



# **ADVANCE MITIGATION PROGRAM**

## **San Diego Sub-basin Regional Advance Mitigation Needs Assessment**

### **Appendices**

Version 1.0

**Establishing Caltrans' Need for Advance Mitigation  
for the San Diego Sub-basin,  
forecast fiscal years 2021/2022 to 2030/2031**

**California Department of Transportation – District 11**

July 2023

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## **APPENDIX A: GIS SOURCES**

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

**Table A-1. District 11 RAMNA GIS Sources**

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
1	State Highway Network	Caltrans	8/1/2018	10/11/2018	<a href="http://www.dot.ca.gov/hq/tsip/gis/datalibrary/Metadata/NHS.html">http://www.dot.ca.gov/hq/tsip/gis/datalibrary/Metadata/NHS.html</a>
2	SHOPP	Caltrans	2021/2022 Q1	6/15/2022	Caltrans System Planning
3	Ecoregion Section	USDA Forest Service	1/26/2021	1/26/2021	<a href="https://data.fs.usda.gov/geodata/edw/datasets.php?xmlKeyword=Ecomap">https://data.fs.usda.gov/geodata/edw/datasets.php?xmlKeyword=Ecomap</a>
4	Watershed Boundary Dataset (GAI)	USGS	9/26/2014	10/19/2018	<a href="https://www.usgs.gov/core-science-systems/ngp/national-hydrography">https://www.usgs.gov/core-science-systems/ngp/national-hydrography</a>
5	California Conservation Easements	California Protected Areas Database	12/1/2020	2/2/2021	<a href="http://www.calands.org/cced">http://www.calands.org/cced</a>
6	California Protected Areas Holdings	California Protected Areas Database	2/10/2021	2/10/2021	<a href="http://www.calands.org/data">http://www.calands.org/data</a>
7	Tribal Land Boundaries	U.S. Bureau of Indian Affairs	5/16/2017	10/11/2018	<a href="https://hub.arcgis.com/items/2e915ef3df48422283e5b2c7d89dfcba">https://hub.arcgis.com/items/2e915ef3df48422283e5b2c7d89dfcba</a>
8	U.S. Military Installations	U.S. Census Bureau	12/1/2017	10/11/2018	<a href="https://www2.census.gov/geo/tiger/TIGER2020/MIL/">https://www2.census.gov/geo/tiger/TIGER2020/MIL/</a>
9	County Boundaries	U.S. Census Bureau	7/8/2016	10/11/2018	<a href="https://data.ca.gov/dataset/ca-geographic-boundaries">https://data.ca.gov/dataset/ca-geographic-boundaries</a>
10	Farmland Mapping & Monitoring Program	California Department of Conservation	6/7/2016	4/27/2021	<a href="https://gis.conservation.ca.gov/portal/home/item.html?id=16689151f4d240d2a16232ea650a6c62">https://gis.conservation.ca.gov/portal/home/item.html?id=16689151f4d240d2a16232ea650a6c62</a>
11	Coastal Zone and LCP	CCC	7/20/2021	8/15/2022	<a href="https://www.coastal.ca.gov/maps/czb/">https://www.coastal.ca.gov/maps/czb/</a> ; <a href="https://www.coastal.ca.gov/maps/lcp/">https://www.coastal.ca.gov/maps/lcp/</a> ; <a href="https://www.coastal.ca.gov/water-quality/critical-coastal-areas/">https://www.coastal.ca.gov/water-quality/critical-coastal-areas/</a>
12	ACE Climate Resilience – ACE [ds2738]	CDFW	2/22/2018	10/17/2018	<a href="https://map.dfg.ca.gov/metadata/ds2738.html?5.66.18">https://map.dfg.ca.gov/metadata/ds2738.html?5.66.18</a>

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
13	Vegetation Caltrans District 11 Geospatial Data for the Advance Mitigation Needs Assessment for the First Quarter of FY 2021/2022	SAMNA	1/1/2017	6/15/2022	<a href="http://www.dot.ca.gov/env/advancemitigation/">http://www.dot.ca.gov/env/advancemitigation/</a>
14	Waters/Wetlands in Caltrans District 11 Geospatial Data for the Advance Mitigation Needs Assessment for the First Quarter of FY 2021/2022	SAMNA	1/1/2017	6/15/2022	<a href="http://www.dot.ca.gov/env/advancemitigation/">http://www.dot.ca.gov/env/advancemitigation/</a>
15	USFWS Critical Habitat	FWS	10/1/2018	3/24/2021	<a href="https://ecos.fws.gov/ecp/report/table/critical-habitat.html">https://ecos.fws.gov/ecp/report/table/critical-habitat.html</a>
16	CEHC	CDFW	10/1/2017	10/17/2018	Layer is a merge of Essential Connectivity Areas and Landscape Blocks.
17	Natural Landscape Blocks – CEHC	CDFW	10/1/2017	10/17/2018	<a href="https://map.dfg.ca.gov/metadata/ds0621.html?5.66.18">https://map.dfg.ca.gov/metadata/ds0621.html?5.66.18</a>
18	Potential Riparian Connections – CEHC	CDFW	3/1/2010	10/17/2018	<a href="https://map.dfg.ca.gov/metadata/ds0622.html?5.66.18">https://map.dfg.ca.gov/metadata/ds0622.html?5.66.18</a>
19	Essential Fish Habitat – West Coast	NOAA Fisheries	3/10/2021	5/25/2022	<a href="https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper">https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper</a>
20	National Flood Hazard Layer	Federal Emergency Management Agency	10/21/2021	11/12/2021	<a href="https://msc.fema.gov/portal/home">https://msc.fema.gov/portal/home</a>
21	CalWater Hydrologic Areas	California Department of Forestry and Fire Protection	11/1/2016	10/19/2018	<a href="https://frap.fire.ca.gov/mapping/gis-data/">https://frap.fire.ca.gov/mapping/gis-data/</a>
22	Areas of Special Biological Significance	SWRCB	1/1/2005	10/15/2020	<a href="https://www.waterboards.ca.gov/water_issues/programs/ocean/asbs_map.shtml">https://www.waterboards.ca.gov/water_issues/programs/ocean/asbs_map.shtml</a>
23	Terrestrial Connectivity – ACE [ds2734]	CDFW	8/28/2019	9/25/2019	<a href="https://map.dfg.ca.gov/metadata/ds2734.html?5.80.28">https://map.dfg.ca.gov/metadata/ds2734.html?5.80.28</a>

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
24	SWAP Terrestrial Targets – 2015	CDFW	2/1/2018	10/29/2018	<a href="https://map.dfg.ca.gov/metadata/ds1966.html?5.66.18">https://map.dfg.ca.gov/metadata/ds1966.html?5.66.18</a>
25	Aquatic Biodiversity Summary – ACE [ds2768]	CDFW	2/22/2018	7/3/2019	<a href="https://map.dfg.ca.gov/metadata/ds2768.html?5.80.28">https://map.dfg.ca.gov/metadata/ds2768.html?5.80.28</a>
26	Calfish Passage Assessment Database (“PAD”)	Calfish	10/3/2019	12/15/2019	<a href="https://map.dfg.ca.gov/metadata/ds0069.html?5.84.18vo">https://map.dfg.ca.gov/metadata/ds0069.html?5.84.18vo</a>
27	Terrestrial Biodiversity Summary – ACE [ds2739]	CDFW	2/24/2020	7/3/2019	<a href="https://map.dfg.ca.gov/metadata/ds2739.html?5.80.28">https://map.dfg.ca.gov/metadata/ds2739.html?5.80.28</a>
28	RCIS Draft Boundaries	CDFW	6/21/2022	6/21/2022	CDFW provided data on 6/21/2022
29	Corps Regulatory In-lieu Fee & Bank Information Tracking System	Mitigation Service Banks	Not available	6/7/2021	<a href="https://ribits.ops.usace.army.mil/">https://ribits.ops.usace.army.mil/</a>
30	CDFW Approved Mitigation Service Areas	Mitigation Service Banks	7/23/2018	1/21/2021	<a href="https://map.dfg.ca.gov/metadata/ds2782.html?5.76.22">https://map.dfg.ca.gov/metadata/ds2782.html?5.76.22</a>
31	Conservation Plan Boundaries – HCP and NCCP [ds760]	CDFW	8/27/2021	8/2/2022	<a href="https://map.dfg.ca.gov/metadata/DS0760.html">https://map.dfg.ca.gov/metadata/DS0760.html</a>
32	National Hydrology Dataset Plus	EPA	3/13/2019	4/29/2021	<a href="https://www.epa.gov/waterdata/get-nhdplus-national-hydrography-dataset-plus-data">https://www.epa.gov/waterdata/get-nhdplus-national-hydrography-dataset-plus-data</a>
33	Tidal Gauges	Permanent Service for Mean Sea Level	1/1/2021	10/19/2021	<a href="https://www.psmsl.org/data/obtaining/">https://www.psmsl.org/data/obtaining/</a>
34	Essential Fish Habitat – Habitat Areas of Particular Concern	NOAA Fisheries	3/10/2021	5/25/2022	<a href="https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper">https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper</a>
35	Fire Hazard Severity Zones in State Responsibility Area	California Department of Forestry and Fire Protection	11/1/2007	6/1/2022	<a href="https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/">https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/</a>
36	Vernal Pools – ACE [ds2732]	CDFW	2/13/2020	1/29/2021	<a href="https://map.dfg.ca.gov/metadata/ds2732.html?5.94.01">https://map.dfg.ca.gov/metadata/ds2732.html?5.94.01</a>



ID	GIS Layer	Source Agency	Source Date	Download Date	Website
37	Core Linkages – Region 5 – Connectivity Monitoring Strategic Plan [ds2698]	CDFW	3/5/2018	8/2/2022	<a href="https://map.dfg.ca.gov/metadata/DS2698.html">https://map.dfg.ca.gov/metadata/DS2698.html</a>
38	Core Habitat Areas – Region 5 – Connectivity Monitoring Strategic Plan [ds2697]	CDFW	1/1/2018	8/5/2022	<a href="https://map.dfg.ca.gov/metadata/DS2697.html">https://map.dfg.ca.gov/metadata/DS2697.html</a>
39	Coastal Zone and LCP	CCC	7/20/2021	8/15/2022	<a href="https://www.coastal.ca.gov/water-quality/critical-coastal-areas/">https://www.coastal.ca.gov/water-quality/critical-coastal-areas/</a>
40	San Diego Multiple Species Conservation Program Cores and Linkages [ds2771]	CDFW	3/22/2018	1/26/2023	<a href="https://map.dfg.ca.gov/metadata/ds2771.html">https://map.dfg.ca.gov/metadata/ds2771.html</a>
41	303(d) List of Impaired Waterbodies	SWRCB	2014–2016	4/7/2020	<a href="https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html">https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html</a>
42	Zip Codes	U.S. Postal Service	2/11/2020	3/11/2020	<a href="https://www.arcgis.com/home/item.html?id=8d2012a2016e484dafaac0451f9aea24">https://www.arcgis.com/home/item.html?id=8d2012a2016e484dafaac0451f9aea24</a>

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

To identify the list of SHOPP projects planned for the GAI, Caltrans consulted the SHOPP Ten-Year Book for fiscal years 2021/22 to 2030/31 (Caltrans 2021). 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 21 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 to replace/install culverts. See Table 1 of Caltrans 2021 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 11 SHOPP transportation projects that are planned in the GAI during the planning period covered by this RAMNA, as well as the HUC-8 and ecoregion section, advertised year, and planned activities for each planned transportation project, are listed in Table B-1.

### **References**

Caltrans (California Department of Transportation). 2021. *State Highway Operation and Protection Program Ten-Year Project Book Fiscal Years 2021/22–2030/31*. State Highway Operation and Protection Program Fiscal Year 2021/22 (Quarter 1). September. Sacramento, California.

**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	Begin Mile	End Mile	Activity
16889	San Diego	Southern California Coast	2021/22	11	San Diego	54	R0.0	6.353	Pavement
17021	San Diego	Southern California Mountains and Valleys	2021/22	11	San Diego	8	R31.8	R41.7	Pavement
18718	San Diego	Southern California Coast	2024/25	11	San Diego	163	1.6	2.8	Bridge
18973	San Diego	Southern California Coast	2022/23	11	San Diego	15	0.405	R10.600	Drainage
18983	San Diego	Southern California Coast	2021/22	11	San Diego	125	9.3	13	Pavement
19044	San Diego	Southern California Coast	2023/24	11	San Diego	805	0.149	14.6	Pavement
19142	San Diego	Southern California Coast	2022/23	11	San Diego	805	14.6	23.7	Mobility – TMS
19151	San Diego	Southern California Coast	2023/24	11	San Diego	805	23.7	28.5	Drainage
19300	San Diego	Southern California Coast	2023/24	11	San Diego	94	1.416	16	Drainage
19303	San Diego	Southern California Coast	2023/24	11	San Diego	94	15.3	65.3	Drainage
19303	San Diego	Southern California Mountains and Valleys	2023/24	11	San Diego	94	15.3	65.3	Drainage
19306	San Diego	Southern California Coast	2023/24	11	San Diego	67	R4.1	15.9	Drainage

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route	Begin Mile	End Mile	Activity
19306	San Diego	Southern California Mountains and Valleys	2023/24	11	San Diego	67	R4.1	15.9	Drainage
19307	San Diego	Southern California Mountains and Valleys	2023/24	11	San Diego	79	20.3	53	Drainage
20232	San Diego	Southern California Mountains and Valleys	2026/27	11	San Diego	79	0.044	18.46	Pavement
20475	San Diego	Southern California Mountains and Valleys	2024/25	11	San Diego	78	33.7	37.3	Pavement
21059	San Diego	Southern California Coast	2021/22	11	San Diego	8	13.4	16	Bridge – Health
21780	San Diego	Southern California Mountains and Valleys	2025/26	11	San Diego	78	37.2	60	Pavement
21788	San Diego	Southern California Coast	2024/25	11	San Diego	805	2.897	13.592	Bridge – Health
22120	San Diego	Southern California Coast	2026/27	11	San Diego	8	R21.6	R34.1	Pavement
22120	San Diego	Southern California Mountains and Valleys	2026/27	11	San Diego	8	R21.6	R34.1	Pavement
22939	San Diego	Southern California Coast	2022/23	11	San Diego	5	R0.305	R36.0	Pavement
23229	San Diego	Southern California Coast	2027/28	11	San Diego	5	R38.23	R42.94	Drainage

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route	Begin Mile	End Mile	Activity
23229	San Diego	Southern California Coast	2027/28	11	San Diego	163	0.58R	10.34	Drainage
23240	San Diego	Southern California Mountains and Valleys	2028/29	11	San Diego	78	N17.7	46.5	Pavement

Source: Caltrans 2021

Notes: L = left, N/A = not applicable, R = right

## APPENDIX C: LOCAL COASTAL PROGRAMS

The Coastal Act allows any local government to develop a Local Coastal Program (“LCP”), which is a planning and regulatory tool used to guide and permit development<sup>1</sup> 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 land use plans (“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 areas maps by county (CCC 2021). A key map is provided after Table C-1 that references mapbook pages. These zoomed-in mapbook pages include LCP areas, segments, areas of deferred certification (“ADCs”), and other uncertified areas (“UAs”) within the coastal zone in the GAI. LCPs also address some specific aquatic resources in the coastal zone. Locations of aquatic resources, excerpted from the SAMNA Reporting Tool’s water and wetland layers, are shown by HUC-8 sub-basin in Appendix G (Caltrans 2021a, 2021b).

