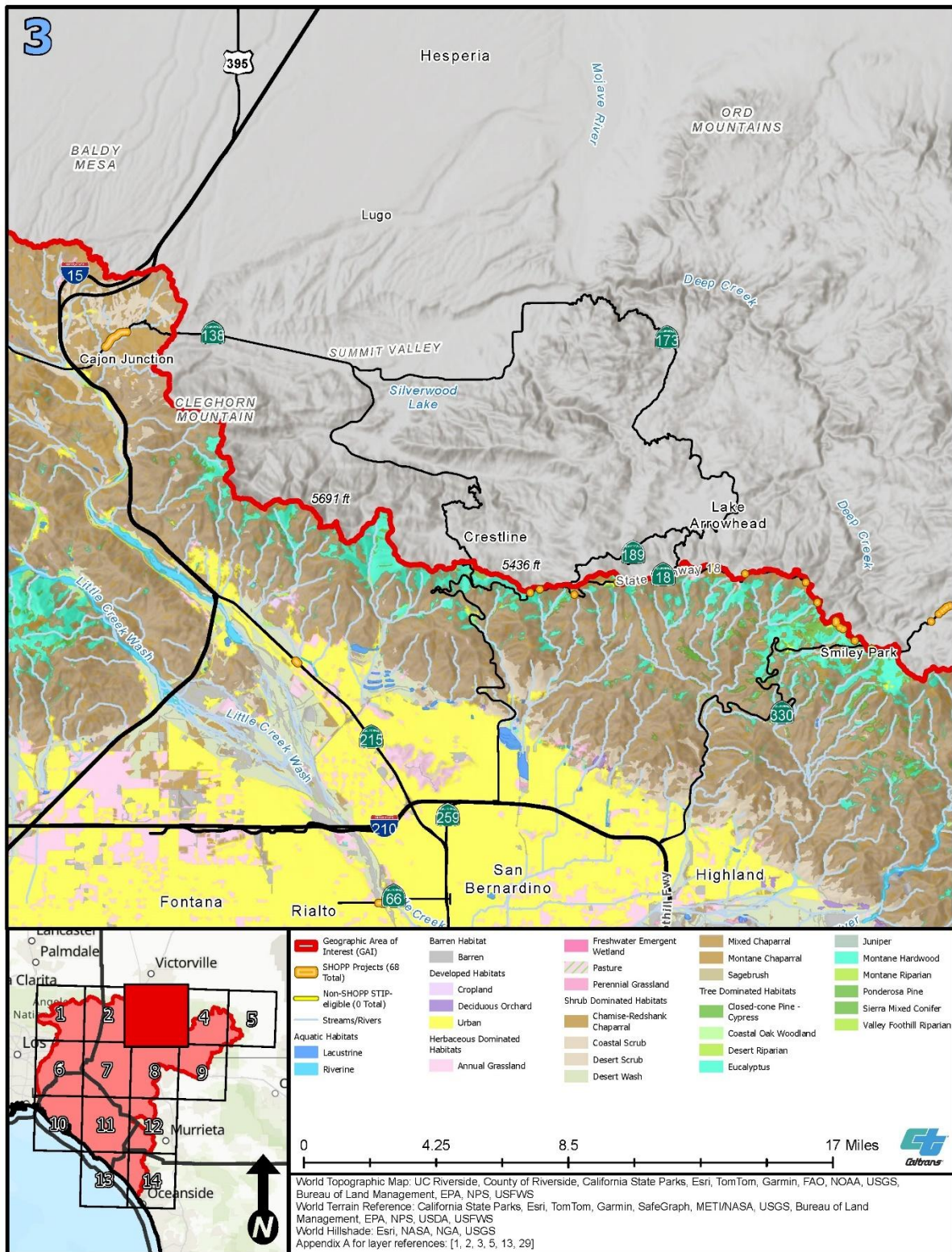
Land Cover Type	Mojave Desert Ecoregion Section	Southern California Coast Ecoregion Section	Southern California Mountains and Valleys Ecoregion Section
Sagebrush	Present	Not present	Present
Herbaceous-dominated Habitats	See below	See below	See below
Annual Grassland	Present	Present	Present
Fresh Emergent Wetland	Present	Present	Present
Pasture	Not present	Present	Present
Perennial Grassland	Not present	Present	Present
Saline Emergent Wetland	Not present	Present	Not present
Wet Meadow	Not present	Present	Present
Aquatic Habitats	See below	See below	See below
Lacustrine	Present	Present	Present
Riverine	Not present	Not present	Present
Developed Habitats	See below	See below	See below
Cropland	Not present	Present	Present
Deciduous Orchard	Present	Present	Present
Evergreen Orchard	Not present	Present	Present
Urban	Present	Present	Present
Vineyard	Present	Present	Present
Non-vegetated Habitats	See below	See below	See below
Barren	Present	Present	Present

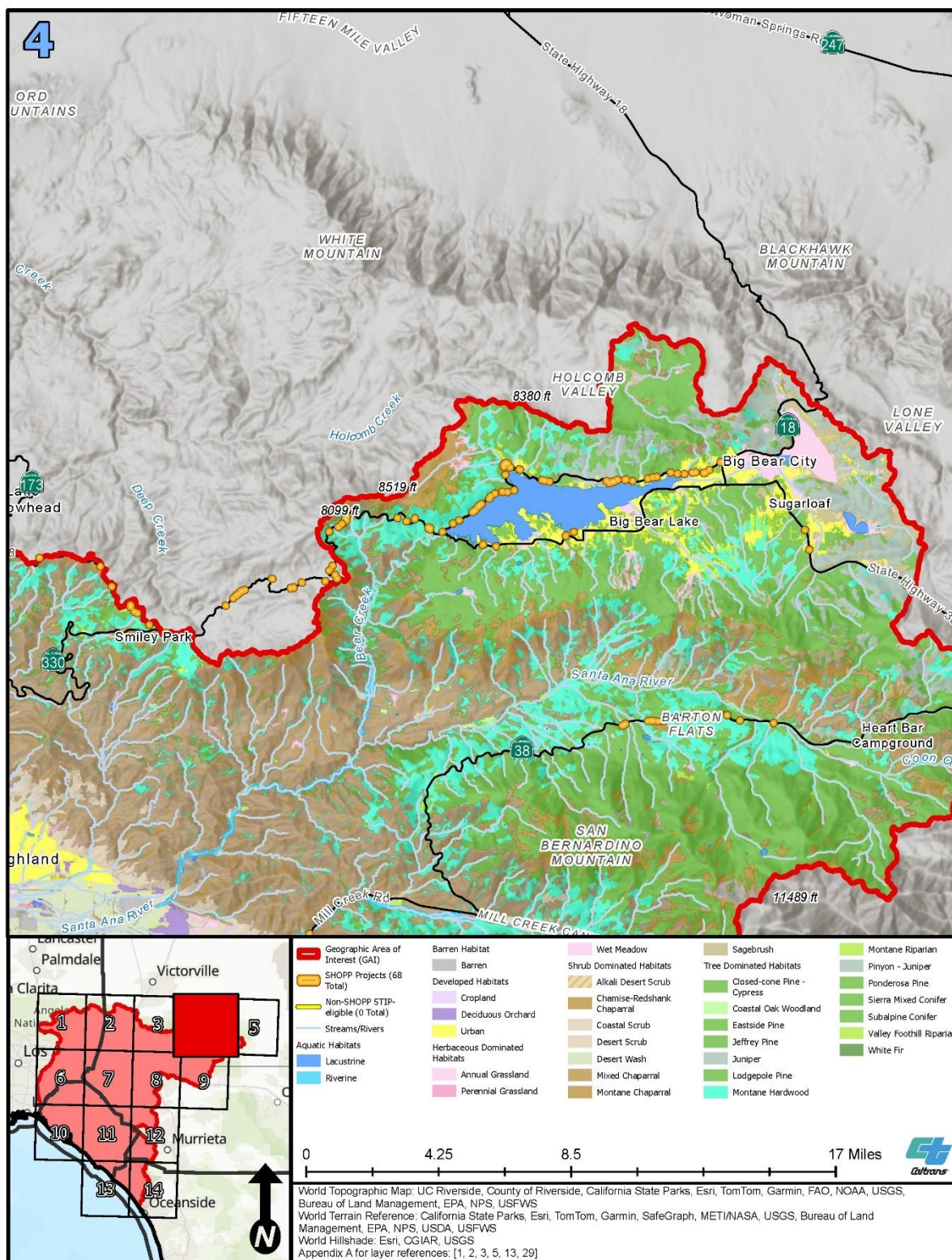
Sources: Caltrans (2024a, 2024b)