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.

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<sup>1</sup> Development is defined broadly under Public Resources Code Section 30106 and includes many habitat restoration activities.

## References

- California Department of Transportation (Caltrans). 2021a. "Waters\_D11 in Caltrans District 11 Geospatial Data for the Advance Mitigation Needs Assessment for the First Quarter of FY 2021/2022" (data file). Accessed June 15, 2022. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- . 2021b. "Wetlands\_D11 in Caltrans District 11 Geospatial Data for the Advance Mitigation Needs Assessment for the First Quarter of FY 2021/2022" (data file). Accessed June 15, 2022. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- CCC (California Coastal Commission). 2021. "Maps: Local Coast 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 <sup>a</sup>	Federal or State Lands Not Included in LCP	Website	Total Acres of LCP <sup>b</sup>
1, 2	San Diego	City of Encinitas	<i>City of Encinitas General Plan</i> (1991, amended 2013)	LCP is included within the General Plan. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified	City of Encinitas	None	None	<a href="https://encinitasca.gov/Government/Departments/Development-Services/Planning-Division/Land-Development">https://encinitasca.gov/Government/Departments/Development-Services/Planning-Division/Land-Development</a>	8,809
1-3	San Diego	City of Solana Beach	<i>City of Solana Beach Local Coastal Plan</i> (2013, amended 2018)	LCP for the City of Solana Beach. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified <sup>c</sup>	City of Solana Beach	None	None	<a href="https://www.ci.solana-beach.ca.us/?SEC=0D05AB2F-1E66-4C37-8D2C-97E6489F0B7E">https://www.ci.solana-beach.ca.us/?SEC=0D05AB2F-1E66-4C37-8D2C-97E6489F0B7E</a>	2,293
1-3	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	None	<a href="https://www.sandiegocounty.gov/content/sdc/pds/advance/county-of-san-diego-local-coastal-program.html">https://www.sandiegocounty.gov/content/sdc/pds/advance/county-of-san-diego-local-coastal-program.html</a>	766
2	San Diego	City of Del Mar	<i>City of Del Mar Local Coastal Program Land Use Plan</i> (1983, amended 2019)	LCP for Del Mar. Bans development in wetlands and requires a 100-foot buffer from wetlands.	Certified	City of Del Mar	None	None	<a href="http://www.delmar.ca.us/164/City-Development-Documents">http://www.delmar.ca.us/164/City-Development-Documents</a>	1,164
2-5, 7, 9	San Diego	City of San Diego	<i>North City Local Coastal Program Land Use Plan</i> (1981, amended 1988)	LCP for the North City segment in the City of San Diego.	Certified	North City Segment	Cal Sorrento Property ADC Carmel Valley ADC Los Peñasquitos Regional Park ADC South Slopes ADC Torrey Pines City Park ADC Via de la Valle Specific Plan ADC State Hwy. 8 and I-5 ROWs UA	None	<a href="https://www.coastal.ca.gov/lcp/lcpstatus-2005.pdf">https://www.coastal.ca.gov/lcp/lcpstatus-2005.pdf</a> <a href="https://documents.coastal.ca.gov/assets/rflg/FY17_18_LCPStatusSummaryChart.pdf">https://documents.coastal.ca.gov/assets/rflg/FY17_18_LCPStatusSummaryChart.pdf</a>	4,044
4-7	San Diego	City of San Diego	<i>La Jolla Community Plan and Local Coastal Program Land Use Plan</i> (2014)	LCP for the La Jolla segment in the City of San Diego	Certified	La Jolla Segment	None	None	<a href="https://www.sandiego.gov/planning/community/profiles/lajolla/plan">https://www.sandiego.gov/planning/community/profiles/lajolla/plan</a>	3,386
4, 5	San Diego	University of California, San Diego	<i>University Community Plan</i> (1986, amended 2019)	Included in the area covered by the community plan for the University planning area.	Certified	University of California, San Diego	None	None	<a href="https://www.sandiego.gov/sites/default/files/university_cp_07.11.19.pdf">https://www.sandiego.gov/sites/default/files/university_cp_07.11.19.pdf</a>	186

Mapbook Grid Number	HUC-8 Name	LCP Jurisdiction	LCP/LUP/General Plan Name	Description	Status	Segments/Areas Identified on Maps	UAs and ADCs <sup>a</sup>	Federal or State Lands Not Included in LCP	Website	Total Acres of LCP <sup>b</sup>
6-9	San Diego	City of San Diego	<i>Mission Bay Park Master Plan Update</i> (1994, amended 2002)	LCP for the Mission Bay segment in the City of San Diego	Uncertified	Mission Bay Segment	None	None	<a href="https://www.sandiego.gov/sites/default/files/mbpmasterplanfv.pdf">https://www.sandiego.gov/sites/default/files/mbpmasterplanfv.pdf</a>	4,138
6, 8, 9	San Diego	City of San Diego	<i>Mission Beach Precise Plan and Local Coastal Program Addendum</i> (2018)	LCP for the Mission Beach segment in the City of San Diego.	Certified	Mission Beach Segment	None	None	<a href="https://www.sandiego.gov/planning/community/profiles/missionbeach/plan">https://www.sandiego.gov/planning/community/profiles/missionbeach/plan</a>	240
6, 7	San Diego	City of San Diego	<i>Pacific Beach Community Plan and Local Coastal Program Land Use Plan</i> (1993, amended 2005)	LCP and LUP for the Pacific Beach segment in the City of San Diego. Bans new development within 100 feet from any wetland in the Northern Wildlife Preserve.	Certified	Pacific Beach Segment	None	None	<a href="https://www.sandiego.gov/sites/default/files/legacy/planning/community/profiles/pdf/cp/cppbfullversion.pdf">https://www.sandiego.gov/sites/default/files/legacy/planning/community/profiles/pdf/cp/cppbfullversion.pdf</a>	1,506
8-11	San Diego	City of San Diego	Not applicable	Not applicable	Not applicable	Water area	None	None	Not applicable	3,364
9	San Diego	San Diego County Regional Airport Authority	<i>San Diego International Airport Master Plan</i> (2008)	The San Diego County Regional Airport Authority has authority over development on airport property. There is not an LCP for the airport; however, the San Diego County Regional Airport Authority applies for CDPs from the CCC for airport projects.	Not applicable	San Diego International Airport	None	None	<a href="https://www.san.org/Airport-Authority/About-the-Authority">https://www.san.org/Airport-Authority/About-the-Authority</a> <a href="https://www.san.org/Airport-Projects/2008-Airport-Master-Plan#3134211-adopted-master-plan">https://www.san.org/Airport-Projects/2008-Airport-Master-Plan#3134211-adopted-master-plan</a>	1,075
8, 9	San Diego	City of San Diego	<i>Ocean Beach Community Plan and Local Coastal Program</i> (1979, amended 1988)	LCP for the Ocean Beach segment in the City of San Diego.	Certified	Ocean Beach Segment	None	None	<a href="https://www.sandiego.gov/sites/default/files/legacy/planning/community/profiles/oceanbeach/pdf/oceanbeachcommplan.pdf">https://www.sandiego.gov/sites/default/files/legacy/planning/community/profiles/oceanbeach/pdf/oceanbeachcommplan.pdf</a>	718
8, 9, 11, 12	San Diego	City of San Diego	<i>Peninsula Community Plan and Local Coastal Program Land Use Plan</i> (1987, amended 2011)	LCP for the Peninsula segment in the City of San Diego. Includes a goal to continue restoration at the Famosa Slough.  Cabrillo National Monument is operated by the National Park Service. Activities within the park must comply with the Peninsula Community Plan and LCP LUP, and the <i>Cabrillo National Monument General Management Plan</i> (1996).	Certified	Peninsula Segment	Famosa Slough ADC	Cabrillo National Monument US Coast Guard Reservation Fort Rosecrans National Cemetery US Naval Reservation Point Loma	<a href="https://www.sandiego.gov/planning/community/profiles/peninsula/plan">https://www.sandiego.gov/planning/community/profiles/peninsula/plan</a> <a href="https://documents.coastal.ca.gov/assets/rfig/FY17_18_LCPStatusSummaryChart.pdf">https://documents.coastal.ca.gov/assets/rfig/FY17_18_LCPStatusSummaryChart.pdf</a> <a href="https://www.govinfo.gov/content/pkg/FR-1996-04-12/pdf/96-9138.pdf">https://www.govinfo.gov/content/pkg/FR-1996-04-12/pdf/96-9138.pdf</a>	3,010

Mapbook Grid Number	HUC-8 Name	LCP Jurisdiction	LCP/LUP/General Plan Name	Description	Status	Segments/Areas Identified on Maps	UAs and ADCs <sup>a</sup>	Federal or State Lands Not Included in LCP	Website	Total Acres of LCP <sup>b</sup>
8, 9	San Diego	San Diego Unified Port District ("SDUPD")	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for the Shelter Island/La Playa planning area. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified	Shelter Island/La Playa Planning Area	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	521
9, 10, 12-14	San Diego	City of Coronado	<i>City of Coronado Local Coastal Program Land Use Plan (1980, amended 2005)</i>	LCP for the City of Coronado	Certified	City of Coronado	None	Coronado – US Naval Amphibious Base 1 and 2 Coronado – US Naval Air Station North Island San Diego – US Naval Air Station North Island US Naval Amphibious – Open Water Area US Naval Radio Station	<a href="https://www.coronado.ca.us/UserFiles/Servers/Server_746006/File/government/departments/comm%20development/building/1373656741_71747.pdf">https://www.coronado.ca.us/UserFiles/Servers/Server_746006/File/government/departments/comm%20development/building/1373656741_71747.pdf</a>	7,175
9, 10, 13	San Diego	City of San Diego	<i>Barrio Logan Harbor 101 Community Plan (1978, amended 2005)</i>	LCP for the Barrio Logan segment in the City of San Diego	Certified	Barrio Logan Segment	None	US Naval Station San Diego 1-3	<a href="https://www.sandiego.gov/sites/default/files/legacy/planning/community/profiles/pdf/cp/cpblfull.pdf">https://www.sandiego.gov/sites/default/files/legacy/planning/community/profiles/pdf/cp/cpblfull.pdf</a>	1,077
9, 10	San Diego	City of San Diego	<i>San Diego Downtown Community Plan (2006)</i>	The Community Plan, along with Planned District Ordinances, makes up the LCP for the Centre City segment in the City of San Diego.	Certified	Centre City Segment	County Administration Center ADC	US Naval Base Commander	<a href="https://www.sandiego.gov/sites/default/files/downtown-community-plan-all-1.pdf">https://www.sandiego.gov/sites/default/files/downtown-community-plan-all-1.pdf</a> <a href="https://documents.coastal.ca.gov/assets/rfig/FY17_18_LCPStatusSummaryChart.pdf">https://documents.coastal.ca.gov/assets/rfig/FY17_18_LCPStatusSummaryChart.pdf</a>	122
9, 10	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for the Centre City/Embarcadero Planning Area – a. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified	Centre City/Embarcadero Planning Area – a	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	224
9, 10	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for Centre City/Embarcadero Planning Area – b. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified	Centre City/Embarcadero Planning Area – b	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	268
9, 10, 12, 13	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for the Coronado Bayfront planning area within the City of Coronado. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified	Coronado Bayfront (Coronado)	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	405

Mapbook Grid Number	HUC-8 Name	LCP Jurisdiction	LCP/LUP/General Plan Name	Description	Status	Segments/Areas Identified on Maps	UAs and ADCs <sup>a</sup>	Federal or State Lands Not Included in LCP	Website	Total Acres of LCP <sup>b</sup>
9, 10	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for the San Diego Bayfront planning area within the City of Coronado. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified	Coronado Bayfront (San Diego)	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	51
9, 10, 13	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for the Tenth Avenue Marine Terminal planning area. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors	Certified	Tenth Avenue Marine Terminal Planning Area	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	360
9	San Diego	San Diego – US Naval Training Center	<i>Naval Training Center Precise Plan and Local Coastal Program (2001)</i>	LCP and LUP for the Naval Training Center	Certified	US Naval Training Center	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_25539.pdf">https://www.sandag.org/uploads/projectid/projectid_577_25539.pdf</a>	537
13, 14	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for the Chula Vista Bayfront planning area. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified	Chula Vista Bayfront Planning Area	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	1,567
13	San Diego	City of National City	<i>National City Local Coastal Program Land Use Plan (1981, amended 1997)</i>	LCP for National City. Includes a goal to conduct restoration at Paradise Marsh. Requires a 100-foot buffer from wetlands unless CDFW agrees to a reduced buffer.	Certified	City of National City	None	US Naval Station SD 1-4 (National City) City of National City (water area)	<a href="https://www.nationalcityca.gov/home/showdocument?id=255">https://www.nationalcityca.gov/home/showdocument?id=255</a>	1,621
13	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for the National City Bayfront Planning Area – a. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified	National City Bayfront Planning Area – a	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	65
13	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for the National City Bayfront Planning Area – b. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified	National City Bayfront Planning Area – b	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	418
13, 14	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for the South Bay Salt Lands planning area within the City of Coronado	Certified	South Bay Salt Lands (Coronado)	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	308

Mapbook Grid Number	HUC-8 Name	LCP Jurisdiction	LCP/LUP/General Plan Name	Description	Status	Segments/Areas Identified on Maps	UAs and ADCs <sup>a</sup>	Federal or State Lands Not Included in LCP	Website	Total Acres of LCP <sup>b</sup>
13, 14	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for the South Bay Salt Lands planning area within the City of National City	Certified	South Bay Salt Lands (National City)	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	305
13, 14	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for the South Bay Salt Lands planning area within the City of San Diego	Certified	South Bay Salt Lands (San Diego)	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	297
13	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego (2017)<sup>d</sup></i>	The Port Master Plan includes the LUP for the Silver Strand South planning area within the City of Coronado. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified	Silver Strand South Planning Area (Coronado)	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	205
13–15	San Diego	City of Chula Vista	<i>Chula Vista Bayfront Local Coastal Program Land Use Plan (2012, amended 2015)</i>	LCP for Chula Vista. This document is currently being amended. Requires wetland mitigation at a 4:1 ratio and riparian mitigation at a 3:1 ratio in areas where buffers to aquatic features have not already been established. In areas where buffers have been established, 50 feet of buffer is needed from impacts to riparian features and 100 feet of buffer from impacts to wetland features, unless an agreement with CDFW is made for a different buffer.	Certified	City of Chula Vista	South Bay Islands UA	None	<a href="https://www.chulavistaca.gov/departments/development-services/planning/planning-digital-library/specific-plan">https://www.chulavistaca.gov/departments/development-services/planning/planning-digital-library/specific-plan</a> <a href="https://documents.coastal.ca.gov/assets/rflg/FY17_18_LCPStatusSummaryChart.pdf">https://documents.coastal.ca.gov/assets/rflg/FY17_18_LCPStatusSummaryChart.pdf</a>	1,036
14	San Diego	City of Imperial Beach	<i>City of Imperial Beach General Plan/Local Coastal Program Land Use Plan (2019)</i>	LCP for the City of Imperial Beach.	Certified	City of Imperial Beach	None	Border Field State Park	<a href="https://www.imperialbeachca.gov/index.asp?SEC=83F00CF2-A639-40F4-8278-A5F0DF2BBEED&amp;DE=18B4B5C7-C64B-4A7C-A8A4-D59F1D8E4878">https://www.imperialbeachca.gov/index.asp?SEC=83F00CF2-A639-40F4-8278-A5F0DF2BBEED&amp;DE=18B4B5C7-C64B-4A7C-A8A4-D59F1D8E4878</a>	1,872
14, 15	San Diego	City of San Diego	<i>Otay Mesa-Nestor Community Plan (1996, amended 2016)</i>	LCP for the Otay Mesa-Nestor segment in the City of San Diego	Certified	Otay Mesa-Nestor Segment	Otay River Valley and South Bay Study Area ADC	None	<a href="https://www.sandiego.gov/sites/default/files/omnfull.pdf">https://www.sandiego.gov/sites/default/files/omnfull.pdf</a> <a href="https://documents.coastal.ca.gov/assets/rflg/FY17_18_LCPStatusSummaryChart.pdf">https://documents.coastal.ca.gov/assets/rflg/FY17_18_LCPStatusSummaryChart.pdf</a>	1,000

Mapbook Grid Number	HUC-8 Name	LCP Jurisdiction	LCP/LUP/General Plan Name	Description	Status	Segments/Areas Identified on Maps	UAs and ADCs <sup>a</sup>	Federal or State Lands Not Included in LCP	Website	Total Acres of LCP <sup>b</sup>
14, 15	San Diego	City of San Diego	<i>Tijuana River Valley Local Coastal Program Land Use Plan</i> (1976, amended 2007)	LCP for the Tijuana River segment in the City of San Diego. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified	Tijuana River Segment	None	None	<a href="https://www.sandiego.gov/sites/default/files/trvprint.pdf">https://www.sandiego.gov/sites/default/files/trvprint.pdf</a>	3,693
14	San Diego	SDUPD	<i>Port Master Plan: Port of San Diego</i> (2017) <sup>d</sup>	The Port Master Plan includes the LUP for the South Bay/Imperial Beach planning area. Requires a buffer of at least 100 feet from wetlands and 50 feet from riparian corridors.	Certified	South Bay/Imperial Planning Area	None	None	<a href="https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf">https://www.sandag.org/uploads/projectid/projectid_577_26390.pdf</a>	420

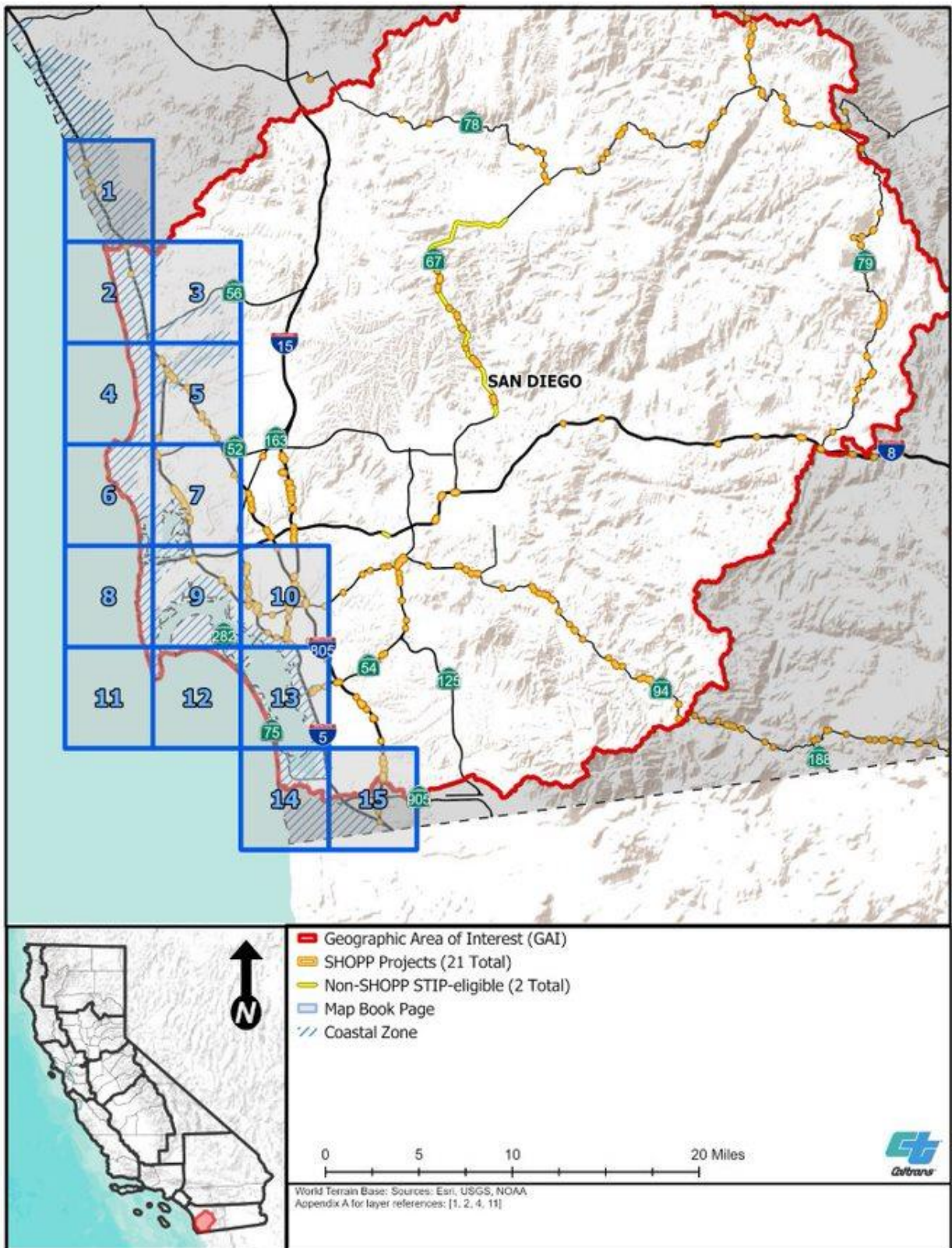
Source: CCC (2021)

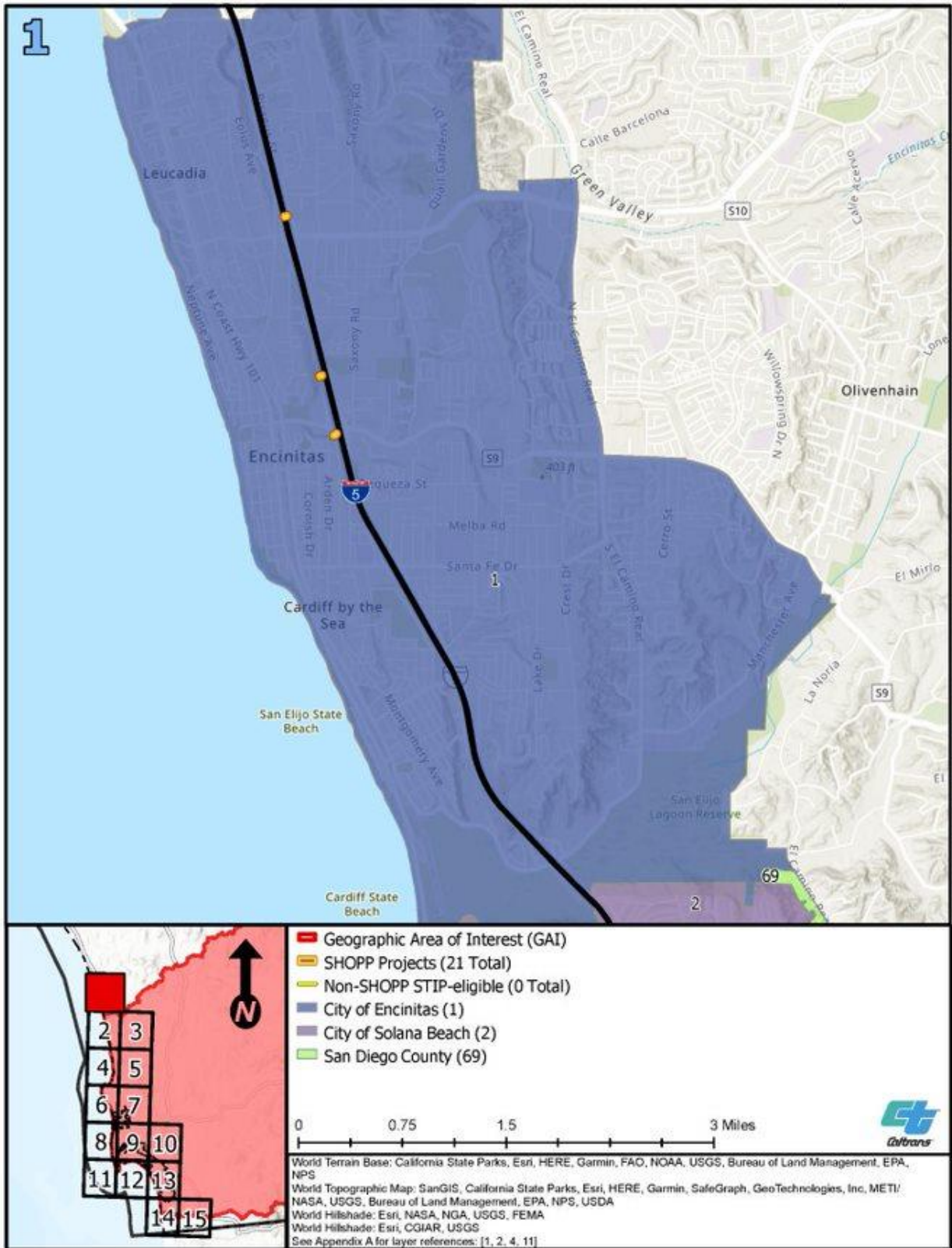
<sup>a</sup> ADC: Refers to a geographic area that has not been officially segmented for purposes of LCP preparation and, during certification review of the LCP, was not certified. A UA may be an area that was created through annexation or was subsequently identified but may not have been included in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

<sup>b</sup> Numbers were rounded to the nearest whole number. Excludes ADCs, federal lands, and state lands.

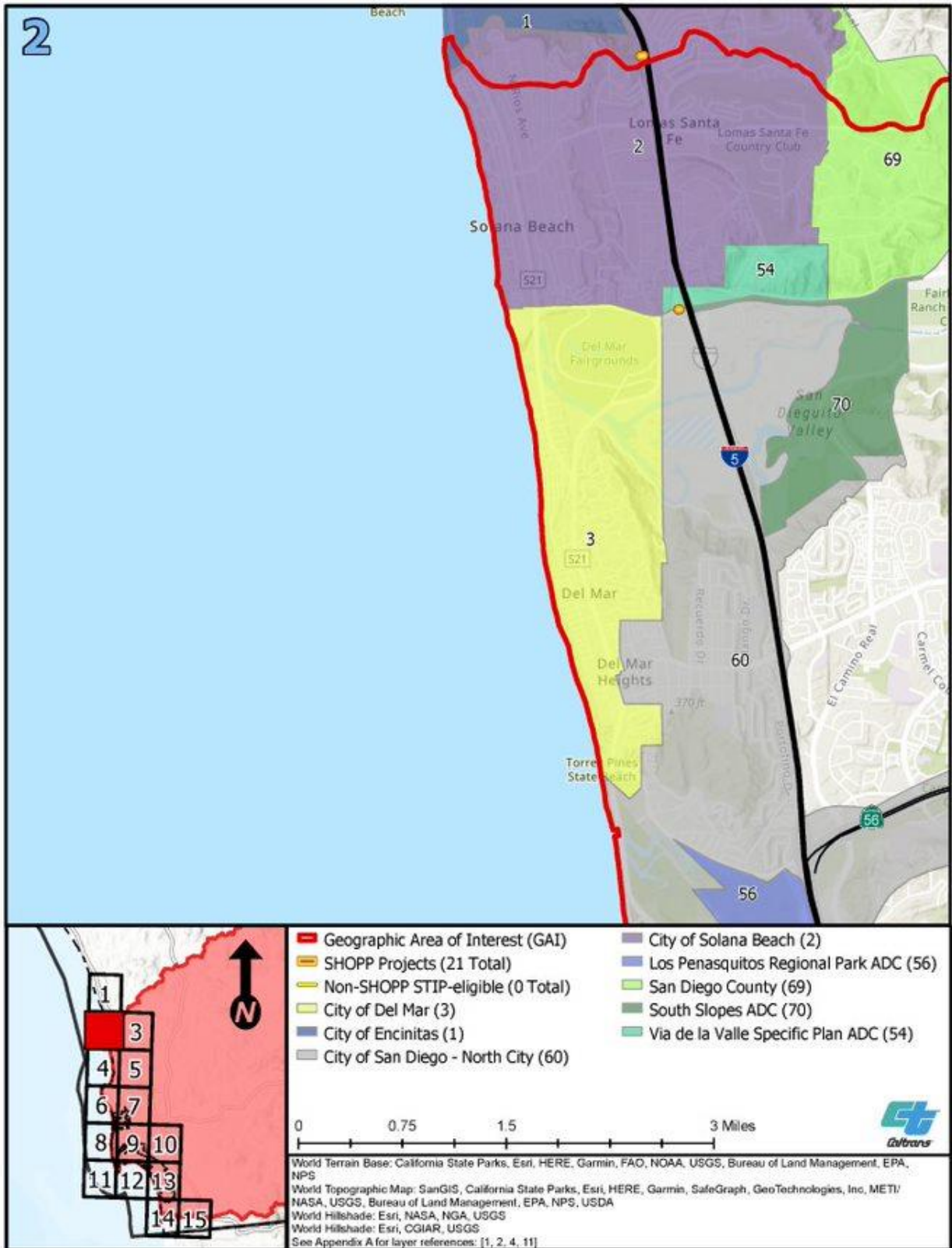
<sup>c</sup> Although the LUP was certified, the City of Solana Beach does not have a certified Implementation Plan; therefore, CCC retains jurisdiction in this city.