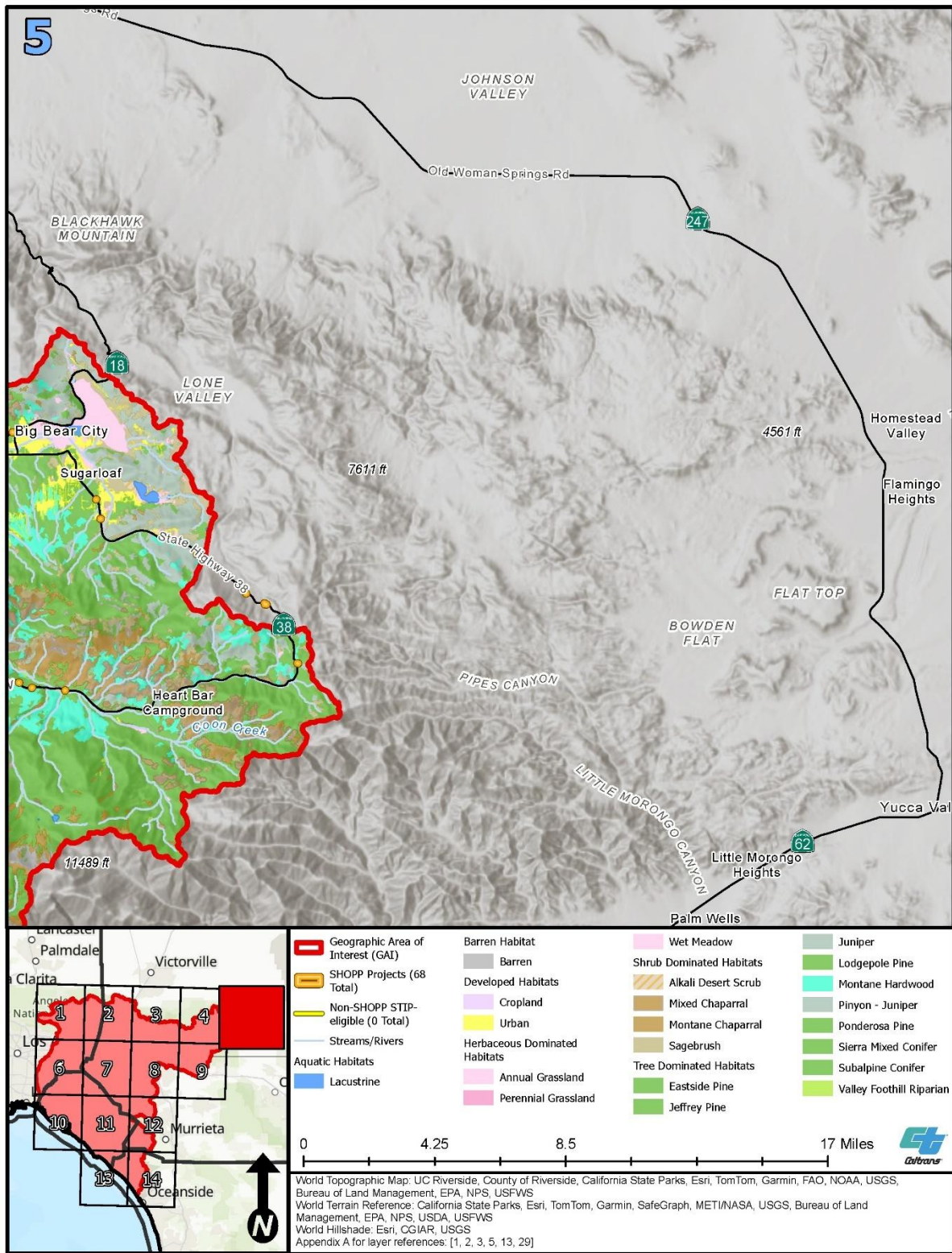


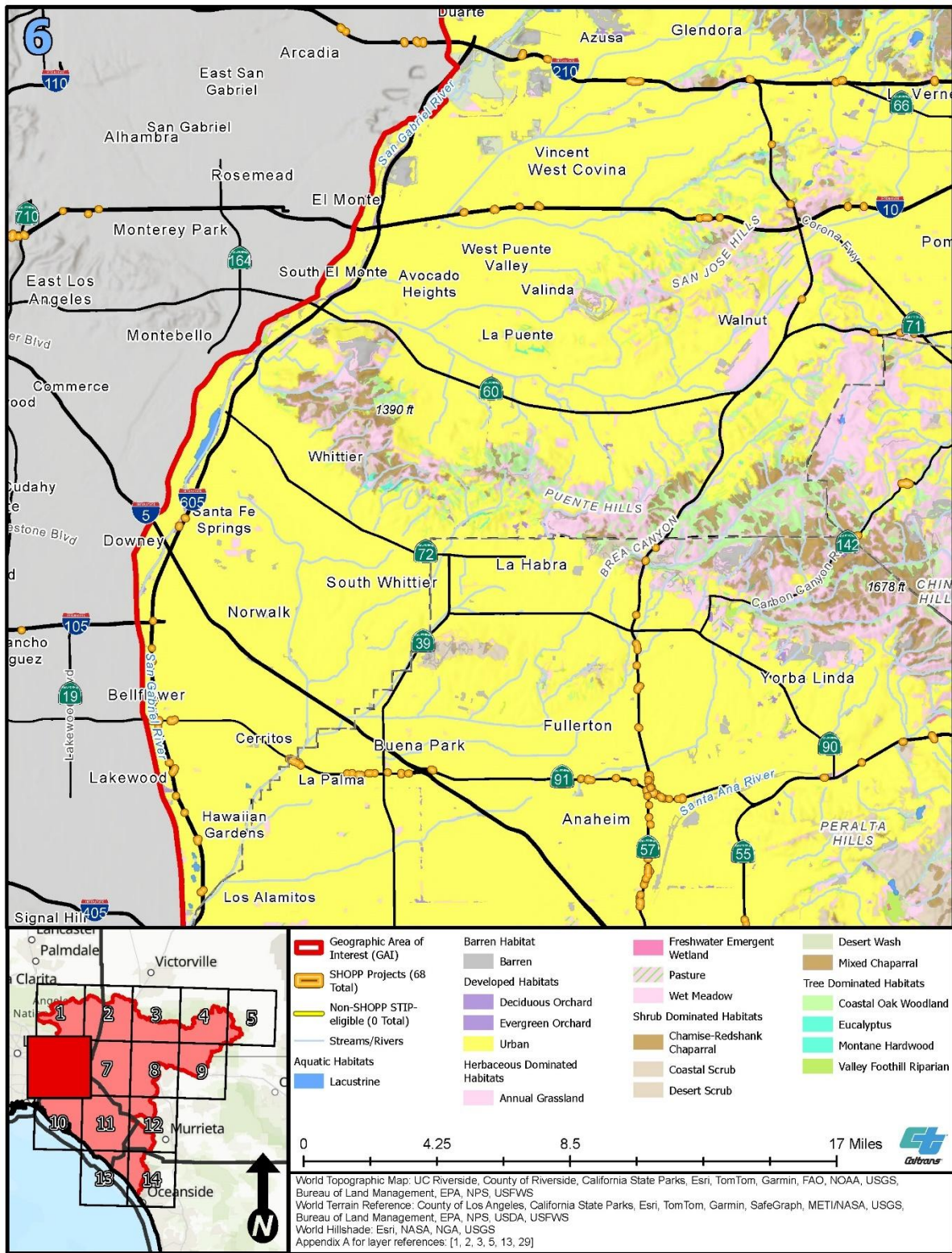


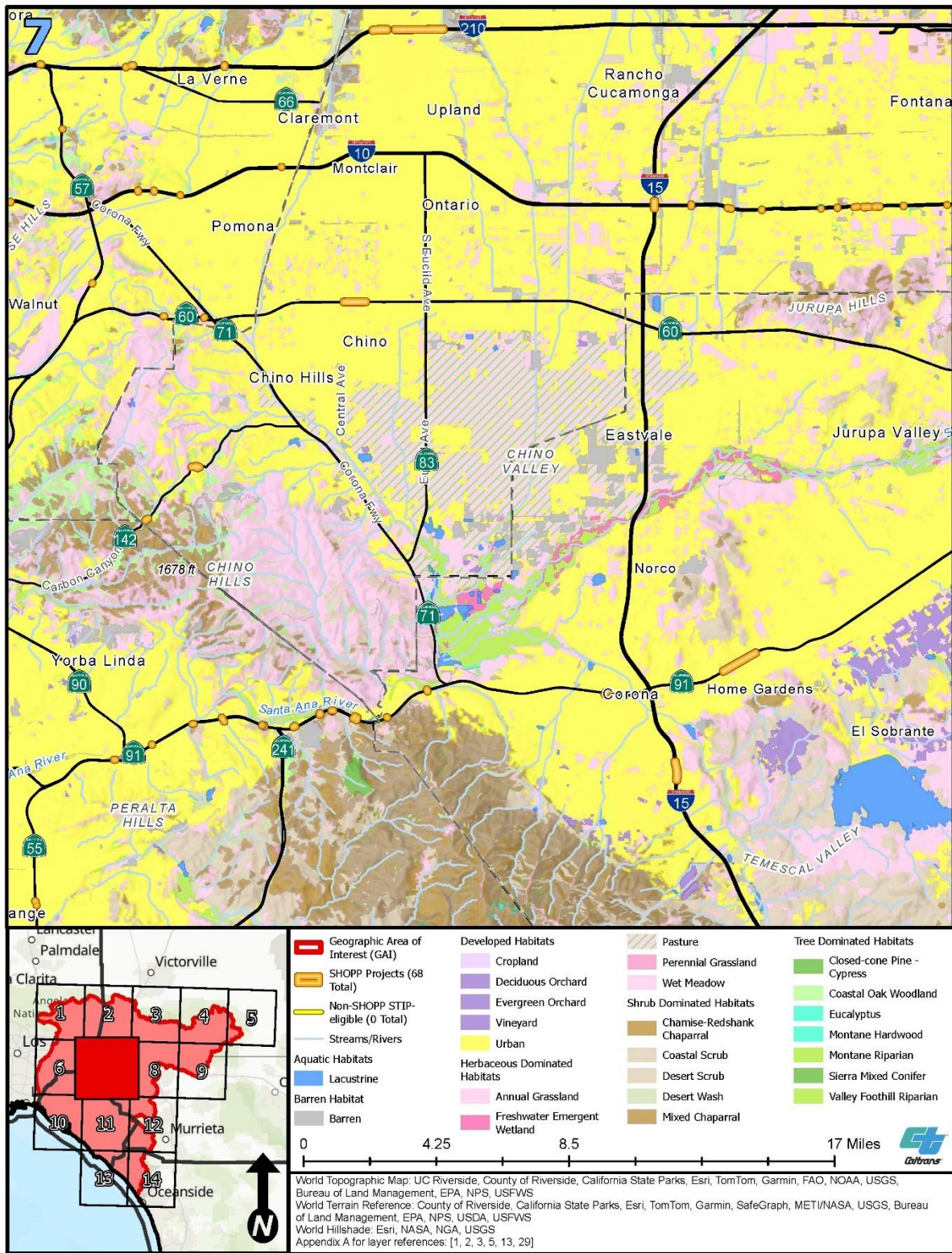


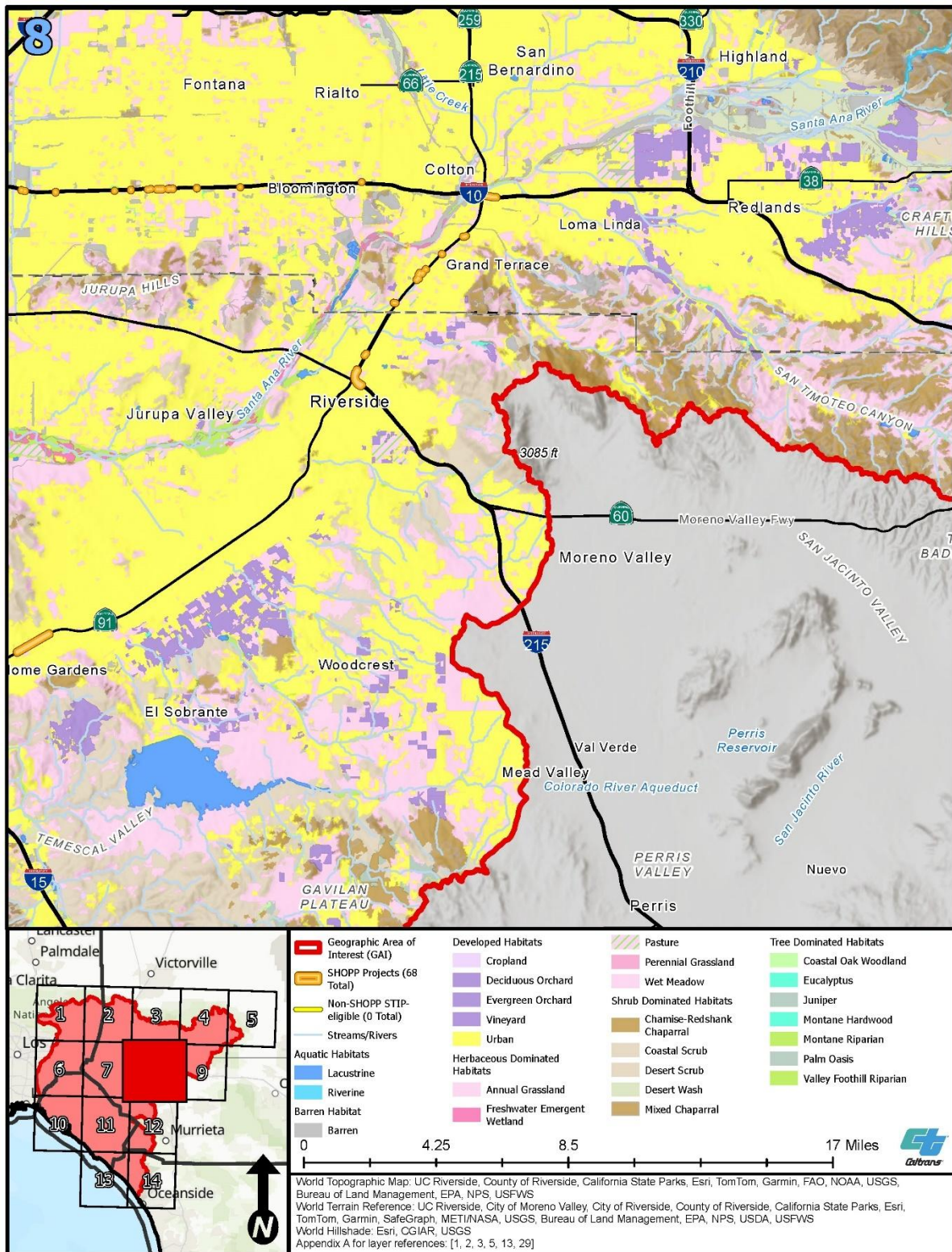


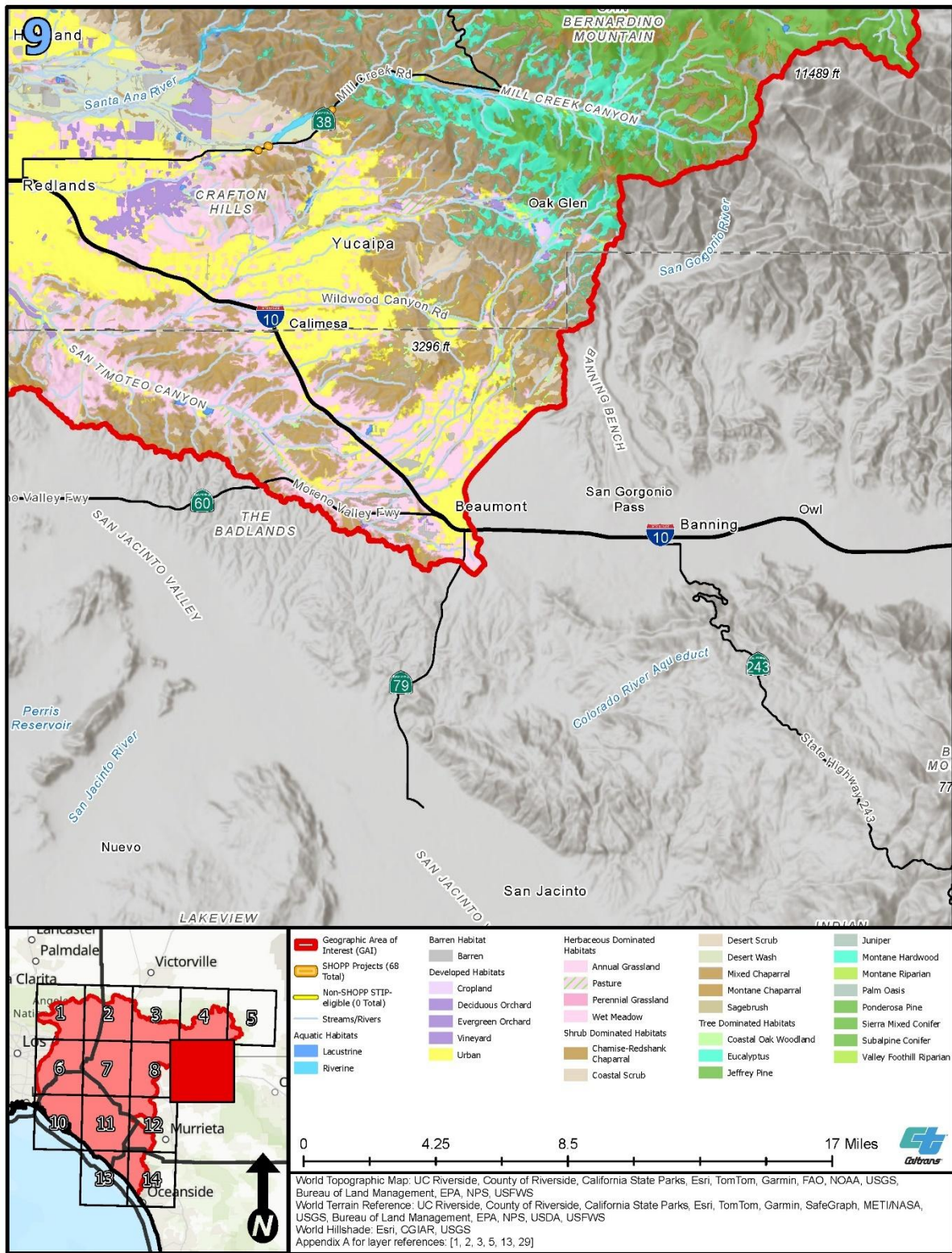


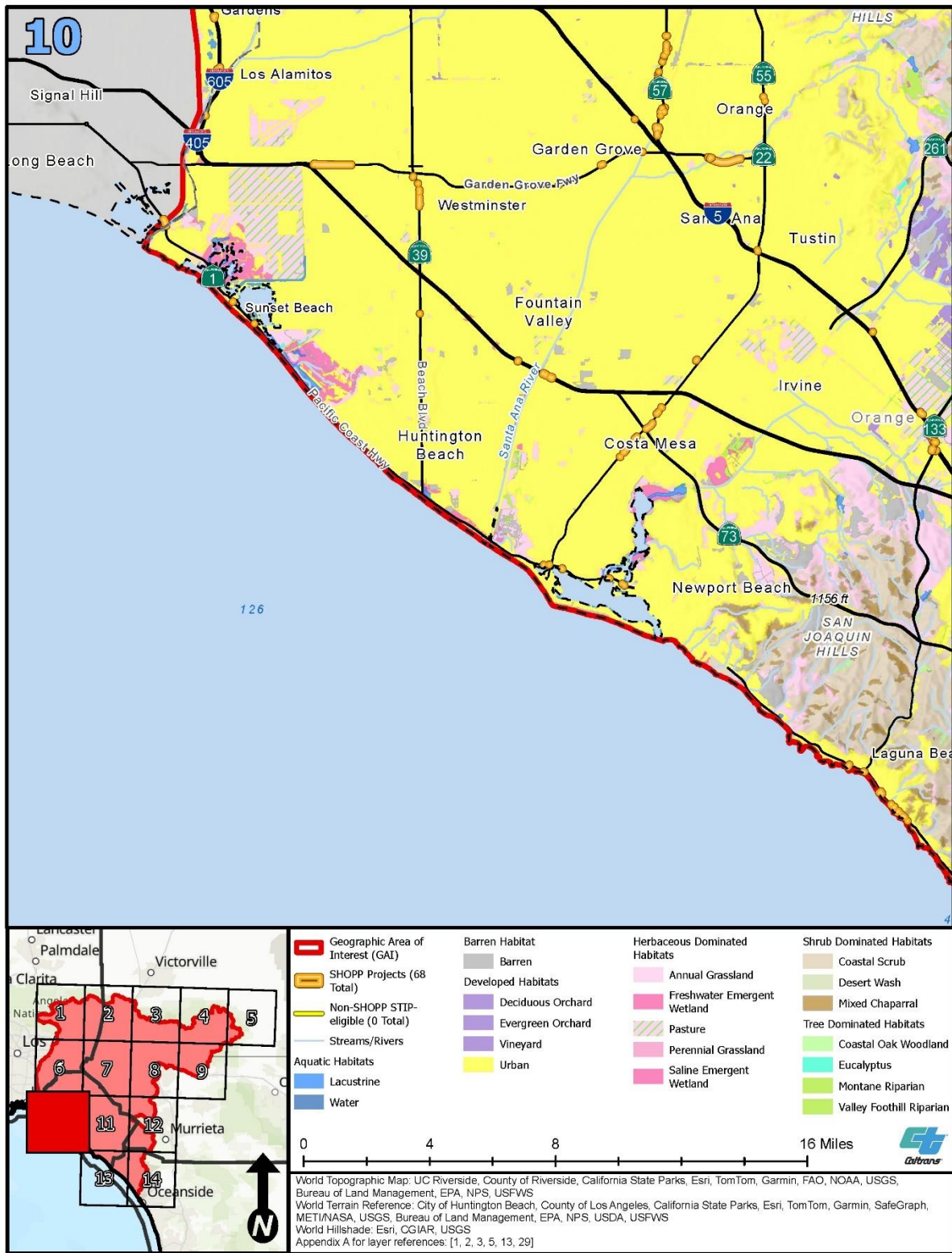


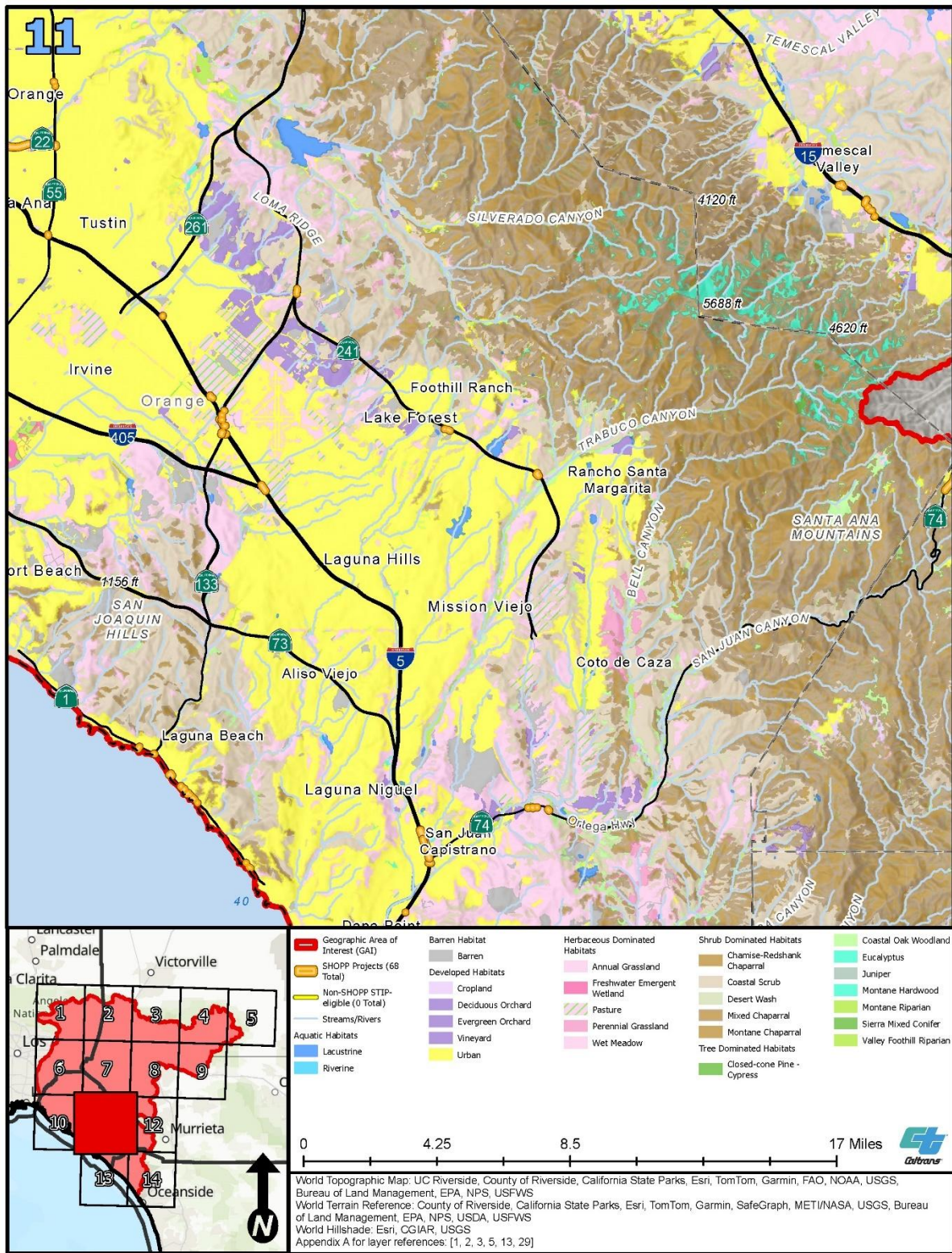


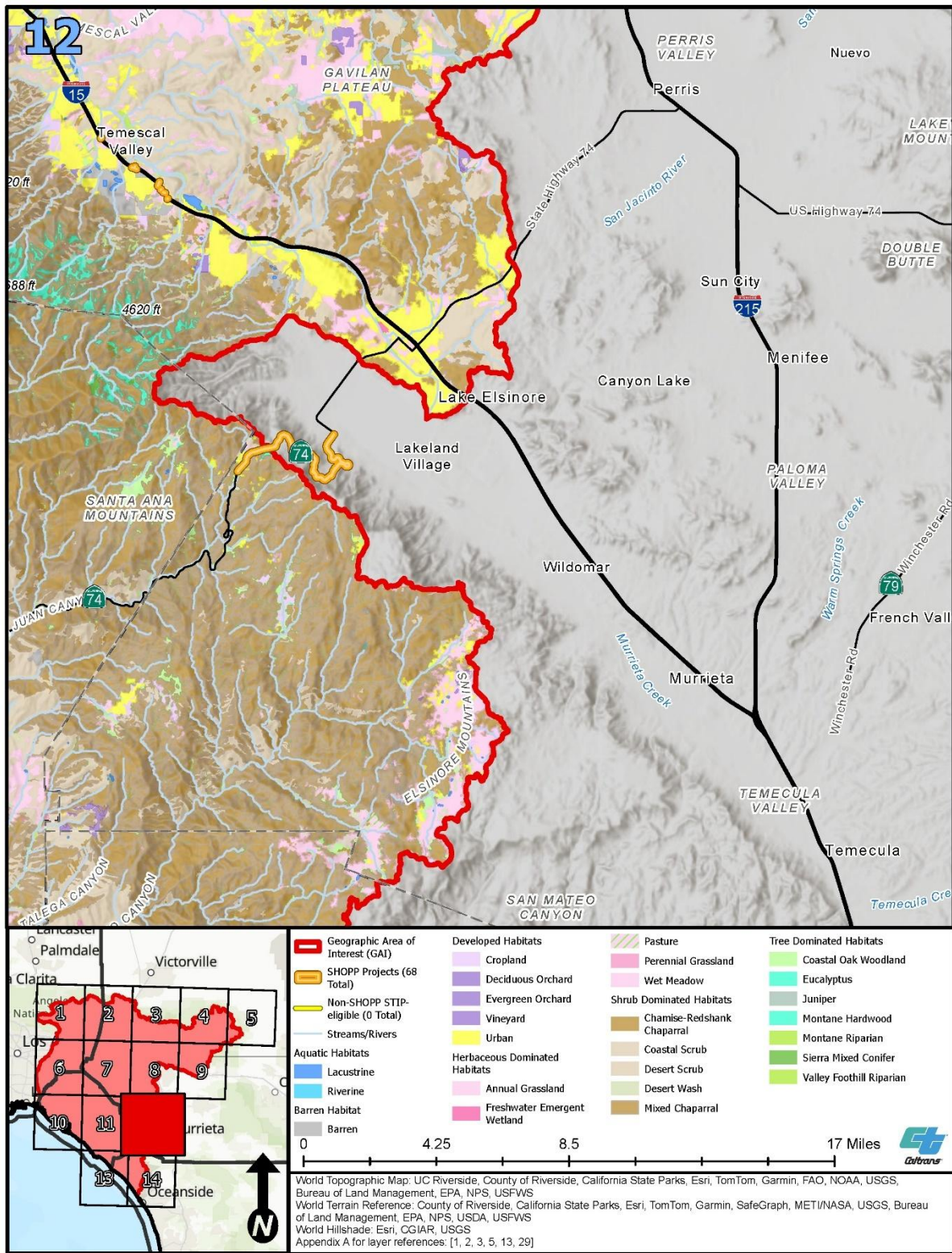


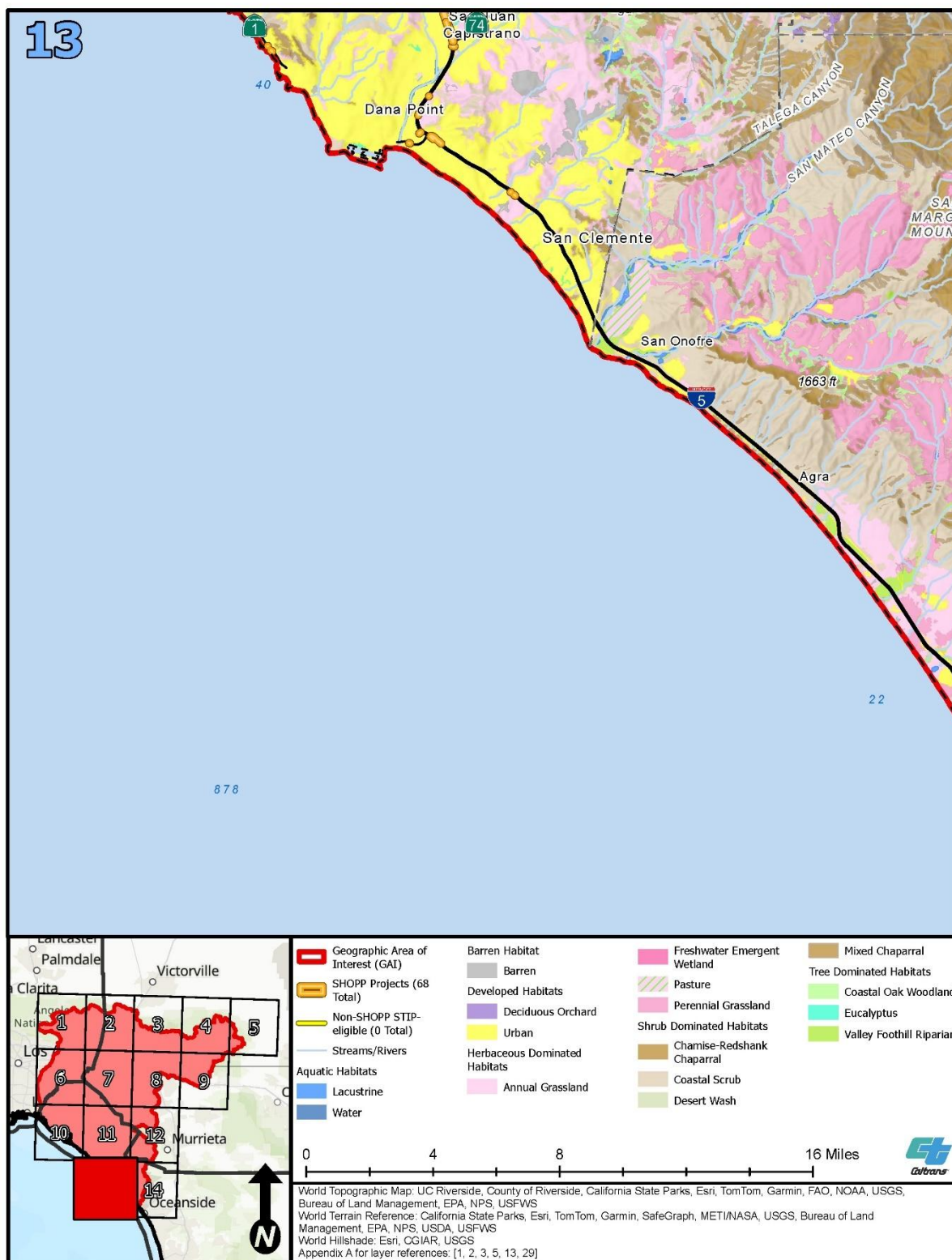


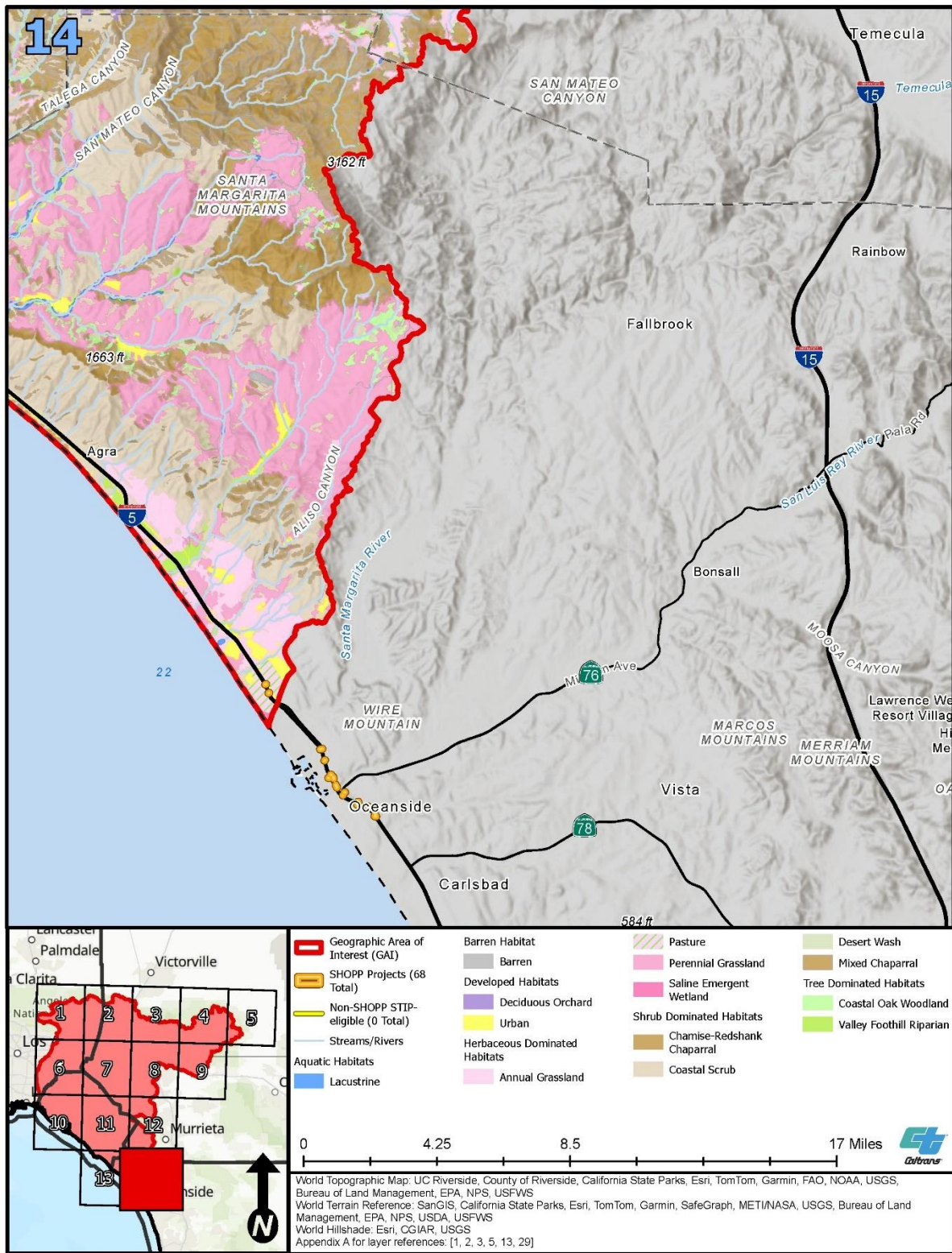












This page is intentionally left blank.

APPENDIX E: COMPLETE SAMNA SPECIES RESULTS

Complete terrestrial species SAMNA results for the GAI are provided in Tables E-1, E-2, and E-3. Table E-1 consists of the SAMNA results for the Mojave Desert Ecoregion Section in the GAI (starts on page E-3). Table E-2 consists of the SAMNA results for the Southern California Coast Ecoregion Section in the GAI (starts on page E-7). Table E-3 consists of the SAMNA results for the Southern California Mountains and Valleys Ecoregion Section in the GAI (starts on page E-13). 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 2024). 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 system–supplied or other documented sources showing their home ranges. When a subspecies did not have home range information that could 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 likely to occur in 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 likely to be present in 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 in 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 each table. Total habitat impacts in the bottom row of each table indicate the total anticipated impacts for each habitat type. These totals are not additive across all special-

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 Bird Species of Special Concern* (Shuford and Gardali 2008). For amphibians and reptiles, this includes California Herps online, HCPs/NCCPs, and NPS documents.

status species because each habitat type may provide suitable habitat for more than one special-status species or subspecies.

Habitats referenced in Tables E-1, E-2, and E-3 are mapped in Appendix D, *Land Cover Types*. The terrestrial species of mitigation need for this GAI include arroyo toad, coastal California gnatcatcher, and least Bell's vireo. 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 in the GAI. For example, advance mitigation established for coastal California gnatcatcher 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 in the GAI, and the other special-status species that may share these habitats, were excerpted from Tables E-1, E-2, and E-3 and are provided in Tables 5-4 to 5-6 in Chapter 5, *Modeled Estimated Impacts*, of the main RAMNA text.

References

- Caltrans (California Department of Transportation). 2024. *Statewide Advance Mitigation Needs Assessment Report*. State Highway Operation and Protection Program. Ten-Year Project Book. Second Quarter 2023/2024 Fiscal Year. September. Accessed November 13, 2024. 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 Conservation Concern in California*.

Table E-1. Complete SAMNA Results for the Mojave Desert Ecoregion Section in the GAI, by Land Cover (acres)

Common Name	Scientific Name	Status	Desert Riparian	Desert Scrub	Mixed Chaparral	Total
Plants	See below	See below	See below	See below	See below	See below
Braunton's milk-vetch ^a	<i>Astragalus brauntonii</i>	FE	0.00	0.00	3.00	3.00