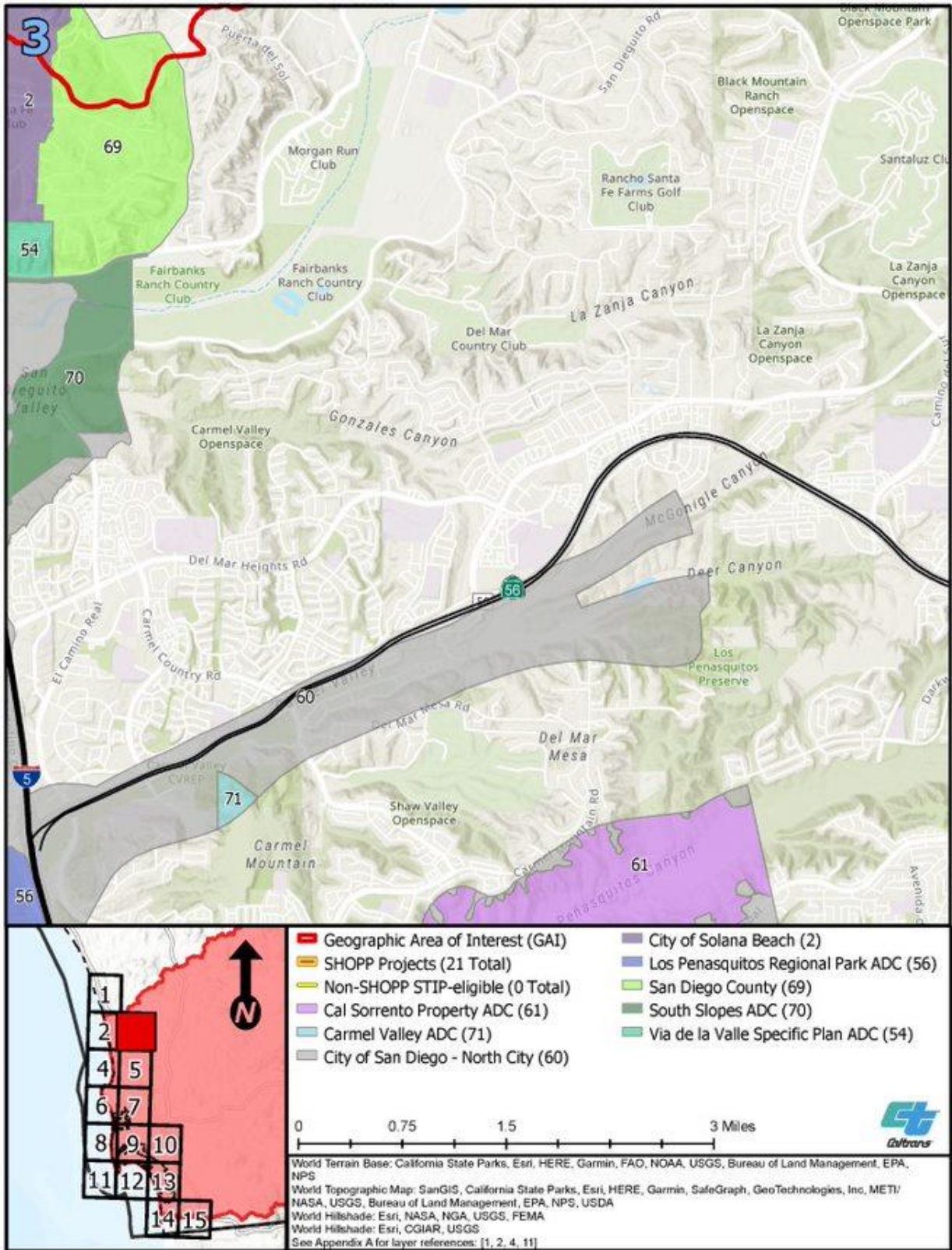
<sup>d</sup> The Port Master Plan is currently undergoing a comprehensive update that will add updated polices regarding habitat buffers and mitigation.



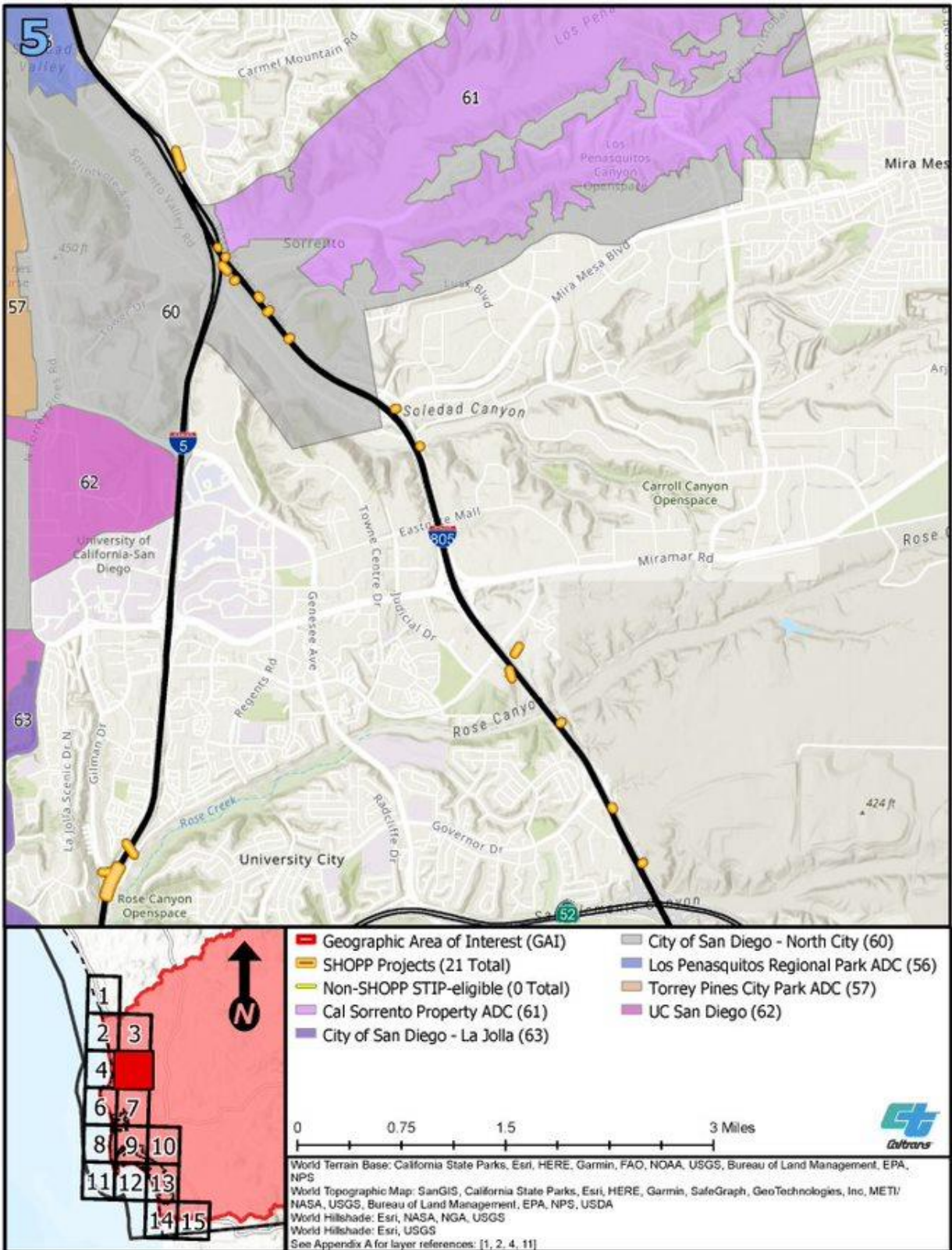


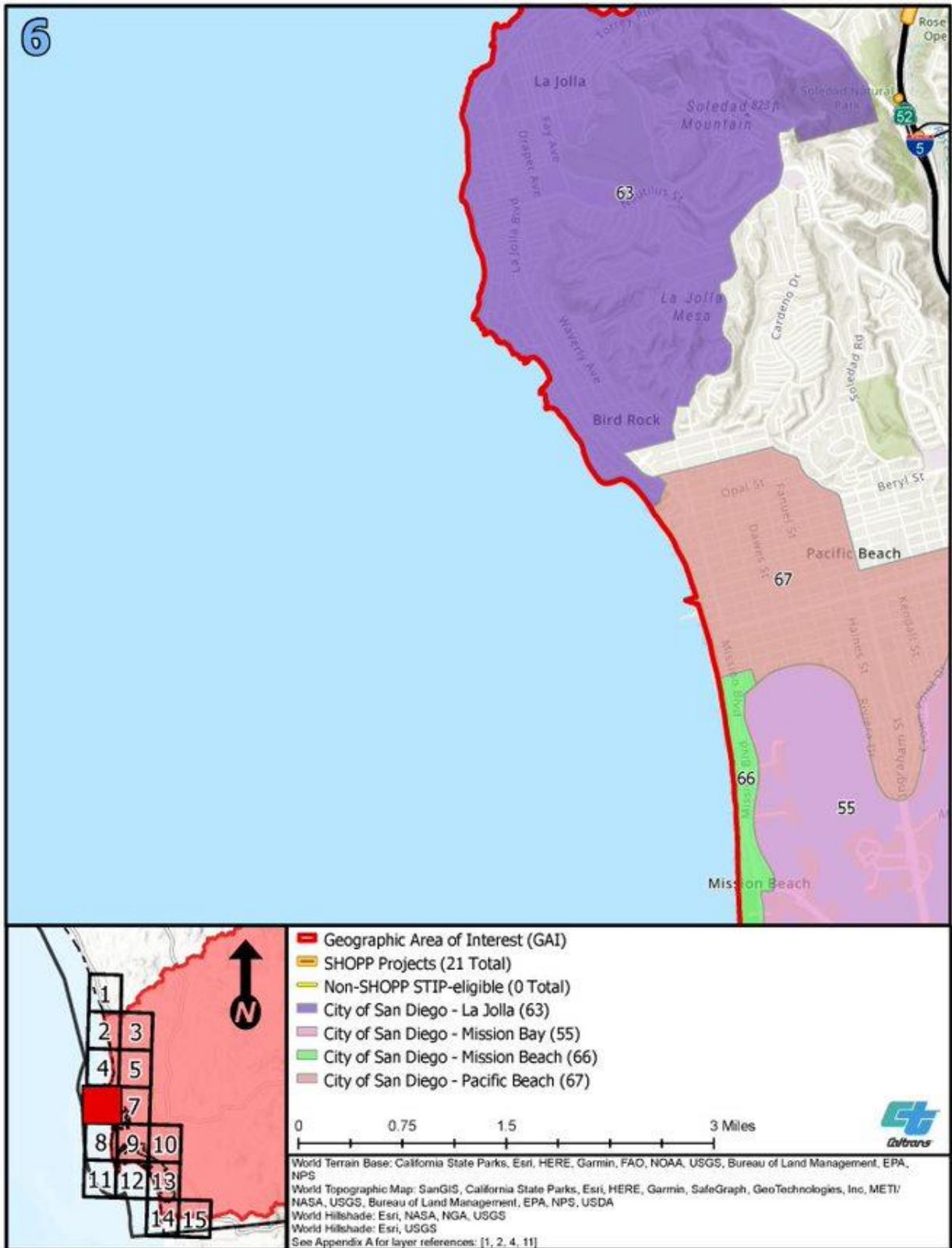


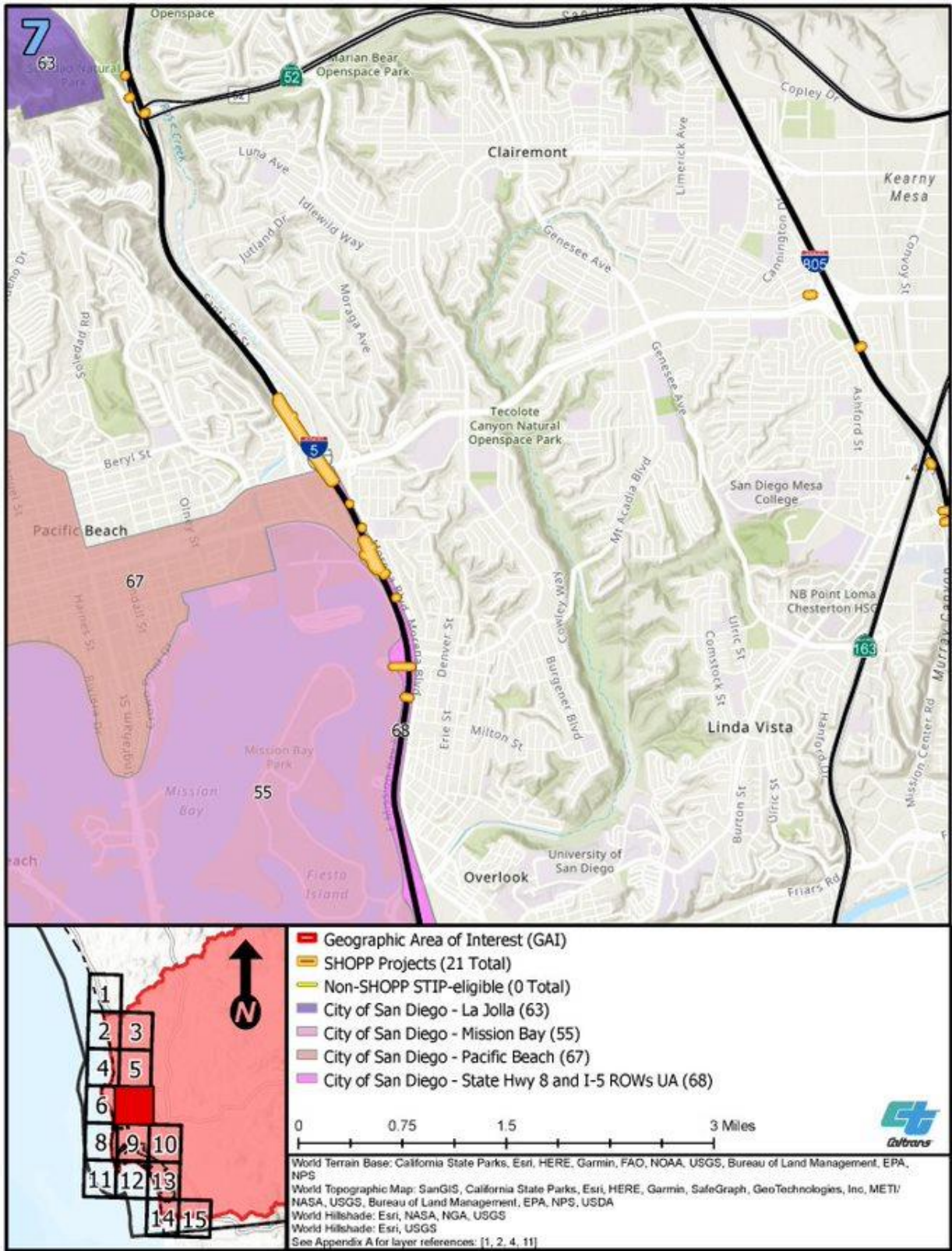


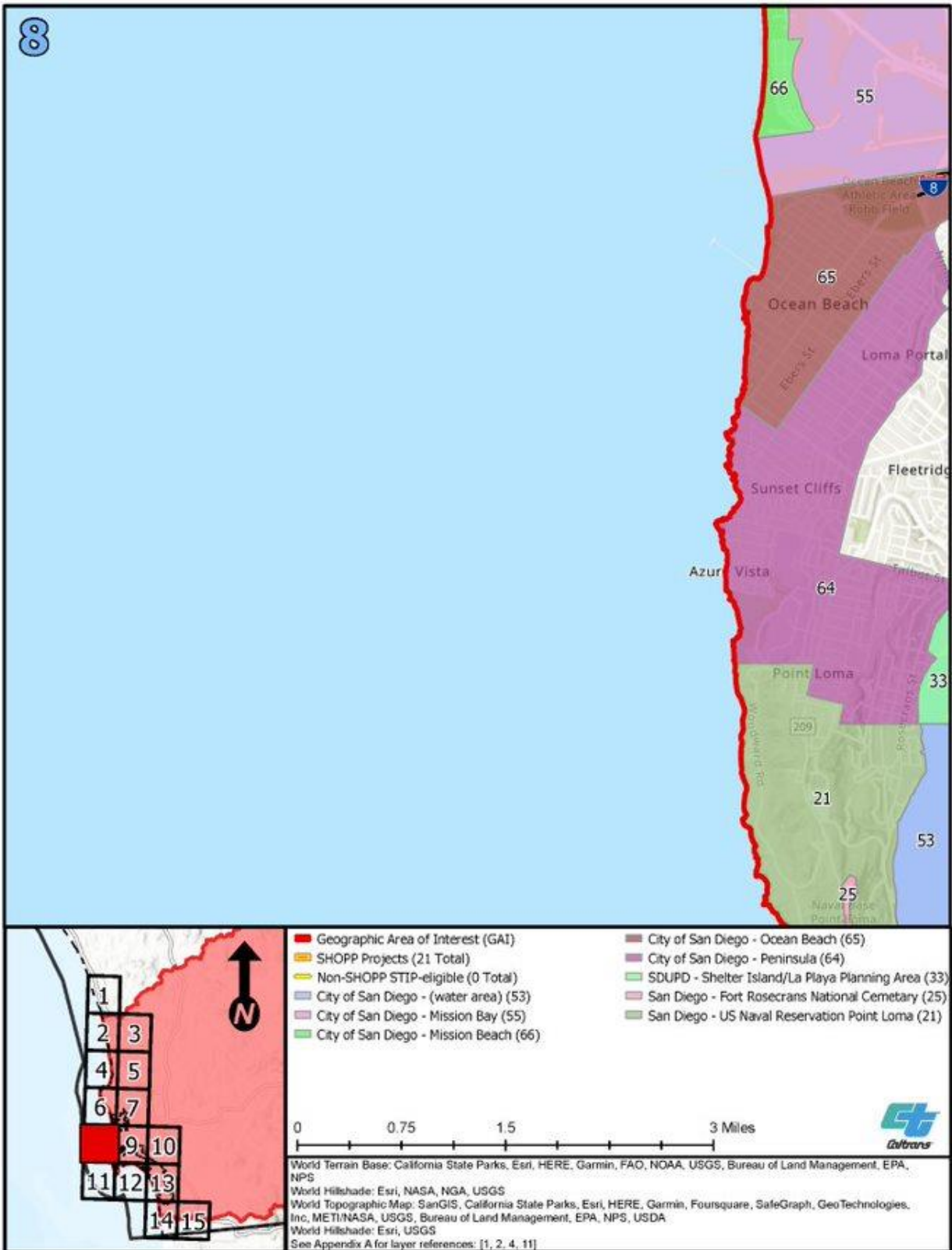


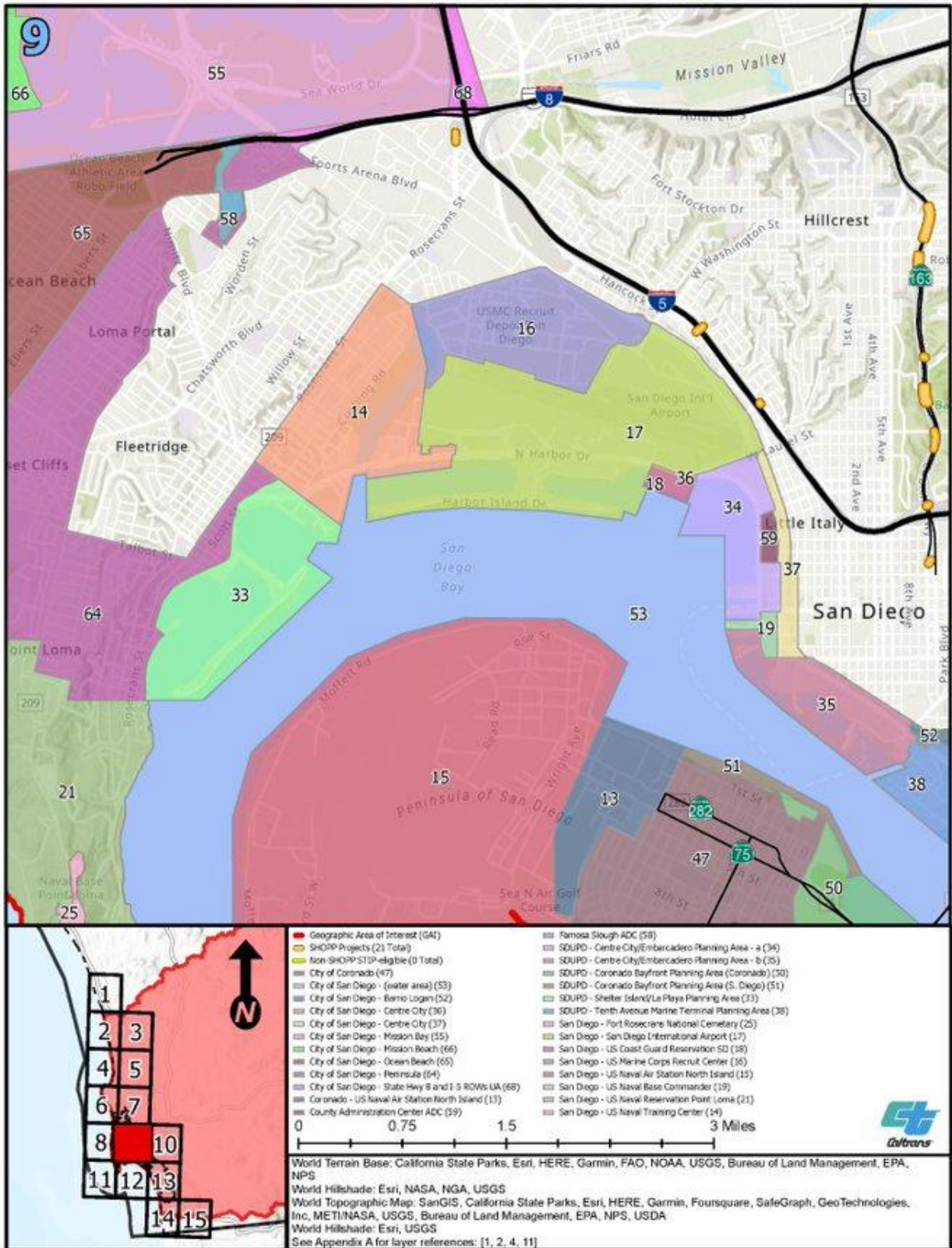




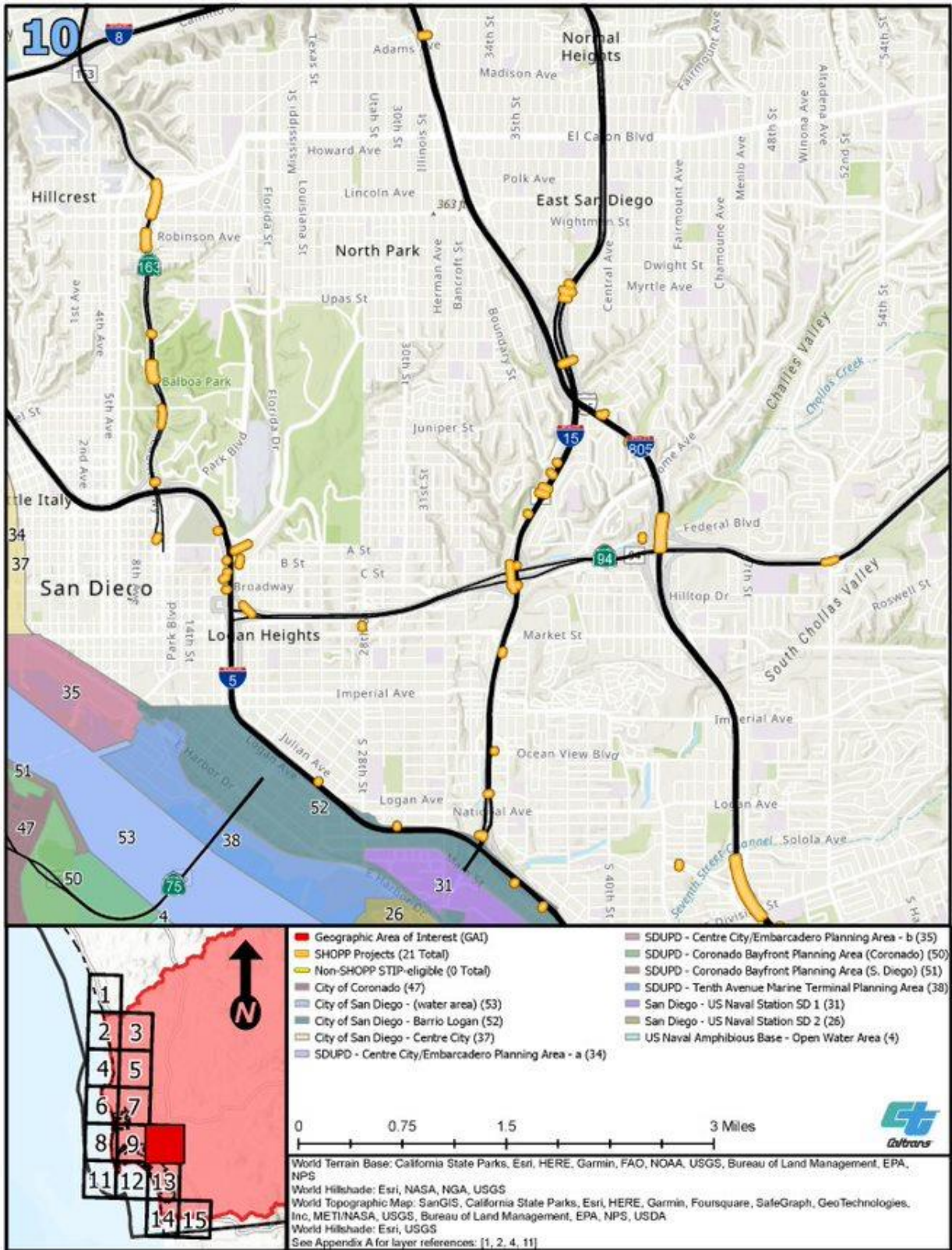


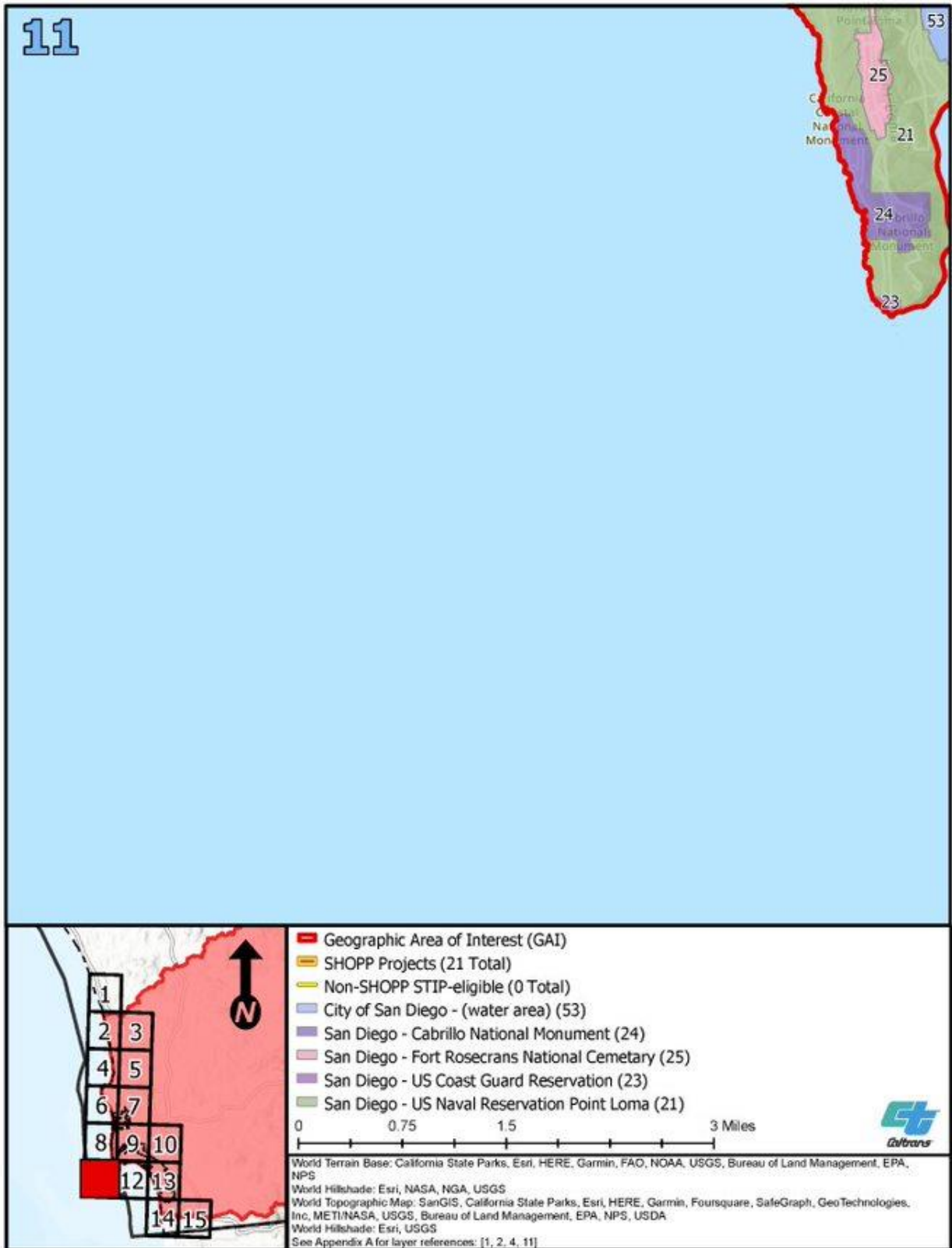


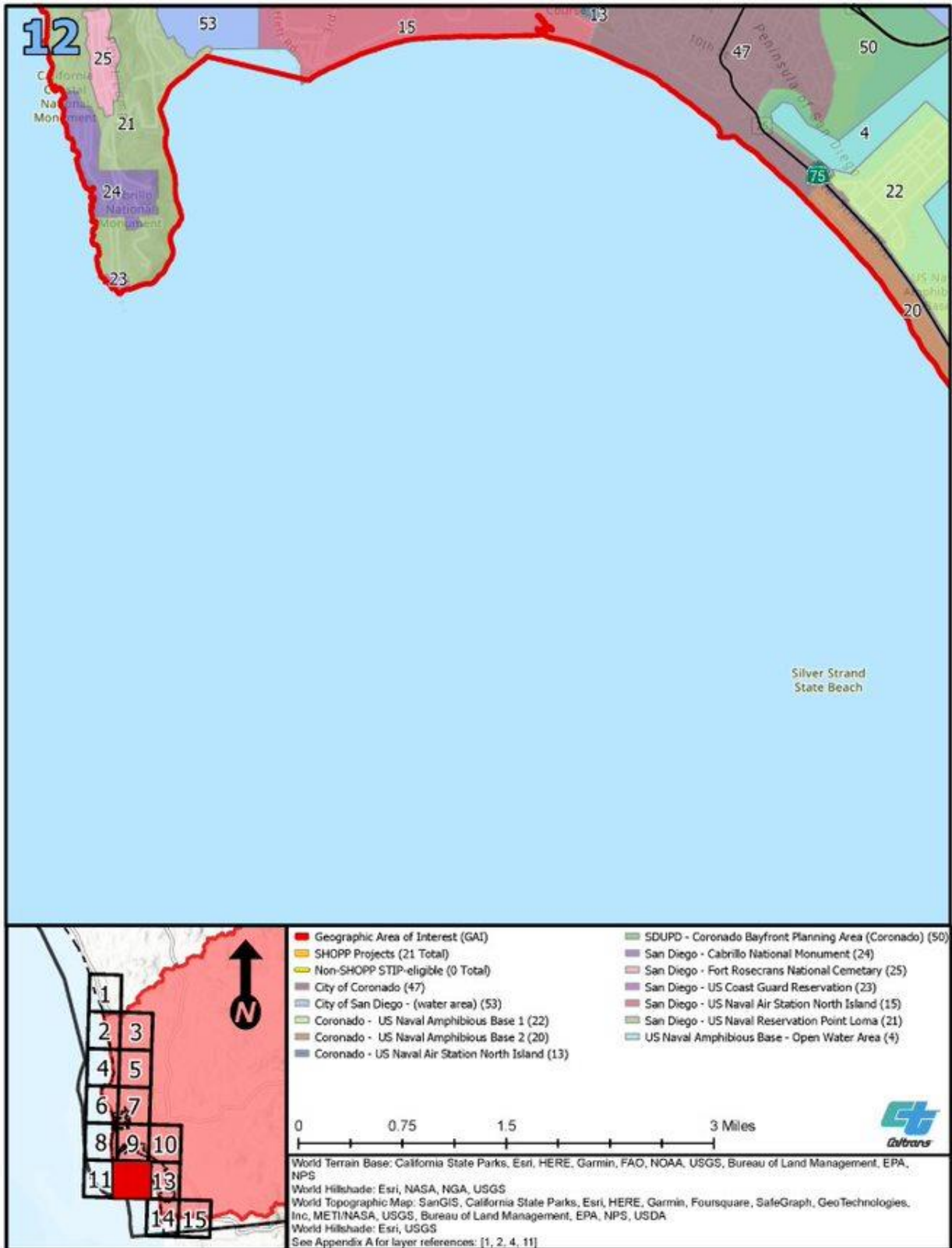


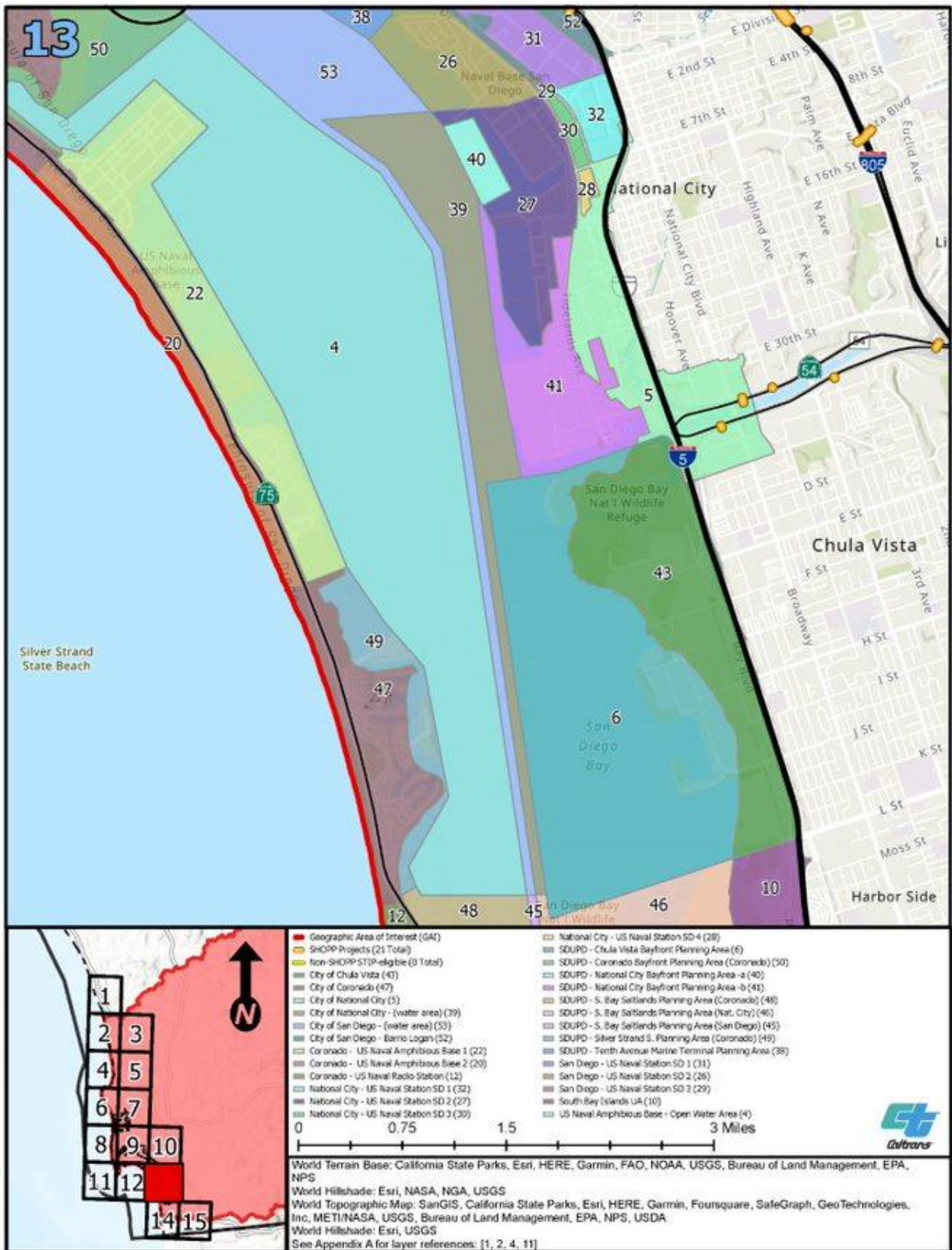


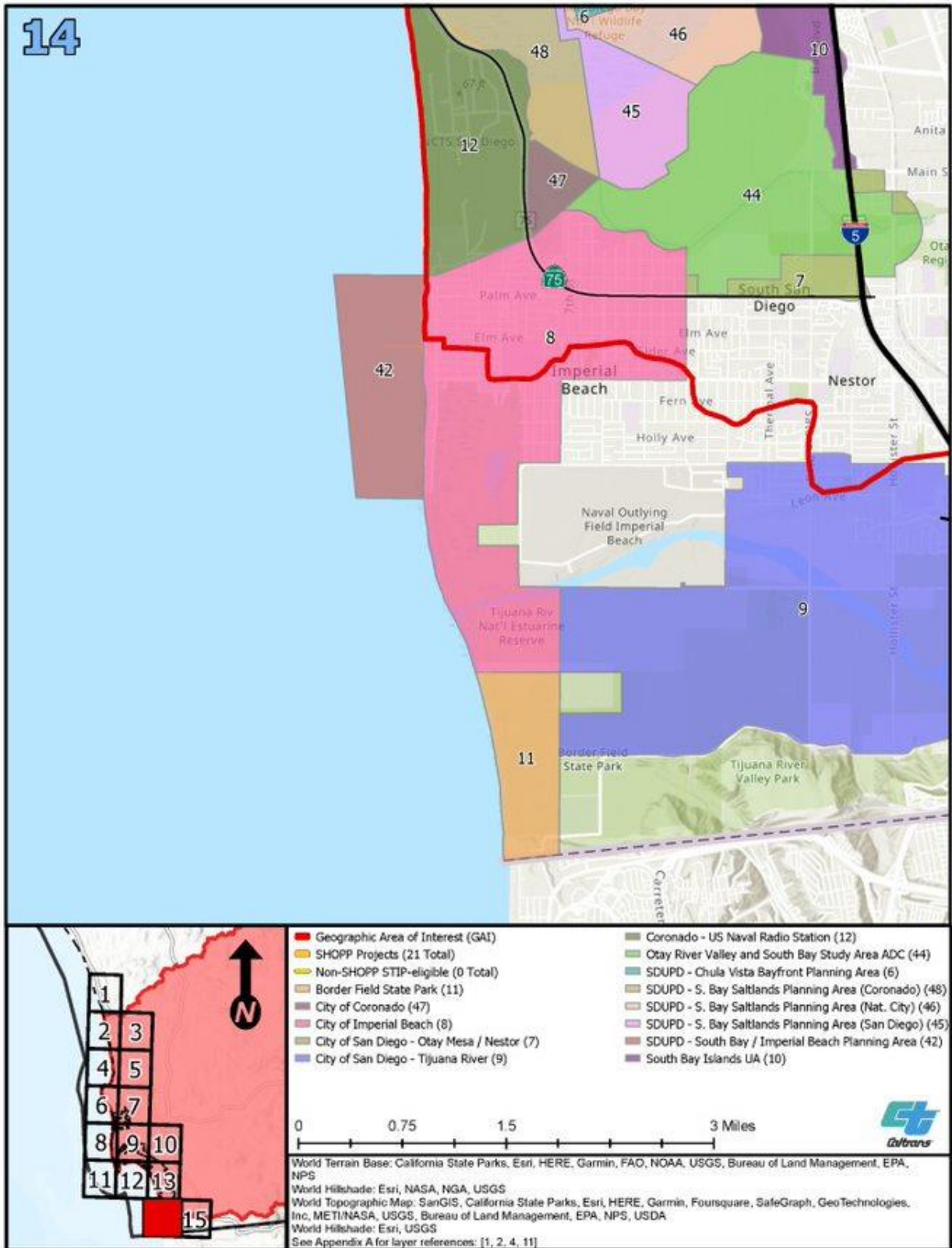