Eureka Dunes evening-primrose ^a	<i>Oenothera californica</i> ssp. <i>eurekensis</i>	SR	0.00	2.67	0.00	2.67
Eureka Valley dune grass ^a	<i>Swallenia alexandrae</i>	FT, SR	0.00	2.67	0.00	2.67
Lane Mountain milk-vetch ^a	<i>Astragalus jaegerianus</i>	FE	0.00	2.67	0.00	2.67
Mojave tarplant ^a	<i>Deinandra mohavensis</i>	FS, SE	0.00	0.00	0.66	0.66
Mt. Gleason paintbrush ^a	<i>Castilleja gleasoni</i>	FS, SR	0.00	0.00	3.00	3.00
Nevin's barberry ^a	<i>Berberis nevinii</i>	FE, SE	0.00	0.00	3.00	3.00
Red Rock tarplant ^a	<i>Deinandra arida</i>	SR	0.00	2.67	0.00	2.67
Rock lady ^a	<i>Holmgrenanthe petrophila</i>	SR	0.00	2.67	0.00	2.67
Slender-horned spineflower ^a	<i>Dodecahema leptoceras</i>	FE, SE	0.00	0.00	3.00	3.00
Amphibians	See below	See below	See below	See below	See below	See below
Arroyo toad	<i>Anaxyrus californicus</i>	FE, SSC	0.53	3.81	3.00	7.34
California red-legged frog	<i>Rana draytonii</i>	FT, SSC	0.00	0.00	3.00	3.00
Western spadefoot	<i>Spea hammondi</i>	FS, SSC	0.00	0.00	3.00	3.00
Reptiles	See below	See below	See below	See below	See below	See below
Blainville's horned lizard	<i>Phrynosoma blainvillii</i>	FS, SSC	0.00	0.00	3.00	3.00
Coachwhip ^b	<i>Coluber flagellum</i>	SSC	0.53	3.81	3.00	7.34
Common sagebrush lizard ^c	<i>Sceloporus graciosus</i>	FS	0.00	0.00	3.00	3.00
Desert night lizard ^d	<i>Xantusia vigilis</i>	FS, SSC	0.53	3.81	0.00	4.34
Gophersnake ^e	<i>Pituophis catenifer</i>	None	0.53	3.81	3.00	7.34
Mohave desert tortoise	<i>Gopherus agassizii</i>	FT, ST	0.53	3.81	0.00	4.34
Mohave fringe-toed lizard	<i>Uma scoparia</i>	FS, SSC	0.53	3.81	0.00	4.34
Ring-necked snake	<i>Diadophis punctatus</i>	FS, SSC	0.00	3.81	3.00	6.81

Common Name	Scientific Name	Status	Desert Riparian	Desert Scrub	Mixed Chaparral	Total
Two-striped gartersnake	<i>Thamnophis hammondi</i>	FS, SSC	0.00	0.00	3.00	3.00
Western patch-nosed snake	<i>Salvadora hexalepis</i>	SSC	0.53	3.81	3.00	7.34
Birds	See below	See below	See below	See below	See below	See below
Bell's sparrow ^f	<i>Artemisiospiza belli</i>	FT, SSC	0.00	3.81	3.00	6.81
Bewick's wren ^g	<i>Thryomanes bewickii</i>	SSC	0.53	0.00	3.00	3.53
Burrowing owl	<i>Athene cunicularia</i>	FS, SSC	0.53	3.81	3.00	7.34
Cactus wren ^h	<i>Campylorhynchus brunneicapillus</i>	FS, SSC	0.53	3.81	3.00	7.34
California quail ⁱ	<i>Callipepla californica</i>	SSC	0.53	3.81	3.00	7.34
California towhee ^j	<i>Pipilo crissalis</i>	None	0.00	0.00	3.00	3.00
Golden eagle	<i>Aquila chrysaetos</i>	FS, SFS, SFP	0.53	3.81	3.00	7.34
Gray vireo	<i>Vireo vicinior</i>	FS, SSC	0.00	0.00	3.00	3.00
Great blue heron ^k	<i>Ardea herodias</i>	SFS	0.53	0.00	0.00	0.53
Great egret ^l	<i>Ardea alba</i>	SFS	0.53	0.00	0.00	0.53
Le Conte's thrasher	<i>Toxostoma lecontei</i>	FS, SSC	0.00	3.81	0.00	3.81
Loggerhead shrike	<i>Lanius ludovicianus</i>	SE, SSC	0.53	3.81	3.00	7.34
Long-eared owl	<i>Asio otus</i>	SSC	0.53	3.81	3.00	7.34
Northern harrier	<i>Circus cyaneus</i>	SSC	0.53	3.81	3.00	7.34
Red-winged blackbird ^m	<i>Agelaius phoeniceus</i>	SSC	0.53	0.00	0.00	0.53
Savannah sparrow ⁿ	<i>Passerculus sandwichensis</i>	SE, SSC	0.53	3.81	3.00	7.34
White-tailed kite	<i>Elanus leucurus</i>	FS, SFP	0.00	3.81	3.00	6.81
Yellow warbler	<i>Setophaga petechia</i>	SSC	0.53	0.00	3.00	3.53
Mammals	See below	See below	See below	See below	See below	See below
American badger	<i>Taxidea taxus</i>	SSC	0.53	3.81	3.00	7.34
Bighorn sheep	<i>Ovis canadensis</i>	FE, FS, SE, ST, SFP	0.53	3.81	0.00	4.34
Black-tailed jackrabbit ^o	<i>Lepus californicus</i>	None	0.53	3.81	3.00	7.34