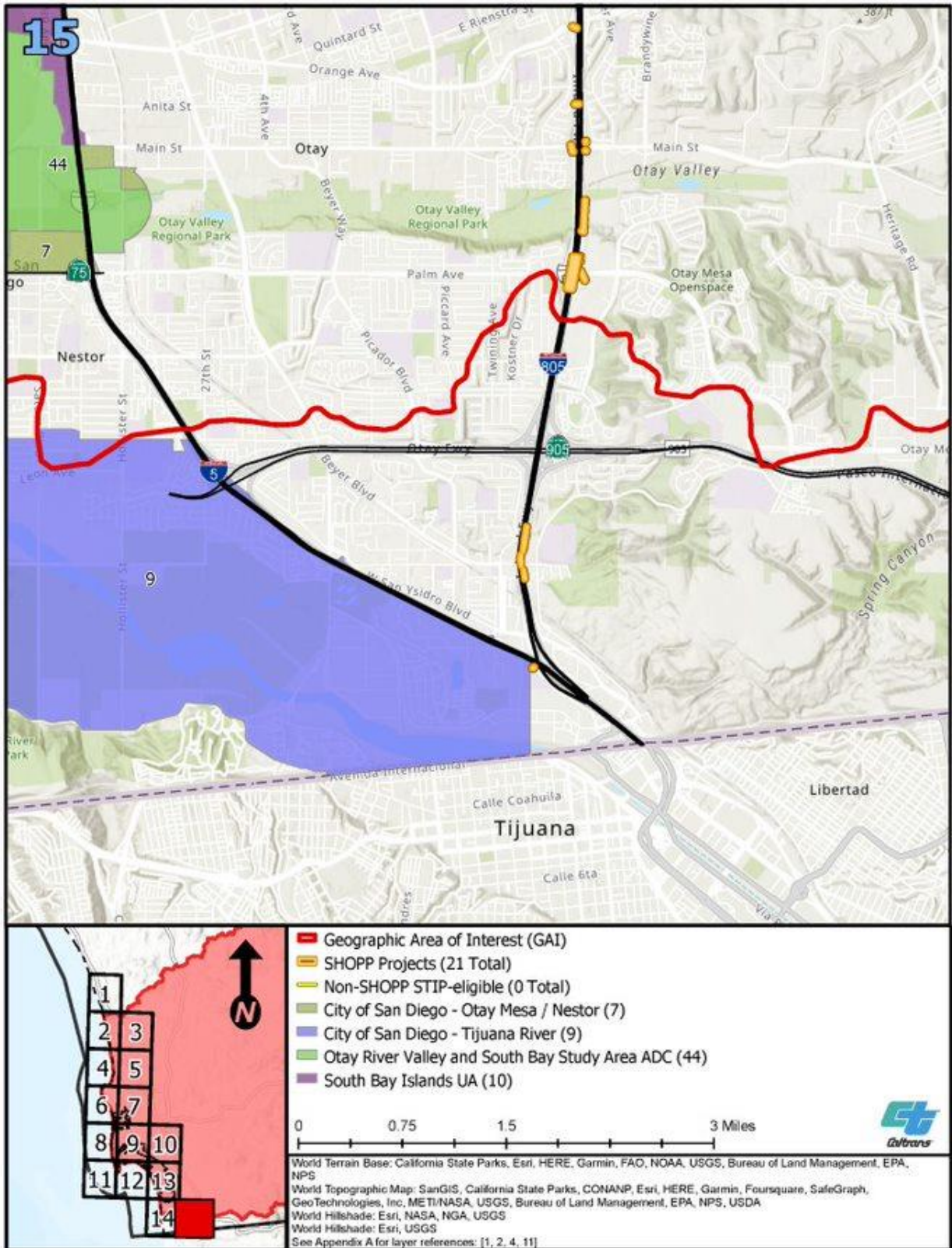












## APPENDIX D: LAND COVER TYPES

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, the USFS Classification and Assessment with LandSat of Visible Ecological Groupings, and the California Department of Forestry and Fire Protection vegetation layer (Caltrans 2021a, 2021b). 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 D-1 indicates which habitat types occur within the ecoregion sections.