Common Name	Scientific Name	Status	Desert Riparian	Desert Scrub	Mixed Chaparral	Total
California vole ^p	<i>Microtus californicus</i>	FE, FS, SE, SSC	0.00	0.00	3.00	3.00
Deer mouse ^a	<i>Peromyscus maniculatus</i>	SSC	0.53	3.81	3.00	7.34
Desert woodrat	<i>Neotoma lepida</i>	SSC	0.53	3.81	3.00	7.34
Fringed myotis	<i>Myotis thysanodes</i>	FS	0.53	0.00	3.00	3.53
Kit fox ^f	<i>Vulpes macrotis</i>	FE, ST	0.53	3.81	0.00	4.34
Little pocket mouse	<i>Perognathus longimembris</i>	FS, SSC	0.53	3.81	3.00	7.34
Long-eared myotis	<i>Myotis evotis</i>	FS	0.53	0.00	3.00	3.53
Merriam's kangaroo rat	<i>Dipodomys merriami</i>	FE, SCE, SSC	0.00	2.67	0.00	2.67
Mohave ground squirrel	<i>Xerospermophilus mohavensis</i>	FS, ST	0.00	3.81	0.00	3.81
Ornate shrew ^g	<i>Sorex ornatus</i>	FE, SSC	0.00	0.00	3.00	3.00
Pallid bat	<i>Antrozous pallidus</i>	FS, SSC	0.53	3.81	3.00	7.34
Ringtail	<i>Bassariscus astutus</i>	SFP	0.53	3.81	3.00	7.34
San Diego pocket mouse	<i>Chaetodipus fallax</i>	SSC	0.00	2.67	0.00	2.67
Small-footed myotis	<i>Myotis ciliolabrum</i>	FS	0.53	3.81	3.00	7.34
Southern grasshopper mouse	<i>Onychomys torridus</i>	FS, SSC	0.53	3.81	3.00	7.34
Spotted bat	<i>Euderma maculatum</i>	FS, SSC	0.53	3.81	0.00	4.34
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	FS, SSC	0.53	3.81	3.00	7.34
Western mastiff bat	<i>Eumops perotis</i>	FS, SSC	0.53	3.81	3.00	7.34
Western spotted skunk ^l	<i>Spilogale gracilis</i>	SSC	0.53	0.00	3.00	3.53
Yuma myotis	<i>Myotis yumanensis</i>	FS	0.53	3.81	3.00	7.34
Not applicable	Not applicable	Total	0.53	3.81	3.00	7.34

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

^a This plant species does not occur in the Mojave Desert Ecoregion Section in the GAI.

^b Coachwhip: Only the San Joaquin subspecies (*Masticophis flagellum ruddocki*) is special status, and it does not occur in the GAI.

^c Common sagebrush lizard: Only the northern subspecies (*Sceloporus graciosus graciosus*) is special status, and it does not occur in the GAI.

^d Desert night lizard: Only the Sierra subspecies (*Xantusia vigilis sierrae*) is special status, and it does not occur in the GAI.

^e Gophersnake: Only the Santa Cruz Island subspecies appears on the CDFW Special Animals List, and it is listed only as a CDFW Watch List Species.

^f Bell's sparrow: Only the San Clemente subspecies is special status, and it does not occur in the GAI.

^g Bewick's wren: Only the San Clemente subspecies is special status, and it does not occur in the GAI.

^h Cactus wren: Only the San Diego subspecies (*Campylorhynchus brunneicapillus sandiegensis*) is special status, and it does not occur in the Mojave Desert Ecoregion Section (only occurs in the GAI in the Southern California Coast and Southern California Mountain and Valley Ecoregion Sections).

ⁱ California quail: Only the Catalina subspecies (*Callipepla californica catalinensis*) is special status, and it does not occur in the GAI.

^j California towhee: Only the Inyo subspecies is special status, and it does not occur in the GAI.

^k Great blue heron: This species appears on the CDFW Special Animals List but is listed only as State Fire Sensitive.

^l Great egret: This species appears on the CDFW Special Animals List but is listed only as State Fire Sensitive.

^m Red-winged blackbird: Only the Kern subspecies is special status, and it does not occur in the GAI.

ⁿ Savannah sparrow: There are two special-status subspecies that occur in the GAI, but they do not occur in the Mojave Desert Ecoregion Section in the GAI (only in the Southern California Coast Ecoregion Section).

^o Black-tailed jackrabbit: Only the San Diego subspecies is special status, and it does not occur in the Mojave Desert Ecoregion Section in the GAI (only in the Southern California Coast Ecoregion Section).

^p California vole: The special-status south coast marsh subspecies occurs in the GAI but only in the Southern California Coast Ecoregion Section.

^q Deer mouse: Only the Channel Islands subspecies is special status, and it does not occur in the GAI.

^r Kit fox: Only the San Joaquin subspecies is special status, and it does not occur in the GAI.

^s Ornate shrew: There are five special-status subspecies, and none occurs in the Mojave Desert Ecoregion Section. The southern California saltmarsh subspecies is special status and occurs in the GAI but only in the Southern California Coast Ecoregion Section.

^t Western spotted skunk: Only the Channel Islands subspecies is special status, and it does not occur in the GAI.

Table E-2. Complete SAMNA Results for the Southern California Coast Ecoregion Section in the GAI, by Land Cover (acres)

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eucalyptus	Evergreen Orchard	Lacustrine	Mixed Chaparral	Montane Riparian	Pasture	Perennial Grassland	Valley Foothill Riparian	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
Beach spectaclepod ^a	<i>Dithyrea maritima</i>	ST	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
Big-leaved crownbeard	<i>Verbesina dissita</i>	FT, ST	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
Braunton's milk-vetch	<i>Astragalus brauntonii</i>	FE	2.11	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	2.51
California orcutt grass	<i>Orcuttia californica</i>	FE, SE	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.11
Coastal dunes milk-vetch ^a	<i>Astragalus tener</i> var. <i>titi</i>	FE, SE	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
Contra Costa goldfields ^a	<i>Lasthenia conjugens</i>	FE	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
Cuyamaca Lake downingia ^a	<i>Downingia concolor</i> var. <i>brevior</i>	SE	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
Cuyamaca larkspur ^a	<i>Delphinium hesperium</i> ssp. <i>cuyamacae</i>	FS, SR	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
Dehesa nolina ^a	<i>Nolina interrata</i>	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03
Dunn's mariposa lily ^a	<i>Calochortus dunnii</i>	FS, SR	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	1.61
Encinitas baccharis	<i>Baccharis vanessae</i>	FT, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03
Gander's ragwort ^a	<i>Packera ganderi</i>	FS, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03
Gaviota tarplant ^a	<i>Deinandra increscens</i> ssp. <i>Villosa</i>	FE, SE	1.18	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44
Laguna Beach dudleya	<i>Dudleya stolonifera</i>	FT, ST	1.18	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44
Lyon's pentachaeta ^a	<i>Pentachaeta lyonii</i>	FE, SE	1.18	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44
Mexican flannelbush ^a	<i>Fremontodendron mexicanum</i>	FE, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03
Mojave tarplant ^a	<i>Deinandra mohavensis</i>	FS, SE	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.03	0.02	0.00	0.00	0.00	0.17
Mt. Laguna aster ^a	<i>Dieteria asteroides</i> var. <i>lagunensis</i>	FS, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03
Munz's onion ^a	<i>Allium munzii</i>	FE, ST	2.11	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	2.51
Nevin's barberry ^a	<i>Berberis nevinii</i>	FE, SE	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.41
Orcutt's hazardia ^a	<i>Hazardia orcuttii</i>	ST	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
Orcutt's spineflower ^a	<i>Chorizanthe orcuttiana</i>	FE, SE	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
Otay Mesa mint ^a	<i>Pogogyne nudiuscula</i>	FE, SE	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
Otay tarplant ^a	<i>Deinandra conjugens</i>	FT, SE	2.11	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.49
Parish's meadowfoam ^a	<i>Limnanthes alba</i> ssp. <i>parishii</i>	FS, SE	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
Roderick's fritillary ^a	<i>Fritillaria roderickii</i>	SE	2.11	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.49

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eucalyptus	Evergreen Orchard	Lacustrine	Mixed Chaparral	Montane Riparian	Pasture	Perennial Grassland	Valley Foothill Riparian	Total
Salt marsh bird's-beak	<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	FE, SE, FS	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
San Diego ambrosia ^a	<i>Ambrosia pumila</i>	FE	2.11	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	2.51
San Diego button-celery	<i>Eryngium aristulatum</i> var. <i>parishii</i>	FE, SE	2.11	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.49
San Diego mesa mint ^a	<i>Pogogyne abramsii</i>	FE, SE	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
San Diego thorn-mint ^a	<i>Acanthomintha ilicifolia</i>	FT, SE	2.11	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	2.51
San Jacinto Valley crownscale ^a	<i>Atriplex coronata</i> var. <i>notatior</i>	FE	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
Santa Ana River woollystar ^a	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	FE, SE	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
Short-leaved dudleya ^a	<i>Dudleya brevifolia</i>	SE	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
Slender-horned spineflower ^a	<i>Dodecahema leptoceras</i>	FE, SE	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.41
Small-leaved rose ^a	<i>Rosa minutifolia</i>	SE	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.15
Spreading navarretia ^a	<i>Navarretia fossalis</i>	FT	2.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.11
Thread-leaved brodiaea	<i>Brodiaea filifolia</i>	FT, SE	2.11	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	2.51
Vail Lake ceanothus ^a	<i>Ceanothus ophiochilus</i>	FT, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03
Ventura marsh milk-vetch	<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	FE, SE	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
Willowy monardella ^a	<i>Monardella viminea</i>	FE, SE	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26
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
Riverside fairy shrimp	<i>Streptocephalus woottoni</i>	FE	0.43	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54
San Diego fairy shrimp	<i>Branchinecta sandiegonensis</i>	FE	0.24	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
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
Arroyo toad	<i>Anaxyrus californicus</i>	FE, SSC	0.00	0.00	0.00	0.00	0.05	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.12	0.27
California newt	<i>Taricha torosa</i>	SSC	0.46	0.00	0.06	0.38	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.12	1.12
California red-legged frog	<i>Rana draytonii</i>	FT, SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.00	1.22	0.03	0.02	0.00	0.06	0.12	4.14
Ensatina ^b	<i>Ensatina eschscholtzii</i>	FS	0.00	0.00	0.13	0.38	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.12	0.73
Southern California slender salamander ^c	<i>Batrachoseps major</i>	FE, SE	0.00	0.24	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29
Western spadefoot	<i>Spea hammondi</i>	FS, SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.07	1.22	0.03	0.00	0.00	0.06	0.00	4.07

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eucalyptus	Evergreen Orchard	Lacustrine	Mixed Chaparral	Montane Riparian	Pasture	Perennial Grassland	Valley Foothill Riparian	Total
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
Blainville's horned lizard	<i>Phrynosoma blainvillii</i>	FS, SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.06	0.12	2.89
California legless lizard	<i>Anniella pulchra</i>	SSC	0.00	0.00	0.13	0.38	0.05	0.07	0.00	0.00	0.03	0.00	0.00	0.06	0.12	0.83
California mountain kingsnake ^d	<i>Lampropeltis zonata</i>	None	0.24	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.42
Coachwhip ^e	<i>Coluber flagellum</i>	SSC	0.24	0.00	0.06	0.12	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.12	0.64
Common gartersnake	<i>Thamnophis sirtalis</i>	SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.07	1.22	0.03	0.02	0.02	0.06	0.12	4.23
Gophersnake ^f	<i>Pituophis catenifer</i>	None	2.11	0.00	0.13	0.38	0.05	0.07	0.07	0.00	0.03	0.02	0.02	0.06	0.12	3.05
Orange-throated whiptail	<i>Aspidoscelis hyperythra</i>	FS	0.00	0.00	0.13	0.38	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.54
Red diamond rattlesnake	<i>Crotalus ruber</i>	FS, SSC	1.94	0.05	0.13	0.38	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.12	2.72
Ring-necked snake	<i>Diadophis punctatus</i>	FS, SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.00	0.00	0.03	0.02	0.02	0.06	0.12	2.93
Striped racer ^g	<i>Coluber lateralis</i>	None	0.00	0.00	0.13	0.38	0.00	0.07	0.00	0.00	0.03	0.02	0.00	0.00	0.12	0.75
Two-striped gartersnake	<i>Thamnophis hammondi</i>	FS, SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.00	1.22	0.03	0.02	0.00	0.00	0.12	4.08
Western patch-nosed snake	<i>Salvadora hexalepis</i>	SSC	1.53	0.00	0.13	0.38	0.05	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.12	2.30
Western skink ^h	<i>Plestiodon skiltonianus</i>	FS	2.11	0.00	0.13	0.38	0.00	0.07	0.07	0.00	0.03	0.02	0.02	0.06	0.12	3.00
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
American white pelican ⁱ	<i>Pelecanus erythrorhynchos</i>	SSC	0.00	0.24	0.00	0.00	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.00	1.46
Ashy storm-petrel ^j	<i>Oceanodroma homochroa</i>	FS, SSC	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Bald eagle	<i>Haliaeetus leucocephalus</i>	FS, SE, SFP, SFS	2.11	0.24	0.13	0.38	0.00	0.07	0.00	1.22	0.03	0.02	0.00	0.06	0.12	4.37
Bell's sparrow ^k	<i>Artemisiospiza belli</i>	FT, SSC	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.41
Bewick's wren ^l	<i>Thryomanes bewickii</i>	SSC	0.00	0.00	0.13	0.38	0.05	0.07	0.00	0.00	0.03	0.02	0.00	0.00	0.12	0.80
Black skimmer	<i>Rynchops niger</i>	SSC	0.00	0.18	0.00	0.00	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.00	1.41
Black storm-petrel ^m	<i>Oceanodroma melania</i>	SSC	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Brown pelican	<i>Pelecanus occidentalis</i>	FS, SFP	0.00	0.05	0.00	0.00	0.00	0.00	0.00	1.11	0.00	0.00	0.00	0.00	0.00	1.16
Burrowing owl	<i>Athene cunicularia</i>	FS, SSC	2.11	0.24	0.13	0.38	0.05	0.07	0.00	0.00	0.03	0.00	0.02	0.06	0.12	3.19
Coastal California gnatcatcher	<i>Polioptila californica</i>	FT, SSC	0.63	0.00	0.06	0.35	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.06	0.12	1.31
California quail ⁿ	<i>Callipepla californica</i>	SSC	2.11	0.00	0.13	0.38	0.05	0.07	0.07	0.00	0.03	0.02	0.00	0.06	0.12	3.04
California towhee ^o	<i>Pipilo crissalis</i>	None	0.00	0.00	0.13	0.38	0.00	0.07	0.00	0.00	0.03	0.02	0.00	0.00	0.12	0.75
Common loon ^p	<i>Gavia immer</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11	0.00	0.00	0.00	0.00	0.00	1.11

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eucalyptus	Evergreen Orchard	Lacustrine	Mixed Chaparral	Montane Riparian	Pasture	Perennial Grassland	Valley Foothill Riparian	Total
Common yellowthroat ^q	<i>Geothlypis trichas</i>	SSC	2.11	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.02	0.00	0.06	0.12	2.37
Fork-tailed storm-petrel ^r	<i>Oceanodroma furcata</i>	FS, SSC	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Golden eagle	<i>Aquila chrysaetos</i>	FS, SFS, SFP	0.87	0.05	0.13	0.38	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.12	1.65
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC	1.94	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.01
Great blue heron ^s	<i>Ardea herodias</i>	SFS	2.11	0.00	0.13	0.38	0.00	0.07	0.00	1.22	0.00	0.02	0.00	0.06	0.12	4.11
Great egret ^t	<i>Ardea alba</i>	SFS	2.11	0.00	0.13	0.00	0.00	0.07	0.00	1.22	0.00	0.02	0.00	0.06	0.12	3.73
Hutton's vireo ^u	<i>Vireo huttoni</i>	SSC	0.00	0.00	0.13	0.12	0.00	0.00	0.00	0.00	0.03	0.02	0.00	0.00	0.12	0.42
Least bittern	<i>Ixobrychus exilis</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.00	1.22
Least tern	<i>Sternula antillarum</i>	FE, SE, SFP	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
Light-footed clapper rail	<i>Rallus longirostris levipes</i>	FE, SE, SFP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.12
Loggerhead shrike	<i>Lanius ludovicianus</i>	SE, SSC	2.11	0.24	0.13	0.38	0.05	0.07	0.00	0.00	0.03	0.02	0.00	0.06	0.12	3.20
Long-eared owl	<i>Asio otus</i>	SSC	0.87	0.00	0.13	0.00	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.12	1.22
Marsh wren	<i>Cistothorus palustris</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.12	0.14
Northern harrier	<i>Circus cyaneus</i>	SSC	2.11	0.24	0.13	0.38	0.05	0.07	0.00	1.22	0.03	0.02	0.00	0.06	0.12	4.42
Oregon vesper sparrow	<i>Pooecetes gramineus affinis</i>	SSC	0.87	0.00	0.13	0.00	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.00	1.10
Osprey ^v	<i>Pandion haliaetus</i>	SFS	2.11	0.24	0.13	0.00	0.05	0.07	0.00	1.22	0.03	0.02	0.00	0.06	0.12	4.04
Peregrine falcon ^w	<i>Falco peregrinus</i>	SFS, SFP	2.11	0.24	0.13	0.38	0.00	0.07	0.00	1.22	0.03	0.02	0.00	0.06	0.12	4.37
Purple martin	<i>Progne subis</i>	SSC	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
Redhead	<i>Aythya americana</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.12
Red-winged blackbird ^x	<i>Agelaius phoeniceus</i>	SSC	2.11	0.00	0.00	0.38	0.00	0.07	0.00	0.00	0.00	0.02	0.00	0.06	0.12	2.75
Rufous-crowned sparrow ^y	<i>Aimophila ruficeps</i>	SSC	2.11	0.00	0.00	0.38	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.06	0.12	2.76
San Diego cactus wren	<i>Campylorhynchus brunneicapillus sandiegensis</i>	FS, SSC	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.15
Savannah sparrow	<i>Passerculus sandwichensis</i>	SE, SSC	2.11	0.00	0.13	0.38	0.05	0.07	0.00	0.00	0.03	0.00	0.02	0.06	0.12	2.96
Short-eared owl	<i>Asio flammeus</i>	SSC	0.63	0.00	0.06	0.34	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.06	0.00	1.19
Snowy plover	<i>Charadrius nivosus</i>	FT, SSC	0.00	0.24	0.00	0.00	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.00	1.46
Song sparrow ^z	<i>Melospiza melodia</i>	SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.00	1.22	0.03	0.02	0.00	0.06	0.12	4.14
Spotted towhee ^{aa}	<i>Pipilo maculatus</i>	SSC	0.00	0.00	0.13	0.38	0.05	0.07	0.00	0.00	0.03	0.02	0.00	0.00	0.12	0.80
Tricolored blackbird	<i>Agelaius tricolor</i>	FS, ST, SSC	2.11	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.06	0.12	2.35
White-tailed kite	<i>Elanus leucurus</i>	FS, SFP	2.11	0.24	0.13	0.38	0.00	0.07	0.07	0.00	0.03	0.00	0.00	0.06	0.12	3.20
Yellow warbler	<i>Setophaga petechia</i>	SSC	0.00	0.00	0.13	0.38	0.05	0.07	0.00	0.00	0.03	0.02	0.00	0.00	0.12	0.80

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eucalyptus	Evergreen Orchard	Lacustrine	Mixed Chaparral	Montane Riparian	Pasture	Perennial Grassland	Valley Foothill Riparian	Total
Yellow-breasted chat	<i>Icteria virens</i>	SSC	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.12	0.52
Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>	SSC	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
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
American badger	<i>Taxidea taxus</i>	SSC	2.11	0.24	0.13	0.38	0.05	0.07	0.07	0.00	0.03	0.02	0.02	0.06	0.12	3.29
Big-eared woodrat	<i>Neotoma macrotis</i>	FS, SSC	0.00	0.00	0.13	0.38	0.00	0.07	0.00	0.00	0.03	0.02	0.00	0.06	0.12	0.81
Bighorn sheep ^{bb}	<i>Ovis canadensis</i>	FE, FS, SE, ST, SFP	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	0.05
Black-tailed jackrabbit	<i>Lepus californicus</i>	None	2.11	0.00	0.13	0.38	0.05	0.07	0.07	0.00	0.03	0.02	0.02	0.06	0.12	3.05
Broad-footed mole ^{cc}	<i>Scapanus latimanus</i>	SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.07	0.00	0.00	0.02	0.02	0.06	0.12	2.98
Brush rabbit	<i>Sylvilagus bachmani</i>	FE, SE	2.11	0.00	0.13	0.38	0.00	0.07	0.07	0.00	0.03	0.02	0.02	0.06	0.12	3.00
California pocket mouse	<i>Chaetodipus californicus</i>	SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.00	2.72
California sea-lion	<i>Zalophus californianus</i>	None	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
California vole	<i>Microtus californicus</i>	FE, FS, SE, SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.07	0.00	0.03	0.02	0.02	0.06	0.12	3.00
Deer mouse ^{dd}	<i>Peromyscus maniculatus</i>	SSC	2.11	0.24	0.13	0.38	0.05	0.07	0.07	0.00	0.03	0.02	0.02	0.06	0.12	3.29
Desert woodrat	<i>Neotoma lepida</i>	SSC	0.00	0.00	0.00	0.38	0.05	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.46
Fringed myotis	<i>Myotis thysanodes</i>	FS	2.11	0.24	0.13	0.38	0.05	0.07	0.00	1.22	0.03	0.02	0.02	0.06	0.12	4.44
Guadalupe fur-seal	<i>Arctocephalus townsendi</i>	FT, ST, SFP	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Harbor seal	<i>Phoca vitulina</i>	None	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Little pocket mouse	<i>Perognathus longimembris</i>	FS, SSC	0.00	0.00	0.13	0.38	0.05	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.59
Long-eared myotis	<i>Myotis evotis</i>	FS	0.00	0.24	0.13	0.38	0.05	0.07	0.07	1.22	0.03	0.02	0.02	0.06	0.12	2.41
Mountain lion ^{ee}	<i>Puma concolor</i>	SSC	0.87	0.00	0.13	0.38	0.00	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.12	1.60
Northern elephant seal	<i>Mirounga angustirostris</i>	None	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Ornate shrew	<i>Sorex ornatus</i>	FE, SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.00	0.00	0.03	0.02	0.00	0.06	0.12	2.91
Pallid bat	<i>Antrozous pallidus</i>	FS, SSC	2.11	0.24	0.13	0.38	0.05	0.07	0.07	0.00	0.03	0.02	0.02	0.06	0.12	3.29
Pocketed free-tailed bat	<i>Nyctinomops femorosaccus</i>	SSC	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Red fox ^{ff}	<i>Vulpes vulpes</i>	FE, FS, ST	0.12	0.18	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.06	0.00	0.37
Ringtail	<i>Bassariscus astutus</i>	SFP	2.11	0.24	0.13	0.38	0.05	0.07	0.00	0.00	0.03	0.02	0.02	0.06	0.12	3.22
San Diego pocket mouse	<i>Chaetodipus fallax</i>	SSC	0.87	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	1.28
Small-footed myotis	<i>Myotis ciliolabrum</i>	FS	2.11	0.24	0.13	0.38	0.00	0.07	0.07	1.22	0.03	0.02	0.02	0.06	0.12	4.46
Southern grasshopper mouse	<i>Onychomys torridus</i>	FS, SSC	1.99	0.00	0.00	0.38	0.05	0.00	0.00	0.00	0.03	0.02	0.00	0.00	0.12	2.58

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eucalyptus	Evergreen Orchard	Lacustrine	Mixed Chaparral	Montane Riparian	Pasture	Perennial Grassland	Valley Foothill Riparian	Total
Spotted bat	<i>Euderma maculatum</i>	FS, SSC	0.78	0.00	0.07	0.00	0.05	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.92
Stephens' kangaroo rat	<i>Dipodomys stephensi</i>	FT, ST	0.87	0.00	0.00	0.12	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	FS, SSC	2.11	0.24	0.13	0.38	0.05	0.07	0.07	0.00	0.03	0.02	0.02	0.06	0.12	3.29
Western mastiff bat	<i>Eumops perotis</i>	FS, SSC	2.11	0.24	0.13	0.38	0.05	0.07	0.07	0.00	0.03	0.02	0.02	0.06	0.12	3.29
Western red bat	<i>Lasiurus blossevillii</i>	SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.00	1.22	0.03	0.02	0.02	0.06	0.12	4.15
Western spotted skunk ⁹⁹	<i>Spilogale gracilis</i>	SSC	2.11	0.00	0.13	0.38	0.00	0.07	0.07	0.00	0.03	0.02	0.02	0.06	0.12	3.00
Western yellow bat	<i>Lasiurus xanthinus</i>	SSC	0.00	0.00	0.13	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.30
Yuma myotis	<i>Myotis yumanensis</i>	FS	2.11	0.00	0.13	0.38	0.05	0.07	0.07	1.22	0.03	0.02	0.02	0.06	0.12	4.28
Not applicable	Not applicable	Total	2.11	0.24	0.13	0.38	0.05	0.07	0.07	1.22	0.03	0.02	0.02	0.06	0.12	4.51

Notes: 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 This plant species does not occur in the Southern California Coast Ecoregion Section in the GAI.

^b Ensatina: Only the yellow-blotched and large-blotched subspecies are special status, and neither occurs in the Southern California Coast Ecoregion Section (the large-blotched subspecies occurs in the GAI in the Southern California Mountains and Valleys Ecoregion Section).

^c Southern California slender salamander: Only the desert subspecies is special status, and it does not occur in the GAI.

^d California mountain kingsnake: Following recent taxonomic rearrangements, there are currently no species of kingsnakes that are considered special status.

^e Coachwhip: Only the San Joaquin subspecies is special status, and it does not occur in the GAI.

^f Gophersnake: Only the Santa Cruz Island subspecies appears on the CDFW Special Animals List, and it is listed only as a CDFW Watch List Species.

^g Striped racer: Only the Alameda subspecies is special status, and it does not occur in the GAI.

^h Western skink: Only the Coronado subspecies (*Plestiodon skiltonianus interparietalis*) is special status, and it does not occur in the GAI.

ⁱ American white pelican: This species is considered special status only in the portion of its range where it nests, and it does not nest in the GAI.

^j Ashy storm-petrel: This species nests offshore only and would not be subject to impacts from transportation projects.

^k Bell's sparrow: Only the San Clemente subspecies is special status, and it does not occur in the GAI.

^l Bewick's wren: Only the San Clemente subspecies is special status, and it does not occur in the GAI.

^m Black storm-petrel: This species nests offshore only and would not be subject to impacts from transportation projects.

ⁿ California quail: Only the Catalina subspecies is special status, and it does not occur in the GAI.

^o California towhee: Only the Inyo subspecies is special status, and it does not occur in the GAI.

^p Common loon: This species is considered special status only in the portion of its range where it nests, and it does not nest in the GAI.

^q Common yellowthroat: Only the San Francisco/saltmarsh subspecies is special status, and it does not occur in the GAI.

^r Fork-tailed storm-petrel: Only nesting colonies and only nests on offshore islands are considered special status. This species does not nest in the GAI.

^s Great blue heron: This species appears on the CDFW Special Animals List but is listed only as State Fire Sensitive.

^t Great egret: This species appears on the CDFW Special Animals List but is listed only as State Fire Sensitive.

^u Hutton's vireo: Only the Catalina subspecies is special status, and it does not occur in the GAI.

^v Osprey: This species appears on the CDFW Special Animals List but is listed only as State Fire Sensitive.

^w Peregrine falcon: This species appears on the CDFW Special Animals List and is listed as State Fire Sensitive and State Fully Protected.

^x Red-winged blackbird: Only the Kern subspecies is special status, and it does not occur in the GAI.

^y Rufous-crowned sparrow: Only the Santa Cruz Island subspecies is special status, and it does not occur in the GAI.

^z Song sparrow: There are five subspecies that are special status, none of which occurs in the GAI.

^{aa} Spotted towhee: Only the San Clemente subspecies is special status, and it does not occur in the GAI.

^{bb} Bighorn sheep: This species does not occur in the Southern California Coast Ecoregion Section (occurs in the GAI in the Mojave Desert and Southern California Mountains and Valleys Ecoregion Sections).

^{cc} Broad-footed mole: Only the Alameda Island subspecies is special status, and it does not occur in the GAI.

^{dd} Deer mouse: Only the Anacapa Island and San Clemente subspecies are special status, and neither occurs in the GAI.

^{ee} Mountain lion: Only the Yuma subspecies is special status, and it does not occur in the GAI.

^{ff} Red fox: Only the Sierra Nevada subspecies is special status, and it does not occur in the GAI.

⁹⁹ Western spotted skunk: Only the Channel Islands subspecies is special status, and it does not occur in the GAI.

Table E-3. Complete SAMNA Results for the Southern California Mountains and Valleys Ecoregion Section in the GAI, by Land Cover (acres)

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eastside Pine	Jeffrey Pine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood- Conifer	Montane Riparian	Pinyon- Juniper	Ponderosa Pine	Sagebrush	Sierran Mixed Conifer	Valley Foothill Riparian	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	See below
Ash-gray paintbrush	<i>Castilleja cinerea</i>	FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.15	0.00	0.00	0.00	0.00	0.40
Baja California birdbush ^a	<i>Ornithostaphylos oppositifolia</i>	SE	0.00	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
Beach spectaclepod ^a	<i>Dithyrea maritima</i>	ST	0.00	0.00	0.00	0.28	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	0.28
Big Bear Valley sandwort	<i>Eremogone ursina</i>	FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.15
Big-leaved crownbeard ^a	<i>Verbesina dissita</i>	FT, ST	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
Braunton's milk-vetch	<i>Astragalus brauntonii</i>	FE	1.06	0.00	0.00	1.07	0.00	0.00	0.00	2.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.79
California orcutt grass ^a	<i>Orcuttia californica</i>	FE, SE	1.06	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	0.00	1.06
Coastal dunes milk-vetch ^a	<i>Astragalus tener</i> var. <i>titi</i>	FE, SE	0.00	0.00	0.00	0.28	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	0.28
Contra Costa goldfields ^a	<i>Lasthenia conjugens</i>	FE	0.75	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	0.00	0.75
Cushenbury buckwheat	<i>Eriogonum ovalifolium</i> var. <i>vineum</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	0.15	0.00	0.00	0.00	0.00	0.15
Cushenbury milk-vetch ^a	<i>Astragalus albens</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	0.15	0.00	0.00	0.00	0.00	0.15
Cushenbury oxytheca ^a	<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</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	0.15	0.00	0.00	0.00	0.00	0.15
Cuyamaca Lake downingia ^a	<i>Downingia concolor</i> var. <i>brevior</i>	SE	0.70	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	0.00	0.70
Cuyamaca larkspur ^a	<i>Delphinium hesperium</i> ssp. <i>cuyamacae</i>	FS, SR	0.70	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	0.00	0.70
Dehesa nolina ^a	<i>Nolina interrata</i>	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
Del Mar manzanita ^a	<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	FE	0.00	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
Dunn's mariposa lily ^a	<i>Calochortus dunnii</i>	FS, SR	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.69
Encinitas baccharis	<i>Baccharis vanessae</i>	FT, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.15
Gander's ragwort ^a	<i>Packera ganderi</i>	FS, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eastside Pine	Jeffrey Pine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood- Conifer	Montane Riparian	Pinyon- Juniper	Ponderosa Pine	Sagebrush	Sierran Mixed Conifer	Valley Foothill Riparian	Total
Gaviota tarplant ^a	<i>Deinandra increscens</i> ssp. <i>Villosa</i>	FE, SE	0.75	0.00	0.00	0.28	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	1.03
Laguna Beach dudleya ^a	<i>Dudleya stolonifera</i>	FT, ST	0.75	0.00	0.00	0.28	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	1.20
Lyon's pentachaeta ^a	<i>Pentachaeta lyonii</i>	FE, SE	0.75	0.00	0.00	0.28	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	1.20
Mexican flannelbush ^a	<i>Fremontodendron mexicanum</i>	FE, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
Mojave tarplant ^a	<i>Deinandra mohavensis</i>	FS, SE	0.00	0.00	0.00	0.49	0.00	0.00	0.00	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92
Mt. Gleason paintbrush	<i>Castilleja gleasoni</i>	FS, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.51	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	1.71
Mt. Laguna aster ^a	<i>Dieteria asteroides</i> var. <i>lagunensis</i>	FS, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
Munz's onion	<i>Allium munzii</i>	FE, ST	1.06	0.00	0.00	0.73	0.00	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.94
Nevin's barberry	<i>Berberis nevinii</i>	FE, SE	0.00	0.00	0.00	1.07	0.00	0.00	0.00	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.18
Orcutt's hazardia ^a	<i>Hazardia orcuttii</i>	ST	0.00	0.00	0.00	0.28	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	0.45
Orcutt's spineflower	<i>Chorizanthe orcuttiana</i>	FE, SE	0.00	0.00	0.00	0.28	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	0.45
Otay Mesa mint ^a	<i>Pogogyne nudiuscula</i>	FE, SE	0.75	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	0.00	0.75
Otay tarplant ^a	<i>Deinandra conjugens</i>	FT, SE	1.06	0.00	0.00	0.73	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	1.79
Parish's checkerbloom	<i>Sidalcea hickmanii</i> ssp. <i>parishii</i>	FS, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.17	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.87
Parish's daisy ^a	<i>Erigeron parishii</i>	FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.15
Parish's meadowfoam ^a	<i>Limnanthes alba</i> ssp. <i>parishii</i>	FS, SE	0.70	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	0.00	0.70
Roderick's fritillary ^a	<i>Fritillaria roderickii</i>	SE	1.10	0.00	0.00	1.07	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	2.18
Salt marsh bird's-beak	<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	FE, SE, FS	0.00	0.00	0.00	0.28	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	0.28
San Bernardino Mountains bladderpod	<i>Physaria kingii</i> ssp. <i>bernardina</i>	FE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.61
San Diego ambrosia	<i>Ambrosia pumila</i>	FE	1.06	0.00	0.00	0.73	0.00	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.94
San Diego button-celery ^a	<i>Eryngium aristulatum</i> var. <i>parishii</i>	FE, SE	1.06	0.00	0.00	0.73	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	1.79