A key map is provided after Table D-1 that references mapbook pages including zoomed-in views of locations in the GAI and mapped land cover types (page D-5). These nine maps correspond with the aquatic resources maps in Appendix G.

**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, eucalyptus, Jeffrey pine, montane hardwood, montane hardwood-conifer, montane riparian, Sierran mixed conifer, and valley foothill riparian, which are found in both 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 chamise-redshank chaparral, coastal scrub, desert scrub, desert wash, mixed chaparral, montane chaparral, and sagebrush, which are found in both 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 both 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 open water, which are found in both 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 both 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 both ecoregion sections.

## References

- Caltrans (California Department of Transportation). 2021a. "Vegetation\_D11 in Caltrans District 11 Geospatial Data for the Advance Mitigation Needs Assessment for the First Quarter of FY 2021/2022" (data file). Accessed June 15, 2022. <https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation>.
- . 2021b. *Statewide Advance Mitigation Needs Assessment Report*. State Highway Operation and Protection Program. Ten-Year Project Book. Second Quarter 2021/2022 Fiscal Year. In preparation. 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, K. E., and W. F. Laudenslayer, Jr., eds. 1988. "A Guide to Wildlife Habitats of California." State of California, Resources Agency, Department of Fish and Game. Sacramento, California. Including revisions and updates. Accessed February 6, 2019. <https://www.wildlife.ca.gov/Data/CWHR/Wildlife-Habitats>.

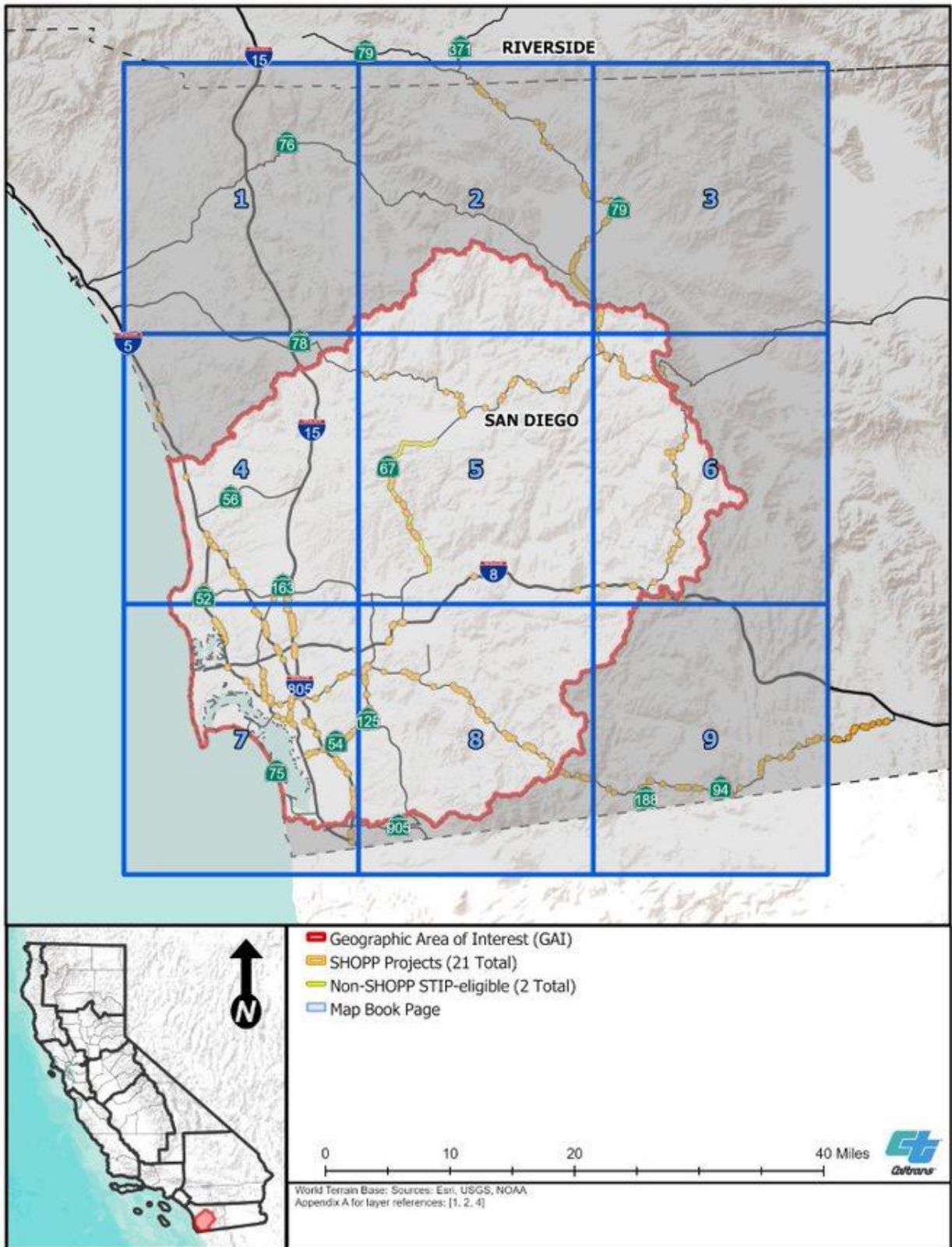


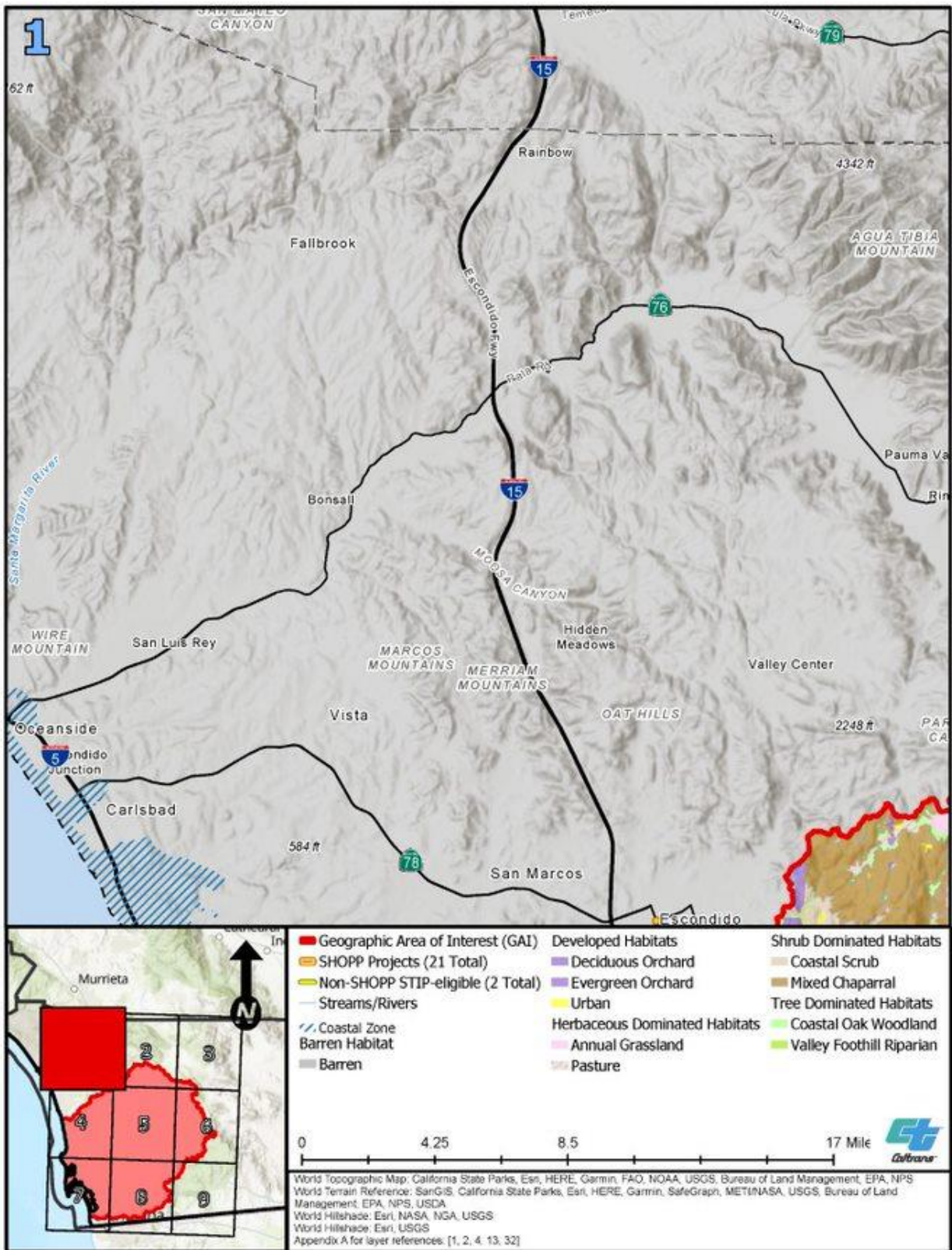
**Table D-1. Land Cover Types in the GAI**

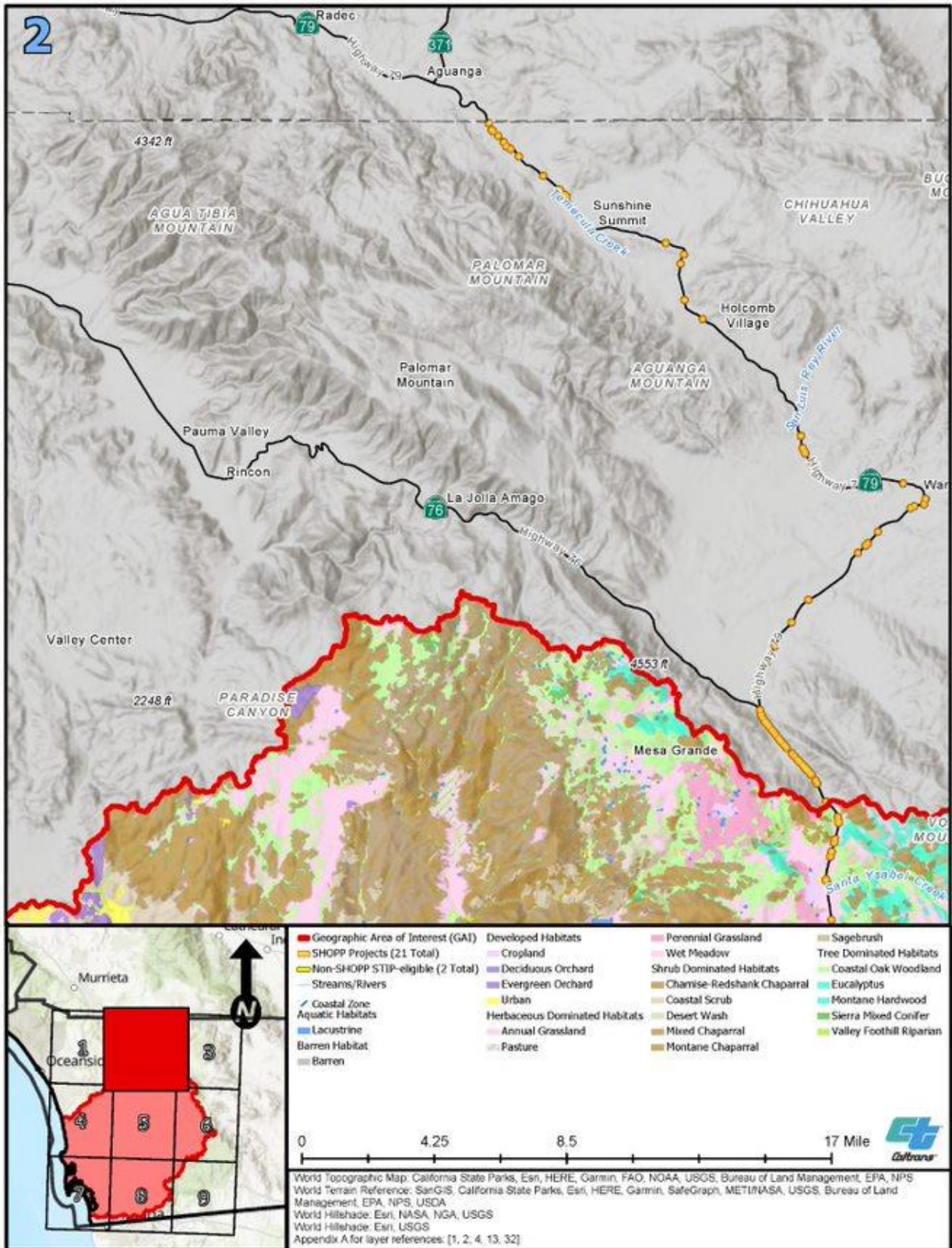
Land Cover Type	Southern California Coast Ecoregion Section	Southern California Mountains and Valleys Ecoregion Section
<b>Tree-dominated Habitats</b>	See below	See below
Closed-Cone Pine-Cypress	Present	Present
Coastal Oak Woodland	Present	Present
Desert Riparian	Present	Not mapped
Eucalyptus	Present	Present
Jeffrey Pine	Not mapped	Present
Montane Hardwood	Not mapped	Present
Montane Hardwood-Conifer	Not mapped	Present
Montane Riparian	Present	Not mapped
Sierran Mixed Conifer	Not mapped	Present
Valley Foothill Riparian	Present	Present
<b>Shrub-dominated Habitats</b>	See below	See below
Chamise-Redshank Chaparral	Present	Present
Coastal Scrub	Present	Present
Desert Scrub	Not mapped	Present
Desert Wash	Present	Present
Mixed Chaparral	Present	Present
Montane Chaparral	Not mapped	Present
Sagebrush	Not mapped	Present
<b>Herbaceous-dominated Habitats</b>	See below	See below
Annual Grassland	Present	Present
Fresh Emergent Wetland	Present	Present
Pasture	Present	Present
Perennial Grassland	Present	Present
Saline Emergent Wetland	Present	Not mapped
Wet Meadow	Present	Present
<b>Aquatic Habitats</b>	See below	See below
Lacustrine	Present	Present
Water	Present	Not mapped