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eastside Pine	Jeffrey Pine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood- Conifer	Montane Riparian	Pinyon- Juniper	Ponderosa Pine	Sagebrush	Sierran Mixed Conifer	Valley Foothill Riparian	Total
San Diego mesa mint ^a	<i>Pogogyne abramsii</i>	FE, SE	0.75	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	0.00	0.75
San Diego thorn-mint ^a	<i>Acanthomintha ilicifolia</i>	FT, SE	1.06	0.00	0.00	0.73	0.00	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.94
San Jacinto Valley crownscale	<i>Atriplex coronata</i> var. <i>notatior</i>	FE	0.75	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	0.00	0.75
Santa Ana River woollystar	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	FE, SE	0.00	0.00	0.00	0.28	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	0.45
Short-leaved dudleya ^a	<i>Dudleya brevifolia</i>	SE	0.00	0.00	0.00	0.28	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	0.45
Slender-horned spineflower	<i>Dodecahema leptoceras</i>	FE, SE	0.00	0.00	0.00	1.07	0.00	0.00	0.00	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.18
Small-leaved rose ^a	<i>Rosa minutifolia</i>	SE	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
Southern mountain buckwheat	<i>Eriogonum kennedyi</i> var. <i>austromontanum</i>	FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
Spreading navarretia ^a	<i>Navarretia fossalis</i>	FT	1.10	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	0.00	1.10
Thread-leaved brodiaea	<i>Brodiaea filifolia</i>	FT, SE	1.10	0.00	0.00	0.73	0.00	0.00	0.00	1.60	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.61
Vail Lake ceanothus ^a	<i>Ceanothus ophiochilus</i>	FT, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98
Ventura marsh milk-vetch ^a	<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	FE, SE	0.00	0.00	0.00	0.28	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	0.28
Willowy monardella ^a	<i>Monardella viminea</i>	FE, SE	0.00	0.00	0.00	0.28	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	0.45
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	See below
Delhi sands flower-loving fly	<i>Rhaphiomidas terminatus abdominalis</i>	FE	0.00	0.16	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	0.16
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	See below
Arroyo toad	<i>Anaxyrus californicus</i>	FE, SSC	0.00	0.00	0.00	0.00	1.93	0.00	0.00	2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	4.47
California newt	<i>Taricha torosa</i>	SSC	0.36	0.00	2.74	1.07	0.00	0.00	0.00	2.52	0.00	0.00	0.20	0.03	0.00	0.00	0.00	0.13	0.00	7.04
California red-legged frog	<i>Rana draytonii</i>	FT, SSC	1.06	0.00	3.96	1.07	0.00	0.00	0.00	3.11	0.00	0.95	0.38	0.03	0.00	0.10	0.00	0.00	0.07	10.73
Ensatina	<i>Ensatina eschscholtzii</i>	FS	0.00	0.00	3.96	1.02	0.00	0.00	0.00	3.02	0.10	0.97	0.44	0.03	0.00	0.10	0.00	1.04	0.07	10.75

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eastside Pine	Jeffrey Pine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood- Conifer	Montane Riparian	Pinyon- Juniper	Ponderosa Pine	Sagebrush	Sierran Mixed Conifer	Valley Foothill Riparian	Total
Foothill yellow-legged frog	<i>Rana boylei</i>	FCE, FCT, FS, SE, ST, SSC	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.62	0.08	0.70	0.20	0.03	0.00	0.00	0.00	0.13	0.00	1.81
San Gabriel slender salamander	<i>Batrachoseps gabrieli</i>	FS	0.00	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.20	0.03	0.00	0.00	0.00	0.13	0.00	2.33
Southern California slender salamander	<i>Batrachoseps major</i>	FE, SE	0.00	1.14	0.00	0.00	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.33
Southern mountain yellow- legged frog	<i>Rana muscosa</i>	FE, FS, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.26	0.03	0.00	0.03	0.00	0.60	0.00	1.78
Western spadefoot	<i>Spea hammondi</i>	FS, SSC	1.06	0.00	1.28	0.73	0.00	0.00	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.02
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	See below
Blainville's horned lizard	<i>Phrynosoma blainvillii</i>	FS, SSC	1.10	0.00	3.96	1.07	0.00	0.00	0.00	3.11	0.00	0.00	0.44	0.00	0.00	0.10	0.00	0.00	0.07	9.86
California legless lizard	<i>Anniella pulchra</i>	SSC	0.00	0.00	3.96	1.07	1.93	0.00	0.00	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	10.14
California mountain kingsnake ^b	<i>Lampropeltis zonata</i>	None	0.04	0.00	2.74	0.00	0.00	0.00	0.46	2.33	0.10	0.97	0.44	0.03	0.00	0.10	0.00	1.04	0.00	8.25
California mountain kingsnake (San Bernardino population) ^c	<i>Lampropeltis zonata parviruba</i>	None	0.04	0.00	0.06	0.00	0.00	0.00	0.46	2.00	0.10	0.97	0.44	0.03	0.00	0.10	0.00	1.04	0.00	5.25
California mountain kingsnake (San Diego population) ^d	<i>Lampropeltis zonata pulchra</i>	FS	0.00	0.00	2.68	0.00	0.00	0.00	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.61
Coachwhip ^e	<i>Coluber flagellum</i>	SSC	1.10	0.00	3.96	1.07	1.93	0.00	0.00	3.11	0.00	0.00	0.00	0.00	0.15	0.00	0.08	0.00	0.07	11.48
Common gartersnake	<i>Thamnophis sirtalis</i>	SSC	1.06	0.00	3.96	1.02	0.00	0.00	0.00	1.95	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.07	8.16
Common sagebrush lizard ^f	<i>Sceloporus graciosus</i>	FS	0.00	0.00	0.00	0.00	0.00	0.28	0.46	2.04	0.10	0.97	0.44	0.00	0.15	0.10	0.08	1.04	0.00	5.67
Desert night lizard ^g	<i>Xantusia vigilis</i>	FS, SSC	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.74
Gophersnake ^h	<i>Pituophis catenifer</i>	None	1.10	0.00	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	14.90
Orange-throated whiptail	<i>Aspidoscelis hyperythra</i>	FS	0.00	0.00	2.68	0.52	0.00	0.00	0.00	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.21
Red diamond rattlesnake	<i>Crotalus ruber</i>	FS, SSC	0.76	0.14	3.90	0.56	0.00	0.00	0.00	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	6.51
Ring-necked snake	<i>Diadophis punctatus</i>	FS, SSC	1.06	0.00	3.96	1.07	0.00	0.00	0.00	2.70	0.02	0.85	0.17	0.03	0.00	0.07	0.00	0.19	0.07	10.19
Striped racer ⁱ	<i>Coluber lateralis</i>	None	0.00	0.00	3.96	1.07	0.00	0.00	0.00	3.11	0.10	0.97	0.44	0.03	0.00	0.10	0.00	1.04	0.07	10.89

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eastside Pine	Jeffrey Pine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood- Conifer	Montane Riparian	Pinyon- Juniper	Ponderosa Pine	Sagebrush	Sierran Mixed Conifer	Valley Foothill Riparian	Total
Two-striped gartersnake	<i>Thamnophis hammondi</i>	FS, SSC	1.10	0.00	3.96	1.07	0.00	0.00	0.46	3.11	0.10	0.97	0.44	0.03	0.00	0.10	0.00	0.00	0.07	11.43
Western patch-nosed snake	<i>Salvadora hexalepis</i>	SSC	1.10	1.61	3.96	1.07	1.93	0.00	0.00	3.11	0.10	0.00	0.00	0.00	0.15	0.00	0.08	0.00	0.07	13.18
Western skink ^j	<i>Plestiodon skiltonianus</i>	FS	1.10	0.00	3.96	1.07	0.00	0.00	0.00	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.00	1.04	0.07	12.15
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	See below
American white pelican ^k	<i>Pelecanus erythrorhynchos</i>	SSC	0.00	1.61	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	1.61
Bald eagle	<i>Haliaeetus leucocephalus</i>	FS, SE, SFP, SFS	1.10	1.61	3.96	1.07	0.00	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	14.59
Bell's sparrow ^l	<i>Artemisiospiza belli</i>	FT, SSC	0.00	0.00	0.00	1.07	0.00	0.26	0.00	3.06	0.08	0.00	0.00	0.00	0.15	0.00	0.06	0.00	0.00	4.68
Bewick's wren ^m	<i>Thryomanes bewickii</i>	SSC	0.00	0.00	3.96	1.07	1.93	0.00	0.00	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.00	0.00	0.07	11.94
Black swift	<i>Cypseloides niger</i>	SSC	0.00	0.83	0.06	0.00	0.00	0.00	0.00	1.63	0.08	0.80	0.24	0.03	0.00	0.03	0.00	0.62	0.00	4.32
Burrowing owl	<i>Athene cunicularia</i>	FS, SSC	0.84	1.14	0.00	0.52	1.19	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.78
Cactus wren	<i>Campylorhynchus brunneicapillus</i>	FS, SSC	0.00	0.00	0.00	1.07	1.93	0.00	0.00	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.11
Coastal California gnatcatcher	<i>Polioptila californica</i>	FT, SSC	0.06	0.00	2.68	0.05	0.00	0.00	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.72
California quail ⁿ	<i>Callipepla californica</i>	SSC	1.10	0.00	3.96	1.07	1.93	0.28	0.00	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	14.44
California spotted owl	<i>Strix occidentalis occidentalis</i>	FS, SSC	0.00	0.00	0.06	0.00	0.00	0.28	0.46	0.00	0.00	0.97	0.44	0.03	0.00	0.10	0.00	1.04	0.00	3.39
California towhee ^o	<i>Pipilo crissalis</i>	None	0.00	0.00	3.96	1.07	0.00	0.00	0.00	3.11	0.10	0.97	0.44	0.03	0.00	0.10	0.00	0.00	0.07	9.86
Common yellowthroat ^p	<i>Geothlypis trichas</i>	SSC	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.07	1.20
Golden eagle	<i>Aquila chrysaetos</i>	FS, SFS, SFP	1.10	1.61	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	16.51
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC	0.75	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	0.00	0.75
Great blue heron ^q	<i>Ardea herodias</i>	SFS	1.10	0.00	3.96	1.07	0.00	0.28	0.00	0.00	0.00	0.97	0.44	0.03	0.15	0.10	0.00	1.04	0.07	9.22
Great egret ^r	<i>Ardea alba</i>	SFS	1.06	0.00	3.90	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	0.07	5.04
Hutton's vireo ^s	<i>Vireo huttoni</i>	SSC	0.00	0.00	3.96	1.05	0.00	0.00	0.00	2.24	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.07	7.41

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eastside Pine	Jeffrey Pine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood- Conifer	Montane Riparian	Pinyon- Juniper	Ponderosa Pine	Sagebrush	Sierran Mixed Conifer	Valley Foothill Riparian	Total
Least Bell's vireo	<i>Vireo bellii pusillus</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	0.00	0.00	0.00	0.07	0.07
Loggerhead shrike	<i>Lanius ludovicianus</i>	SE, SSC	1.10	1.61	3.96	1.07	1.93	0.28	0.46	3.11	0.00	0.97	0.44	0.03	0.15	0.10	0.08	0.00	0.07	15.37
Long-eared owl	<i>Asio otus</i>	SSC	1.10	0.00	3.96	0.00	0.00	0.28	0.00	3.11	0.10	0.97	0.44	0.03	0.00	0.10	0.08	1.04	0.07	11.29
Marsh wren	<i>Cistothorus palustris</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.07	0.10
Mountain plover	<i>Charadrius montanus</i>	FS, SSC	0.29	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	0.00	0.29
Northern goshawk	<i>Accipiter gentilis</i>	FS, SSC, SFS	0.00	0.00	0.00	0.00	0.00	0.28	0.46	0.88	0.10	0.87	0.44	0.03	0.15	0.10	0.08	1.04	0.00	4.44
Northern harrier	<i>Circus cyaneus</i>	SSC	1.10	1.22	3.96	1.02	1.19	0.28	0.46	2.49	0.02	0.27	0.25	0.00	0.15	0.10	0.08	0.91	0.07	13.58
Olive-sided flycatcher	<i>Contopus cooperi</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.28	0.46	2.33	0.00	0.97	0.44	0.03	0.00	0.10	0.00	1.04	0.00	5.66
Oregon vesper sparrow	<i>Poocetes gramineus affinis</i>	SSC	1.06	0.00	3.90	0.00	0.00	0.00	0.00	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.03
Osprey ^t	<i>Pandion haliaetus</i>	SFS	1.06	1.53	3.96	0.00	1.93	0.00	0.00	2.66	0.08	0.80	0.20	0.03	0.00	0.00	0.00	0.13	0.07	12.44
Peregrine falcon ^u	<i>Falco peregrinus</i>	SFS, SFP	1.06	1.53	3.96	1.07	0.00	0.00	0.00	2.66	0.08	0.80	0.20	0.03	0.00	0.00	0.00	0.13	0.07	11.59
Purple martin	<i>Progne subis</i>	SSC	0.46	0.00	3.96	0.00	0.00	0.00	0.00	0.00	0.00	0.95	0.39	0.03	0.00	0.10	0.00	1.04	0.07	7.00
Red-winged blackbird ^v	<i>Agelaius phoeniceus</i>	SSC	1.10	0.00	0.00	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.07	2.28
Rufous-crowned sparrow ^w	<i>Aimophila ruficeps</i>	SSC	1.06	0.00	0.00	1.02	0.00	0.00	0.00	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	4.19
Savannah sparrow ^x	<i>Passerculus sandwichensis</i>	SE, SSC	1.10	0.00	3.96	1.07	1.93	0.00	0.00	3.11	0.00	0.00	0.00	0.00	0.15	0.00	0.08	0.00	0.07	11.48
Song sparrow ^y	<i>Melospiza melodia</i>	SSC	1.10	0.00	3.96	1.07	0.00	0.28	0.46	3.11	0.00	0.97	0.44	0.03	0.15	0.10	0.00	1.04	0.07	12.80
Spotted towhee ^z	<i>Pipilo maculatus</i>	SSC	0.00	0.00	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	13.80
Tricolored blackbird	<i>Agelaius tricolor</i>	FS, ST, SSC	0.75	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	0.07	0.82
White-tailed kite	<i>Elanus leucurus</i>	FS, SFP	1.06	1.14	3.90	0.56	0.00	0.00	0.00	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	7.81
Yellow warbler	<i>Setophaga petechia</i>	SSC	0.00	0.00	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.00	0.10	0.00	1.04	0.07	13.57
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	FT, FS, 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	0.00	0.00	0.00	0.07	0.07
Yellow-breasted chat	<i>Icteria virens</i>	SSC	0.00	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.63
Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>	SSC	0.34	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	0.00	0.34

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eastside Pine	Jeffrey Pine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood- Conifer	Montane Riparian	Pinyon- Juniper	Ponderosa Pine	Sagebrush	Sierran Mixed Conifer	Valley Foothill Riparian	Total
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	See below
American badger	<i>Taxidea taxus</i>	SSC	1.10	1.61	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	16.51
Big-eared woodrat	<i>Neotoma macrotis</i>	FS, SSC	0.00	0.00	3.96	1.07	0.00	0.00	0.00	3.11	0.10	0.97	0.44	0.03	0.00	0.10	0.08	1.04	0.07	10.97
Bighorn sheep	<i>Ovis canadensis</i>	FE, FS, SE, ST, SFP	0.00	0.00	0.00	0.00	1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.85
Black-tailed jackrabbit ^{aa}	<i>Lepus californicus</i>	None	1.06	0.00	3.96	1.07	1.93	0.02	0.00	2.72	0.10	0.87	0.23	0.03	0.00	0.00	0.00	0.27	0.07	12.35
Broad-footed mole ^{bb}	<i>Scapanus latimanus</i>	SSC	1.10	0.00	3.96	1.07	0.00	0.28	0.46	0.00	0.00	0.97	0.44	0.03	0.00	0.10	0.00	1.04	0.07	9.53
Brush rabbit ^{cc}	<i>Sylvilagus bachmani</i>	FE, SE	1.06	0.00	3.96	1.02	0.00	0.00	0.00	2.10	0.00	0.15	0.04	0.00	0.00	0.00	0.00	0.00	0.07	8.41
California pocket mouse	<i>Chaetodipus californicus</i>	SSC	1.10	0.00	3.96	1.07	0.00	0.00	0.00	3.11	0.10	0.97	0.00	0.00	0.00	0.00	0.08	0.00	0.00	10.39
California vole ^{dd}	<i>Microtus californicus</i>	FE, FS, SE, SSC	1.10	0.00	3.96	1.07	0.00	0.28	0.00	3.11	0.10	0.97	0.44	0.03	0.00	0.10	0.08	1.04	0.07	12.36
Deer mouse ^{ee}	<i>Peromyscus maniculatus</i>	SSC	1.10	1.61	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	16.51
Desert woodrat	<i>Neotoma lepida</i>	SSC	0.00	0.00	0.00	1.07	1.93	0.00	0.00	3.11	0.10	0.97	0.44	0.00	0.15	0.00	0.08	0.00	0.00	7.86
Fringed myotis	<i>Myotis thysanodes</i>	FS	1.10	1.61	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	16.51
Little pocket mouse	<i>Perognathus longimembris</i>	FS, SSC	0.00	0.00	1.28	0.55	1.19	0.00	0.00	1.17	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.22
Lodgepole chipmunk	<i>Tamias speciosus</i>	None	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.91	0.00	1.40
Long-eared myotis	<i>Myotis evotis</i>	FS	0.00	1.61	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	15.41
Merriam's kangaroo rat	<i>Dipodomys merriami</i>	FE, SCE, SSC	0.24	0.00	0.00	0.05	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48
Mountain lion ^{ff}	<i>Puma concolor</i>	SSC	1.10	0.00	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	14.90
Ornate shrew ^{gg}	<i>Sorex ornatus</i>	FE, SSC	1.10	0.00	3.96	1.07	0.00	0.00	0.00	3.11	0.10	0.00	0.44	0.03	0.00	0.10	0.00	1.04	0.07	11.03
Pallid bat	<i>Antrozous pallidus</i>	FS, SSC	1.10	1.61	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	16.51
Ringtail	<i>Bassariscus astutus</i>	SFP	1.10	1.61	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	16.51
San Bernardino flying squirrel	<i>Glaucomys sabrinus californicus</i>	FS, SSC	0.00	0.00	0.00	0.00	0.00	0.28	0.46	0.00	0.00	0.10	0.22	0.00	0.00	0.03	0.00	0.76	0.00	1.86

Common Name	Scientific Name	Status	Annual Grassland	Barren	Coastal Oak Woodland	Coastal Scrub	Desert Wash	Eastside Pine	Jeffrey Pine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood- Conifer	Montane Riparian	Pinyon- Juniper	Ponderosa Pine	Sagebrush	Sierran Mixed Conifer	Valley Foothill Riparian	Total
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	FE, SCE, SSC	0.24	0.00	0.00	0.05	1.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48
San Diego pocket mouse	<i>Chaetodipus fallax</i>	SSC	1.06	0.00	0.00	0.56	1.19	0.00	0.00	1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.95
Small-footed myotis	<i>Myotis ciliolabrum</i>	FS	1.10	1.61	3.96	1.07	0.00	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	14.59
Southern grasshopper mouse	<i>Onychomys torridus</i>	FS, SSC	1.10	0.00	0.00	1.07	1.93	0.00	0.00	3.11	0.00	0.00	0.00	0.03	0.15	0.00	0.08	0.00	0.07	7.55
Spotted bat	<i>Euderma maculatum</i>	FS, SSC	1.10	0.00	3.96	1.07	1.93	0.28	0.46	0.00	0.10	0.00	0.44	0.03	0.15	0.10	0.08	1.04	0.07	10.82
Stephens' kangaroo rat	<i>Dipodomys stephensi</i>	FT, ST	1.06	0.00	0.00	0.56	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	1.63
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	FS, SSC	1.10	1.61	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	16.51
Western mastiff bat	<i>Eumops perotis</i>	FS, SSC	1.10	1.61	3.96	1.07	1.93	0.00	0.00	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.00	0.00	0.07	14.65
Western red bat	<i>Lasiurus blossevillei</i>	SSC	1.06	0.00	3.90	0.73	0.00	0.00	0.00	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	7.11
Western spotted skunk ^{hh}	<i>Spilogale gracilis</i>	SSC	1.10	0.00	3.96	1.07	0.00	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	12.98
Western yellow bat	<i>Lasiurus xanthinus</i>	SSC	0.00	0.00	3.96	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	0.07	5.96
White-eared pocket mouse	<i>Perognathus alticollis</i>	FS, SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.45
Yuma myotis	<i>Myotis yumanensis</i>	FS	1.10	0.00	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	14.90
Not applicable	Not applicable	Total	1.10	1.61	3.96	1.07	1.93	0.28	0.46	3.11	0.10	0.97	0.44	0.03	0.15	0.10	0.08	1.04	0.07	16.51

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

^a This plant species does not occur in the Southern California Mountains and Valleys Ecoregion Section in the GAI.

^b California mountain kingsnake: Following recent taxonomic rearrangements, there are currently no species of kingsnakes that are considered special status.

^c California mountain kingsnake (San Bernardino population): Following recent taxonomic rearrangements, there are currently no species of kingsnakes that are considered special status.

^d California mountain kingsnake (San Diego population): Following recent taxonomic rearrangements, there are currently no species of kingsnakes that are considered special status.

^e Coachwhip: Only the San Joaquin subspecies is special status, and it does not occur in the GAI.

^f Common sagebrush lizard: Only the northern subspecies is special status, and it does not occur in the GAI.

^g Desert night lizard: Only the Sierra subspecies is special status, and it does not occur in the GAI.

^h Gophersnake: Only the Santa Cruz Island subspecies appears on the CDFW Special Animals List, and it is listed only as a CDFW Watch List Species.

ⁱ Striped racer: Only the Alameda subspecies is special status, and it does not occur in the GAI.

^j Western skink: Only the Coronado subspecies is special status, and it does not occur in the GAI.

^k American white pelican: This species is considered special status only in the portion of its range where it nests, and it does not nest in the GAI.

^l Bell's sparrow: Only the San Clemente subspecies is special status, and it does not occur in the GAI.

^m Bewick's wren: Only the San Clemente subspecies is special status, and it does not occur in the GAI.

ⁿ California quail: Only the Catalina subspecies is special status, and it does not occur in the GAI.

^o California towhee: Only the Inyo subspecies is special status, and it does not occur in the GAI.

^p Common yellowthroat: Only the San Francisco/saltmarsh subspecies is special status, and it does not occur in the GAI.

^q Great blue heron: This species appears on the CDFW Special Animals List but is listed only as State Fire Sensitive.

^r Great egret: This species appears on the CDFW Special Animals List but is listed only as State Fire Sensitive.

^s Hutton's vireo: Only the Catalina subspecies is special status, and it does not occur in the GAI.

^t Osprey. This species appears on the CDFW Special Animals List but is listed only as State Fire Sensitive.

^u Peregrine falcon: This species appears on the CDFW Special Animals List and is listed as State Fire Sensitive and State Fully Protected.

^v Red-winged blackbird: Only the Kern subspecies is special status, and it does not occur in the GAI.

^w Rufous-crowned sparrow: Only the Santa Cruz Island subspecies is special status, and it does not occur in the GAI.

^x Savannah sparrow: There are two special-status subspecies that occur in the GAI, but they do not occur in the Southern California Mountains and Valleys Ecoregion Section in the GAI (only in the Southern California Coast Ecoregion Section).

^y Song sparrow: There are five subspecies that are special status, none of which occurs in the GAI.

^z Spotted towhee: Only the San Clemente subspecies is special status, and it does not occur in the GAI.

^{aa} Black-tailed jackrabbit: Only the San Diego subspecies is special status and occurs only in the Southern California Coast Ecoregion Section.

^{bb} Broad-footed mole: Only the Alameda Island subspecies is special status, and it does not occur in the GAI.

^{cc} Brush rabbit: Only the riparian subspecies is special status, and it does not occur in the GAI.

^{dd} California vole: The special-status south coast marsh subspecies occurs in the GAI but only in the Southern California Coast Ecoregion Section.

^{ee} Deer mouse: Only the Anacapa Island and San Clemente subspecies are special status, and neither occurs in the GAI.

^{ff} Mountain lion: Only the Yuma subspecies is special status, and it does not occur in the GAI.

^{gg} Ornate shrew: The special-status southern California saltmarsh subspecies occurs in the GAI but only in the Southern California Coast Ecoregion Section.

^{hh} Western spotted skunk: Only the Channel Islands subspecies is special status, and it does not occur in the GAI.

This page is intentionally left blank.

APPENDIX F: HYDROLOGIC UNITS

Sub-basin Descriptions

The GAI encompasses four sub-basins (Aliso-San Onofre, Newport Bay, Santa Ana, and Seal Beach) and overlaps part of one sub-basin (San Gabriel). 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 F-1 at the end of this appendix.

Aliso-San Onofre Sub-basin

The Aliso-San Onofre sub-basin drains an area of approximately 1,815 acres (2.8 square miles) and includes 12,476 rivers and streams that traverse 1,679 miles. As noted in Table F-1, the Aliso-San Onofre sub-basin includes portions of the Santa Ana River, San Jacinto Valley, San Juan, and Santa Margarita HUs. Descriptions of these HUs are provided below and may include features that occur outside of the Aliso-San Onofre sub-basin or GAI.

The Santa Ana River HU is associated with the upper and lower Santa Ana River watersheds. The Santa Ana River, the primary waterbody in the HU, generally flows southwestward from the headwaters in the San Bernardino Mountains for approximately 100 miles to the Pacific Ocean (Santa Ana RWQCB 2016).

The San Jacinto Valley HU is associated with the San Jacinto River Basin and watershed. The San Jacinto River originates in the San Jacinto Mountains and follows the San Jacinto Valley, flowing into Mystic Lake and Canyon Lake before reaching Lake Elsinore. Major tributaries to the San Jacinto River include Bautista Creek, Poppet Creek, Potrero Creek, Perris Valley Drain, and Salt Creek (San Jacinto River Watershed Council 2005).

The San Juan HU includes San Juan and San Mateo Creeks, two major channels that originate in the southern Santa Ana Mountains. The GAI includes only the upper portions of the San Juan Creek and San Mateo Creek watersheds. San Juan Creek divides Dana Point and Capistrano Beach before ultimately draining into the Pacific Ocean at Doheny Beach State Park. San Mateo Creek flows southwestward through a valley between the Santa Ana and Santa Margarita Mountains before draining into the ocean via a saltwater tidal marsh on the Camp Pendleton Naval Reservation (San Diego RWQCB 2016).

The Santa Margarita HU includes the Santa Margarita River, Murrieta Creek, and Temecula River, originating in the Aguanga Mountains. The headwaters of the Santa Margarita River are at the confluence of Murrieta Creek and the Temecula River. The Santa Margarita River ultimately discharges into the Pacific Ocean through the Santa Margarita Lagoon on the Camp Pendleton Naval Reservation (San Diego RWQCB 2016).

Newport Bay Sub-basin

The Newport Bay sub-basin drains an area of approximately 2,208 acres (3.5 square miles) and includes 240 rivers and streams that traverse 104 miles. As noted in Table F-1, the Newport Bay sub-basin includes portions of the Santa Ana River and San Juan HUs.

Descriptions of the Santa Ana River and San Juan HUs are provided in the *Aliso-San Onofre Sub-basin* section.

San Gabriel Sub-basin

The San Gabriel sub-basin drains an area of approximately 14,114 acres (22 square miles) and includes 2,086 rivers and streams that traverse 1,147 miles. As noted in Table F-1, the San Gabriel sub-basin includes portions of the San Gabriel River, Los Angeles River, Santa Ana River, Antelope, and Mojave HUs. A description of the Santa Ana River HU is provided in the *Aliso-San Onofre Sub-basin* section, and the other four HUs are described below.

The San Gabriel River HU includes the San Gabriel River, which originates in the San Gabriel Mountains where the upper reaches of the river are in undisturbed riparian and woodland habitats. The middle reaches of the river have been modified to control flood and debris flows, and to recharge groundwater. The lower reaches are concrete lined, flowing through urban areas of Los Angeles, ultimately discharging into the Pacific Ocean near the city of Long Beach (Los Angeles RWQCB 2014).

The Los Angeles River HU is associated with the Los Angeles River, Big Tujunga Creek, and Rio Hondo watersheds. The Los Angeles River is approximately 55 miles long and originates in the Santa Monica, Santa Susana, and San Gabriel Mountains, flowing from areas covered by forest or open space land through highly urbanized areas. Lower parts of the river are highly modified and lined with concrete (Los Angeles RWQCB 2014).

The Antelope HU corresponds to the Antelope Valley basin, an enclosed inland basin that is bounded by the Tehachapi Mountains and Garlock Fault Zone to the north and west and by the San Gabriel Mountains and San Andreas Rift Zone to the south and west. Streams originate in the mountains and foothills surrounding the valley, and eventually pond in dry lakes (Los Angeles County Department of Public Works 1987).

The Mojave HU is associated with the Mojave River, its surface waters originating on the northern slope of the San Bernardino Mountains, flowing approximately 110 miles through the Mojave Desert, ultimately terminating at Soda Lake. The main stem forms upstream of the Mojave Forks Dam north of the GAI at the confluence of Deep Creek, a perennial stream, and the West Fork Mojave River, typically an ephemeral stream (Lahontan RWQCB 2019).

Santa Ana Sub-basin

The Santa Ana sub-basin drains an area of approximately 24,363 acres (38 square miles) and includes 3,366 rivers and streams that traverse 1,540 miles. As noted in Table F-1, the Santa Ana sub-basin includes portions of the San Gabriel River, Santa Ana River, Mojave, Whitewater, San Jacinto Valley, San Juan, Emerson, Johnson, and Lucerne Lake HUs. Descriptions of the Santa Ana River, San Jacinto Valley, and San Juan HUs are provided in the *Aliso-San Onofre Sub-basin* section. Descriptions of the San Gabriel River and Mojave HUs are provided in the *San Gabriel Sub-basin* section. The Santa Ana

River, San Jacinto Valley, and San Juan Hus are provided in the *Aliso-San Onofre Sub-basin* section.

The Whitewater HU begins approximately 1.5 miles north of Whitewater and 3.5 miles upstream from the San Gorgonio River, east of the GAI. The primary stream within the HU is the Whitewater River, which flows throughout the Coachella Valley. Perennial flow is observed in the mountainous areas and becomes ephemeral farther downstream (Colorado River RWQCB 2019).

The Emerson HU is located in San Bernardino County in the Mojave Desert north of Twentynine Palms. Associated with Emerson Dry Lake at about 2,300 feet above mean sea level, the Emerson subbasin drains to the playa located west of the Lava Bed Mountains (Kennedy/Jenks/Todd LLC 2007).

The Johnson Hydrologic Unit is associated with the Johnson Valley Groundwater Basin. Extending from the San Bernardino Mountains on the south to Melville to the north, the Johnson Valley Groundwater Basin is approximately 111,630 acres in size. Natural recharge to the groundwater basin is from runoff generated upland in the adjacent Fry and San Bernardino Mountains (Kennedy/Jenks/Todd LLC 2007).

The Lucerne Lake HU is located in the Lucerne Valley in the southwestern part of the Mojave Desert. The groundwater basin associated with the HU is approximately 230 square miles. Since groundwater withdrawal from pumping exceeded the amount of groundwater recharge for a long period of time, Lucerne Lake is ephemeral. The playa periodically floods (Stamos et al. 2022).

Seal Beach Sub-basin

The Seal Beach sub-basin drains an area of approximately 2,315 acres (3.6 square miles) and includes 55 rivers and streams that traverse 35 miles. As noted in Table F-1, the Seal Beach sub-basin includes portions of the San Gabriel River and Santa Ana River HUs. A description of the San Gabriel River HU is provided in the *San Gabriel Sub-basin* section, and a description of the Santa Ana River HU is provided in the *Aliso-San Onofre Sub-basin* section.

Crosswalk: HUC-8s to HUs

The SAMNA Reporting Tool expresses the landscape in terms of USGS HUC-8 sub-basins (Caltrans 2024; USGS 2014). However, SWRCB considers beneficial uses in terms of HUs (California Department of Water Resources 2016). Table F-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 F-1. Crosswalk Table of HUC-8 Sub-basins with HUs in the GAI

HUC-8 Number	HUC-8 Name	HUC-8 Acreage ^a	HU Number	HU Name	HU Acreage ^a
18070301	Aliso-San Onofre	394,508	802	San Jacinto Valley	915,426
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	901	San Juan	251,796
18070301	Aliso-San Onofre	394,508	902	San Juan	307,984
18070301	Aliso-San Onofre	394,508	902	San Juan	307,984
18070301	Aliso-San Onofre	394,508	902	San Juan	307,984
18070301	Aliso-San Onofre	394,508	801	Santa Ana River	820,462
18070301	Aliso-San Onofre	394,508	801	Santa Ana River	820,462
18070301	Aliso-San Onofre	394,508	801	Santa Ana River	820,462
18070301	Aliso-San Onofre	394,508	801	Santa Ana River	820,462
18070301	Aliso-San Onofre	394,508	902	Santa Margarita	307,984
18070301	Aliso-San Onofre	394,508	902	Santa Margarita	307,984
18070301	Aliso-San Onofre	394,508	902	Santa Margarita	307,984
18070301	Aliso-San Onofre	394,508	902	Santa Margarita	307,984
18070301	Aliso-San Onofre	394,508	902	Santa Margarita	307,984
18070301	Aliso-San Onofre	394,508	902	Santa Margarita	307,984
18070204	Newport Bay	124,258	901	San Juan	251,796

HUC-8 Number	HUC-8 Name	HUC-8 Acreage ^a	HU Number	HU Name	HU Acreage ^a
18070204	Newport Bay	124,258	901	San Juan	251,796
18070204	Newport Bay	124,258	901	San Juan	251,796
18070204	Newport Bay	124,258	801	Santa Ana River	820,462
18070204	Newport Bay	124,258	801	Santa Ana River	820,462
18070204	Newport Bay	124,258	801	Santa Ana River	820,462
18070106	San Gabriel	579,966	627	Antelope	732,793
18070106	San Gabriel	579,966	412	Los Angeles River	533,853
18070106	San Gabriel	579,966	412	Los Angeles River	533,853
18070106	San Gabriel	579,966	412	Los Angeles River	533,853
18070106	San Gabriel	579,966	412	Los Angeles River	533,853
18070106	San Gabriel	579,966	412	Los Angeles River	533,853
18070106	San Gabriel	579,966	628	Mojave	1,669,511
18070106	San Gabriel	579,966	405	San Gabriel River	454,267
18070106	San Gabriel	579,966	405	San Gabriel River	454,267
18070106	San Gabriel	579,966	405	San Gabriel River	454,267
18070106	San Gabriel	579,966	405	San Gabriel River	454,267
18070106	San Gabriel	579,966	405	San Gabriel River	454,267
18070106	San Gabriel	579,966	405	San Gabriel River	454,267
18070106	San Gabriel	579,966	406	San Gabriel River	134,070
18070106	San Gabriel	579,966	406	San Gabriel River	134,070
18070106	San Gabriel	579,966	406	San Gabriel River	134,070
18070106	San Gabriel	579,966	406	San Gabriel River	134,070
18070106	San Gabriel	579,966	845	San Gabriel River	1,944
18070106	San Gabriel	579,966	846	San Gabriel River	53,702
18070106	San Gabriel	579,966	846	San Gabriel River	53,702
18070106	San Gabriel	579,966	481	Santa Ana River	16,686
18070106	San Gabriel	579,966	481	Santa Ana River	16,686
18070106	San Gabriel	579,966	481	Santa Ana River	16,686
18070106	San Gabriel	579,966	481	Santa Ana River	16,686
18070106	San Gabriel	579,966	801	Santa Ana River	820,462
18070106	San Gabriel	579,966	801	Santa Ana River	820,462

HUC-8 Number	HUC-8 Name	HUC-8 Acreage ^a	HU Number	HU Name	HU Acreage ^a
18070106	San Gabriel	579,966	801	Santa Ana River	820,462
18070106	San Gabriel	579,966	801	Santa Ana River	820,462
18070106	San Gabriel	579,966	801	Santa Ana River	820,462
18070203	Santa Ana	1,084,242	705	Emerson	191,664
18070203	Santa Ana	1,084,242	702	Johnson	193,206
18070203	Santa Ana	1,084,242	701	Lucerne Lake	301,640
18070203	Santa Ana	1,084,242	628	Mojave	663,203
18070203	Santa Ana	1,084,242	628	Whitewater	103,672
18070203	Santa Ana	1,084,242	405	Santa Ana River	781,049
18070203	Santa Ana	1,084,242	405	San Jacinto Valley	508,352
18070203	Santa Ana	1,084,242	405	Santa Ana River	508,352
18070203	Santa Ana	1,084,242	406	San Gabriel River	53,702
18070203	Santa Ana	1,084,242	406	San Juan	193,211
18070203	Santa Ana	1,084,242	802	Mojave	1,669,511
18070203	Santa Ana	1,084,242	802	Mojave	1,669,511
18070203	Santa Ana	1,084,242	802	San Gabriel River	454,267
18070203	Santa Ana	1,084,242	901	San Gabriel River	454,267
18070203	Santa Ana	1,084,242	901	San Gabriel River	454,267
18070203	Santa Ana	1,084,242	481	San Gabriel River	134,070
18070203	Santa Ana	1,084,242	481	San Gabriel River	134,070
18070203	Santa Ana	1,084,242	481	San Gabriel River	134,070
18070203	Santa Ana	1,084,242	801	San Gabriel River	134,070
18070203	Santa Ana	1,084,242	801	San Gabriel River	53,702
18070203	Santa Ana	1,084,242	801	San Jacinto Valley	915,426
18070203	Santa Ana	1,084,242	801	San Jacinto Valley	915,426
18070203	Santa Ana	1,084,242	801	San Jacinto Valley	915,426
18070203	Santa Ana	1,084,242	801	San Juan	251,796
18070203	Santa Ana	1,084,242	801	San Juan	251,796
18070203	Santa Ana	1,084,242	801	Santa Ana River	16,686
18070203	Santa Ana	1,084,242	801	Santa Ana River	16,686
18070203	Santa Ana	1,084,242	801	Santa Ana River	16,686

[illegible]

HUC-8 Number	HUC-8 Name	HUC-8 Acreage ^a	HU Number	HU Name	HU Acreage ^a
18070203	Santa Ana	1,084,242	719	Santa Ana River	915,426
18070203	Santa Ana	1,084,242	719	Santa Ana River	915,426
18070203	Santa Ana	1,084,242	719	Santa Ana River	915,426
18070201	Seal Beach	81,521	405	San Gabriel River	454,267
18070201	Seal Beach	81,521	846	San Gabriel River	53,702
18070201	Seal Beach	81,521	801	Santa Ana River	820,462

Source: Caltrans (2024)

^a Numbers were rounded to the nearest whole number.

References

- California Department of Water Resources. 2016. "CalWater Hydrologic Areas." Accessed October 19, 2019. https://gispublic.waterboards.ca.gov/portalservice/rest/services/Hydrology/CalWater_Boundaries/MapServer.
- Caltrans (California Department of Transportation). 2024. "Waters_D07/D08/D11/D12 in Caltrans District 12 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2023/2024" (data file). Accessed October 2, 2024. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- Colorado River RWQCB (Regional Water Quality Control Board). 2019. *Water Quality Control Plan for the Colorado River Basin Region*.
- Kennedy/Jenks/Todd LLC. 2007. *Basin Conceptual Model and Assessment of Water Supply and Demand for the Ames Valley, Johnson Valley, and Means Valley Groundwater Basins*. Prepared for the Bighorn-Desert View Water Agency and Mojave Water Agency. April. <https://www.mojavewater.org/data-maps/regional-studies/#docaccess-65dff76bf5aad841198aec40dd3097e0c94cca6c1f602ee9263f78965f957cd3>
- Lahontan RWQCB (Regional Water Quality Control Board). 2019. *Water Quality Control Plan for the Lahontan Region*.
- Los Angeles County Department of Public Works. 1987. *Final Report on the Antelope Valley Comprehensive Plan of Flood Control and Water Conservation*.
- Los Angeles RWQCB (Regional Water Quality Control Board). 2014. *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*. Accessed January 14, 2021. https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html.

San Diego RWQCB (Regional Water Quality Control Board). 2016. *Water Quality Control Plan for the San Diego Basin*.

San Jacinto River Watershed Council. 2005. *The San Jacinto Watershed Component of the Santa Ana Integrated Watershed Plan*.

Santa Ana RWQCB (Regional Water Quality Control Board). 2016. *Water Quality Control Plan for the Santa Ana River Basin*.

Stamos, C.L., Larsen, J.D., Powell, R.E., Matti, J.C., and Martin, P., 2022, Hydrogeology and simulation of groundwater flow in the Lucerne Valley groundwater basin, California: U.S. Geological Survey Scientific Investigations Report 2022–5048, 120 p. <https://pubs.usgs.gov/sir/2022/5048/sir20225048.pdf>

USGS (U.S. Geological Survey). 2014. "National Hydrography: National Hydrography Dataset and Watershed Boundary Dataset." Accessed March 18, 2019. <https://www.usgs.gov/core-science-systems/ngp/national-hydrography>.

This page is intentionally left blank.

APPENDIX G: LIST OF 303(d) IMPAIRED WATERS

Section 303(d) of the CWA requires that, every 2 years, each state submit to the EPA a list of rivers, lakes, and reservoirs in the state for which pollution control or requirements have failed to meet water quality standards. Waterbodies in 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 G-1 (SWRCB 2021).

Table G-1. Impaired Waters in the GAI

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
Aliso-San Onofre	Aliso Creek	Phosphorus	Required, not established yet	No
Aliso-San Onofre	Aliso Creek (mouth)	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Bell Canyon Creek	Toxicity	Required, not established yet	Yes
Aliso-San Onofre	Cristianitos Creek	Selenium	Required, not established yet	No
Aliso-San Onofre	Dana Point Harbor	Indicator Bacteria	Required, not established yet	Yes
Aliso-San Onofre	English Canyon	Dieldrin	Required, not established yet	No
Aliso-San Onofre	Laguna Canyon Channel	Phosphorus	Required, not established yet	No
Aliso-San Onofre	Oso Creek (at Mission Viejo Golf Course)	Sulfates	Required, not established yet	No
Aliso-San Onofre	Oso Creek (lower)	Toxicity	Required, not established yet	No
Aliso-San Onofre	Pacific Ocean Shoreline, Dana Point HSA, at Dana Point Harbor at Baby Beach	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, Dana Point HSA, at Dana Point Harbor at patrol dock	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, Lower San Juan HSA, 1,000 feet south of outfall	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, Lower San Juan HSA, 10,000 feet south of outfall	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
Aliso-San Onofre	Pacific Ocean Shoreline, Lower San Juan HSA, 2,000 feet south of outfall	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, Lower San Juan HSA, 3,000 feet south of outfall	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, Lower San Juan HSA, 4,000 feet south of outfall	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, Lower San Juan HSA, 7,500 feet south of outfall	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, Lower San Juan HSA, at North Beach Creek	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, Lower San Juan HSA, at North Doheny State Park Campground	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, Lower San Juan HSA, at San Juan Creek	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, Lower San Juan HSA, at South Doheny State Park Campground	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, Lower San Juan HSA, at surf zone outfall at Doheny State Beach	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, San Clemente HA, at San Clemente City Beach at Pier	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, San Clemente HA, at South Capistrano Beach at Beach Road	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, San Clemente HA, at South Capistrano Beach	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	Pacific Ocean Shoreline, San Mateo Canyon HA, at San Mateo Creek outlet	Indicator Bacteria	Required, not established yet	Yes

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
Aliso-San Onofre	Prima Deshecha Creek	Phosphorus	Required, not established yet	No
Aliso-San Onofre	Salt Creek (Orange County)	Benthic Community Effects	Required, not established yet	No
Aliso-San Onofre	San Juan Creek	Phosphorus	Required, not established yet	No
Aliso-San Onofre	San Juan Creek (mouth)	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Aliso-San Onofre	San Mateo Creek (San Diego County)	Indicator Bacteria	Required, not established yet	Yes
Aliso-San Onofre	Segunda Deshecha Creek	Phosphorus	Required, not established yet	No
Aliso-San Onofre	Wood Canyon (Orange County)	Benthic Community Effects	Required, not established yet	No
Newport Bay	Balboa Beach	DDT (Dichlorodiphenyl-trichloroethane)	Required, not established yet	No
Newport Bay	Bonita Creek	Toxicity	Required, not established yet	No
Newport Bay	Borrego Creek (from Irvine Blvd to San Diego Creek Reach 2)	Indicator Bacteria	Required, not established yet	Yes
Newport Bay	Buck Gully Creek	Indicator Bacteria	Required, not established yet	Yes
Newport Bay	Los Trancos Creek (Crystal Cove Creek)	Indicator Bacteria	Required, not established yet	Yes
Newport Bay	Morning Canyon Creek	Indicator Bacteria	Required, not established yet	Yes
Newport Bay	Moro Canyon Creek	Phosphorus	Required, not established yet	No
Newport Bay	Newport Bay, Lower (entire lower bay, including Rhine Channel, Turning Basin, and South Lido Channel to east end of H-J Moorings)	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Newport Bay	Newport Bay, Upper (Ecological Reserve)	Sedimentation/ Siltation	Being addressed with EPA-approved TMDL	No

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
Newport Bay	Peters Canyon Channel	Toxaphene	Being addressed with EPA-approved TMDL	No
Newport Bay	Rhine Channel	PCBs (Polychlorinated Biphenyls)	Required, not established yet	No
Newport Bay	San Diego Creek Reach 1	Nutrients	Being addressed with EPA-approved TMDL	No
Newport Bay	San Diego Creek Reach 2	Sedimentation/ Siltation	Being addressed with EPA-approved TMDL	No
Newport Bay	Serrano Creek	Ammonia (Unionized)	Required, not established yet	No
San Gabriel	Artesia-Norwalk Drain	Selenium	Required, not established yet	No
San Gabriel	Coyote Creek	Copper, Dissolved	Being addressed with action other than TMDL	No
San Gabriel	Coyote Creek, North Fork	Selenium	Required, not established yet	No
San Gabriel	Crystal Lake	Organic Enrichment/Low Dissolved Oxygen	Required, not established yet	No
San Gabriel	El Dorado Lakes	Algae	Being addressed with EPA-approved TMDL	No
San Gabriel	Puddingstone Reservoir	Mercury	Required, not established yet	No
San Gabriel	Puente Creek	Indicator Bacteria	Required, not established yet	Yes
San Gabriel	San Gabriel River Estuary	Nickel	Required, not established yet	No
San Gabriel	San Gabriel River Reach 1 (Estuary to Firestone)	Temperature, Water	Being addressed with EPA-approved TMDL	No
San Gabriel	San Gabriel River Reach 2 (Firestone to Whittier Narrows Dam)	Lead	Being addressed with EPA-approved TMDL	No
San Gabriel	San Gabriel River Reach 3 (Whittier Narrows to Ramona)	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
San Gabriel	San Gabriel River, East Fork	Trash	Being addressed with EPA-approved TMDL	No
San Gabriel	San Jose Creek Reach 1 (SG Confluence to Temple St)	Ammonia	Being addressed with EPA-approved TMDL	No
San Gabriel	San Jose Creek Reach 2 (Temple to I-10 at White Ave)	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
San Gabriel	Santa Fe Dam Park Lake	PCBs (Polychlorinated Biphenyls)	Required, not established yet	No
San Gabriel	South San Jose Creek (Los Angeles County)	Toxicity	Required, not established yet	No
San Gabriel	Walnut Creek Wash (Drains from Puddingstone Res)	pH	Required, not established yet	No
Santa Ana	Big Bear Lake	Mercury	Required, not established yet	No
Santa Ana	Chino Creek Reach 1A (Santa Ana River R3 confluence to just downstream of confluence with Mill Creek)	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Santa Ana	Chino Creek Reach 1B (Mill Creek confluence to start of concrete-lined channel)	Nutrients	Required, not established yet	No
Santa Ana	Chino Creek Reach 2 (Beginning of concrete channel to confluence with San Antonio Creek)	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Santa Ana	Cucamonga Creek Reach 1 (Valley Reach)	Zinc	Required, not established yet	No
Santa Ana	Cucamonga Creek Reach 2 (Mountain Reach)	pH	Required, not established yet	No
Santa Ana	Elsinore, Lake	PCBs (Polychlorinated Biphenyls)	Required, not established yet	No
Santa Ana	Goldenstar Creek	Indicator Bacteria	Required, not established yet	Yes
Santa Ana	Grout Creek	Nutrients	Required, not established yet	No

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
Santa Ana	Knickerbocker Creek	Indicator Bacteria	Required, not established yet	Yes
Santa Ana	Mill Creek (Prado Area)	Indicator Bacteria	Being addressed with EPA-approved TMDL	Yes
Santa Ana	Mill Creek Reach 1	Indicator Bacteria	Required, not established yet	Yes
Santa Ana	Mountain Home Creek	Indicator Bacteria	Required, not established yet	Yes
Santa Ana	Mountain Home Creek, East Fork	Indicator Bacteria	Required, not established yet	Yes
Santa Ana	Newport Slough	Indicator Bacteria	Required, not established yet	Yes
Santa Ana	Prado Basin Management Zone	pH	Required, not established yet	No
Santa Ana	Prado Park Lake	Nutrients	Required, not established yet	No
Santa Ana	Rathbone (Rathbun) Creek	Nutrients	Required, not established yet	No
Santa Ana	San Antonio Creek	pH	Required, not established yet	No
Santa Ana	San Timoteo Creek Reach 1A (Santa Ana River to Confluence to Barton Rd)	Indicator Bacteria	Required, not established yet	Yes
Santa Ana	San Timoteo Creek Reach 3 (Yucaipa Creek to Headwaters)	Indicator Bacteria	Required, not established yet	Yes
Santa Ana	San Timoteo River Reach 2 (Gage at San Timoteo to confluence with Yucaipa Creek)	Indicator Bacteria	Required, not established yet	Yes
Santa Ana	Santa Ana River Reach 6	Cadmium	Required, not established yet	No
Santa Ana	Santa Ana River Reach 3	Copper	Required, not established yet	No
Santa Ana	Santa Ana River Reach 4	Indicator Bacteria	Required, not established yet	Yes
Santa Ana	Santiago Creek Reach 4	Salinity/TDS/Chlorides	Required, not established yet	No
Santa Ana	Silverado Creek	Salinity/TDS/Chlorides	Required, not established yet	No

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? ^a
Santa Ana	Summit Creek	Nutrients	Required, not established yet	No
Santa Ana	Warm Creek	Indicator Bacteria	Required, not established yet	Yes
Seal Beach	Alamitos Bay	Indicator Bacteria	Required, not established yet	Yes
Seal Beach	Anaheim Bay	Nickel	Required, not established yet	No
Seal Beach	Bolsa Bay Marsh	Toxicity	Required, not established yet	No
Seal Beach	Bolsa Chica Channel	Ammonia (Unionized)	Required, not established yet	No
Seal Beach	Bolsa Chica Ecological Reserve	Toxicity	Required, not established yet	No
Seal Beach	Bolsa Chica State Beach	Nickel	Required, not established yet	No
Seal Beach	East Garden Grove Wintersburg Channel	Ammonia (Unionized)	Required, not established yet	No
Seal Beach	Huntington Beach State Park	PCBs (Polychlorinated Biphenyls)	Required, not established yet	No
Seal Beach	Huntington Harbour	Chlordane	Required, not established yet	No
Seal Beach	San Pedro Bay Near/Off Shore Zones	Total DDT (Sum of 4,4'- and 2,4'-Isomers of DDT, DDE, and DDD)	Being addressed with EPA-approved TMDL	No
Seal Beach	Talbert Channel (Orange County)	Toxicity	Required, not established yet	No

Source: SWRCB (2021)

^a TMDLs relevant to the RAMNA reflect impaired aquatic resource-related beneficial uses.

References

SWRCB (State Water Resources Control Board). 2021. *2018 California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report)*. Accessed November 19, 2024.
https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html.

APPENDIX H: 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 2024a, 2024b). HUs are described in Appendix F, *Hydrologic Units*, which includes a crosswalk table of HUC-8 sub-basins and HUs (Table F-1). These maps correspond with the land cover maps in Appendix D, *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 (2024) National Wetlands Inventory and the SFEI (2024) California Aquatic Resource Inventory are the only known datasets that include the distribution, extent, and types of aquatic resources in the GAI, and the SAMNA Reporting Tool relies on them (Caltrans 2024a, 2024b). The RipZET model (described in Section 1.4.1 of the main RAMNA document) was used to estimate impacts on areas of potential riparian function and informs tables in Chapter 5, *Modeled Estimated Impacts*, but the model was not used for mapping purposes in this RAMNA.

References

- Caltrans (California Department of Transportation). 2024a. "Waters_D07/D08/D11/D12 in Caltrans District 12 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2023/2024" (data file). Accessed October 2, 2024. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- . 2024b. "Wetlands_D07/D08/D11/D12 in Caltrans District 12 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2023/2024" (data file). Accessed October 2, 2024. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- FWS (U.S. Fish and Wildlife Service). 2024. "National Wetlands Inventory. Wetlands Mapper." Accessed November 21, 2024. <https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper>.
- SFEI (San Francisco Estuary Institute). 2024. "California Aquatic Resource Inventory (CARI)." Accessed November 21, 2024. <https://www.sfei.org/cari#sthash.SnPvzyAU.dpbs>.