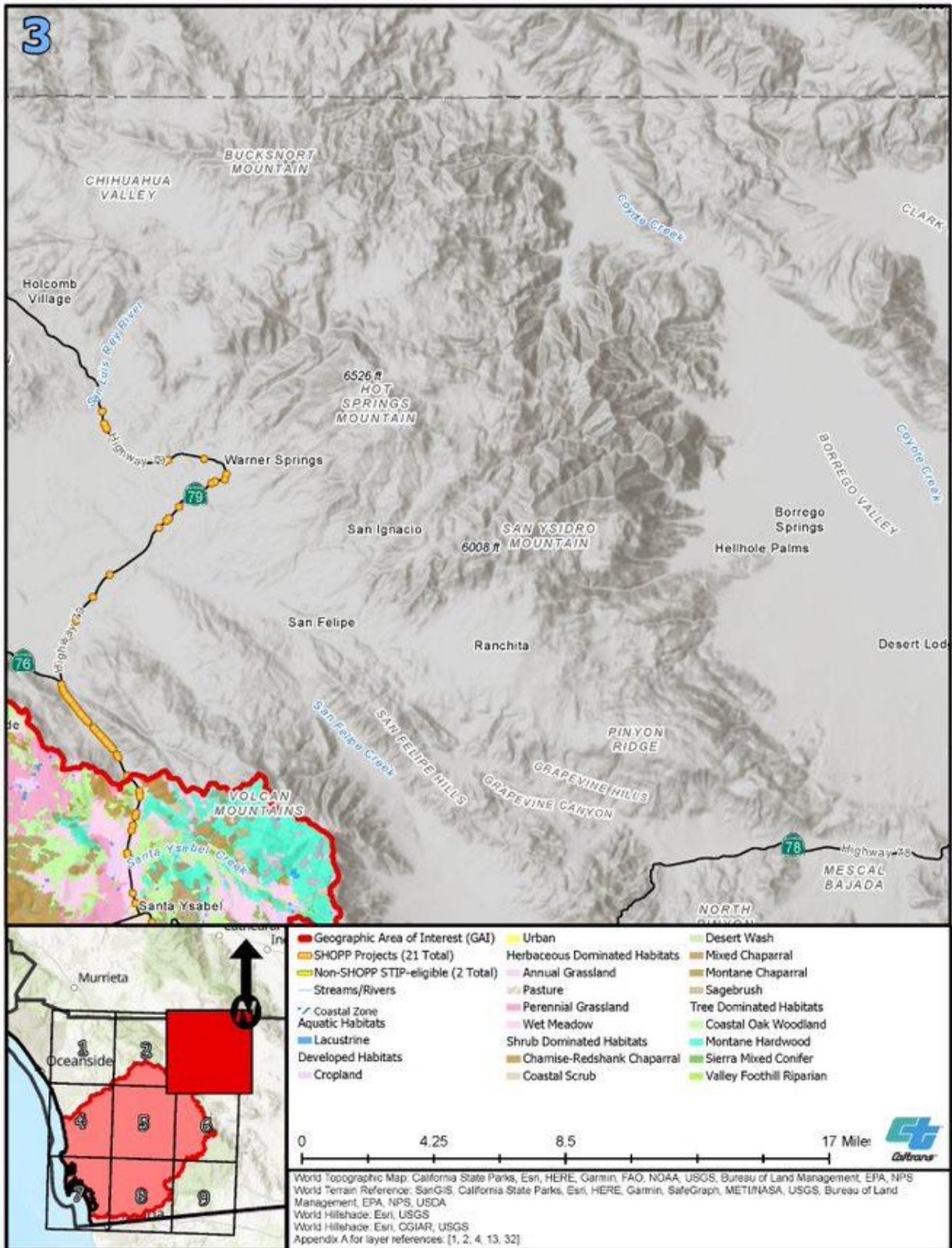
Land Cover Type	Southern California Coast Ecoregion Section	Southern California Mountains and Valleys Ecoregion Section
<b>Developed Habitats</b>	See below	See below
Cropland	Present	Present
Deciduous Orchard	Present	Present
Evergreen Orchard	Present	Present
Urban	Present	Present
Vineyard	Not mapped	Present
<b>Non-vegetated Habitats</b>	See below	See below
Barren	Present	Present

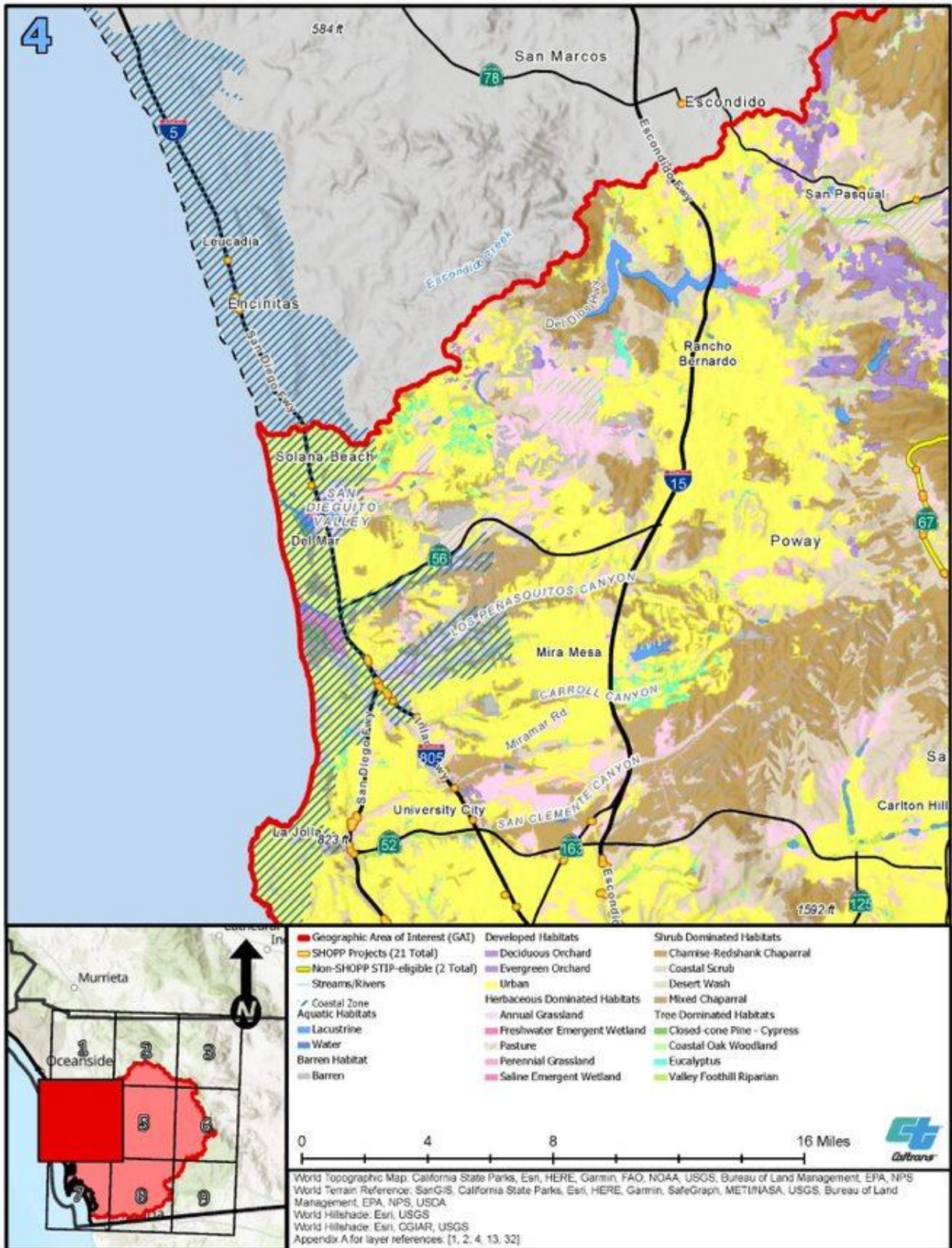
Sources: Caltrans 2021a, 2021b

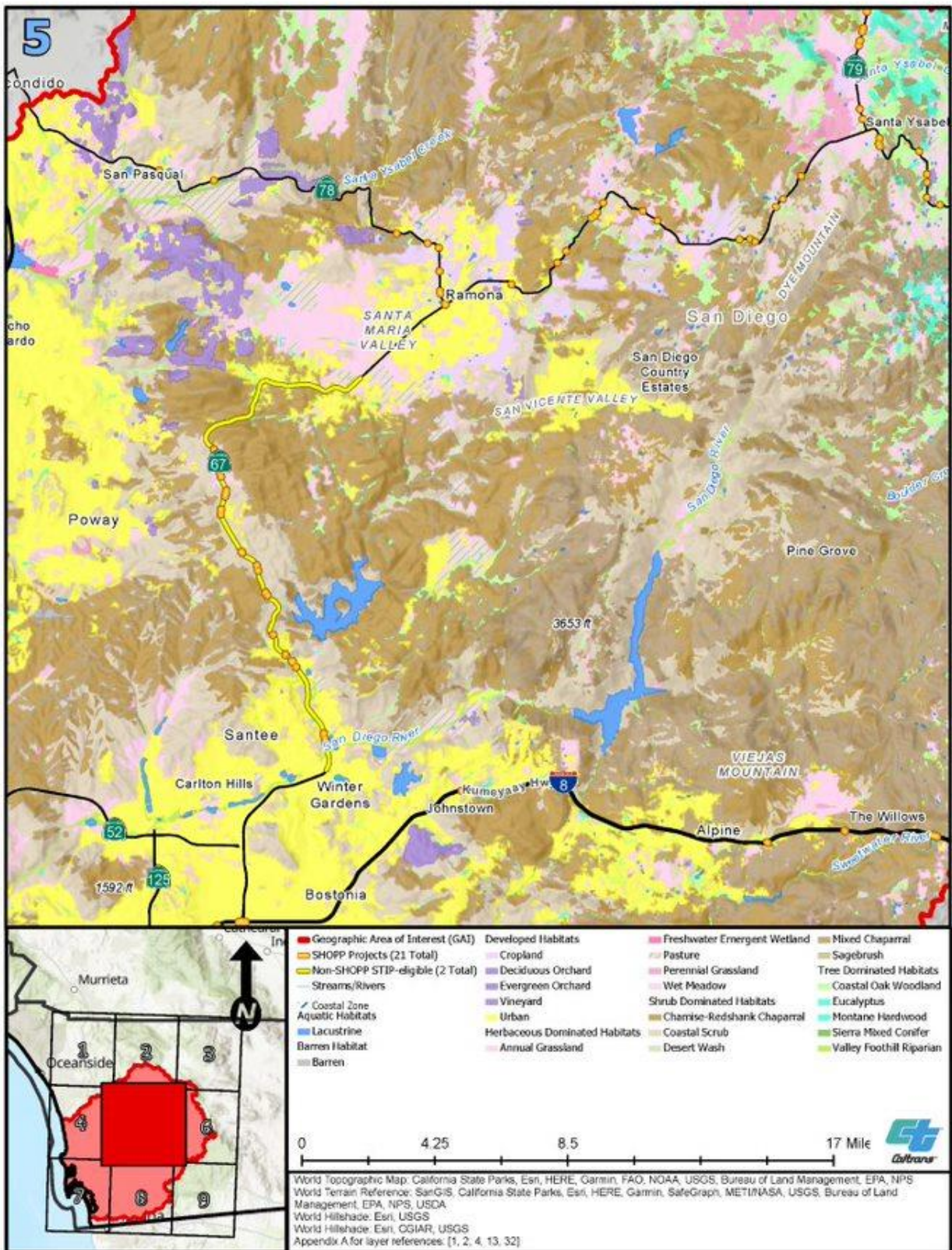




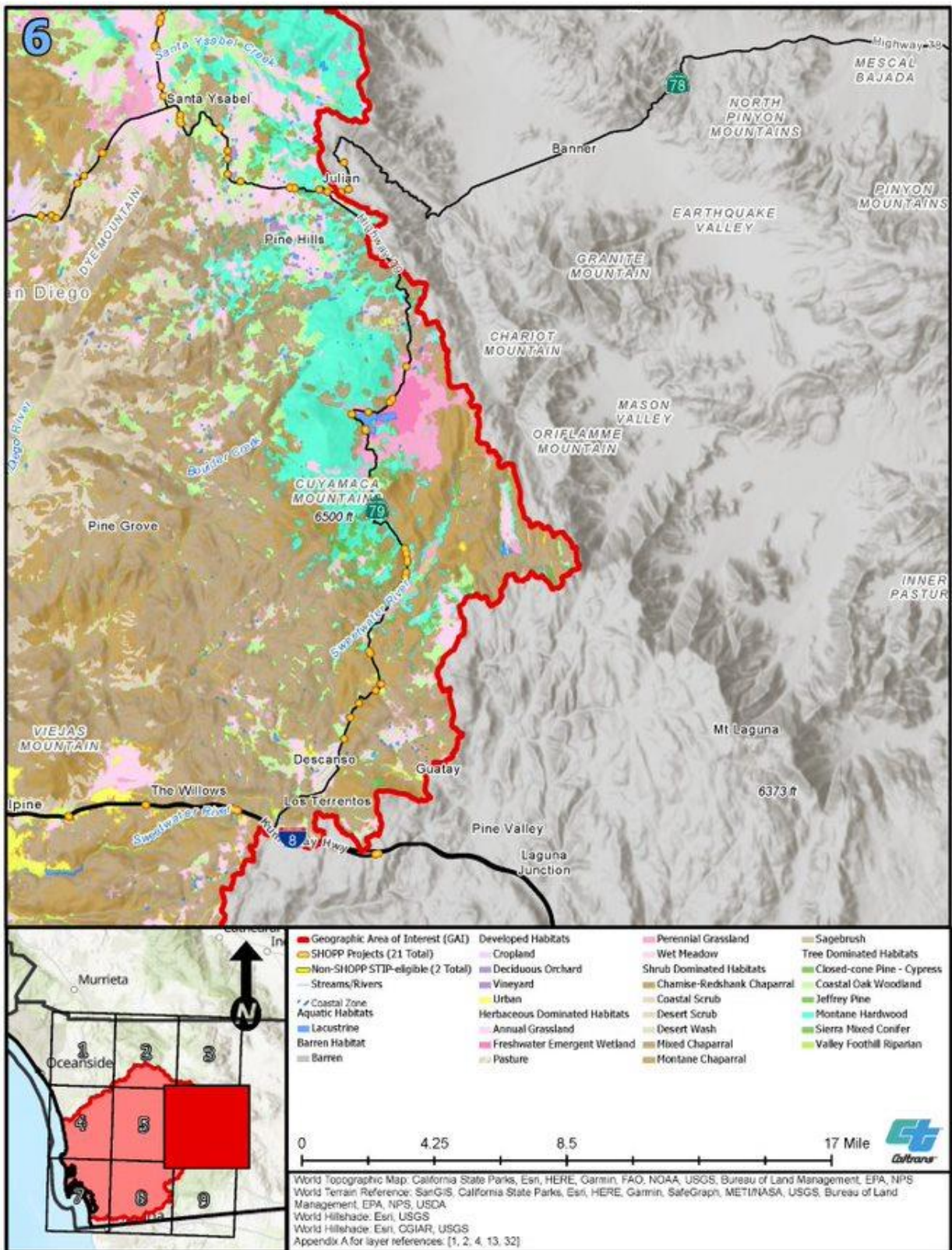


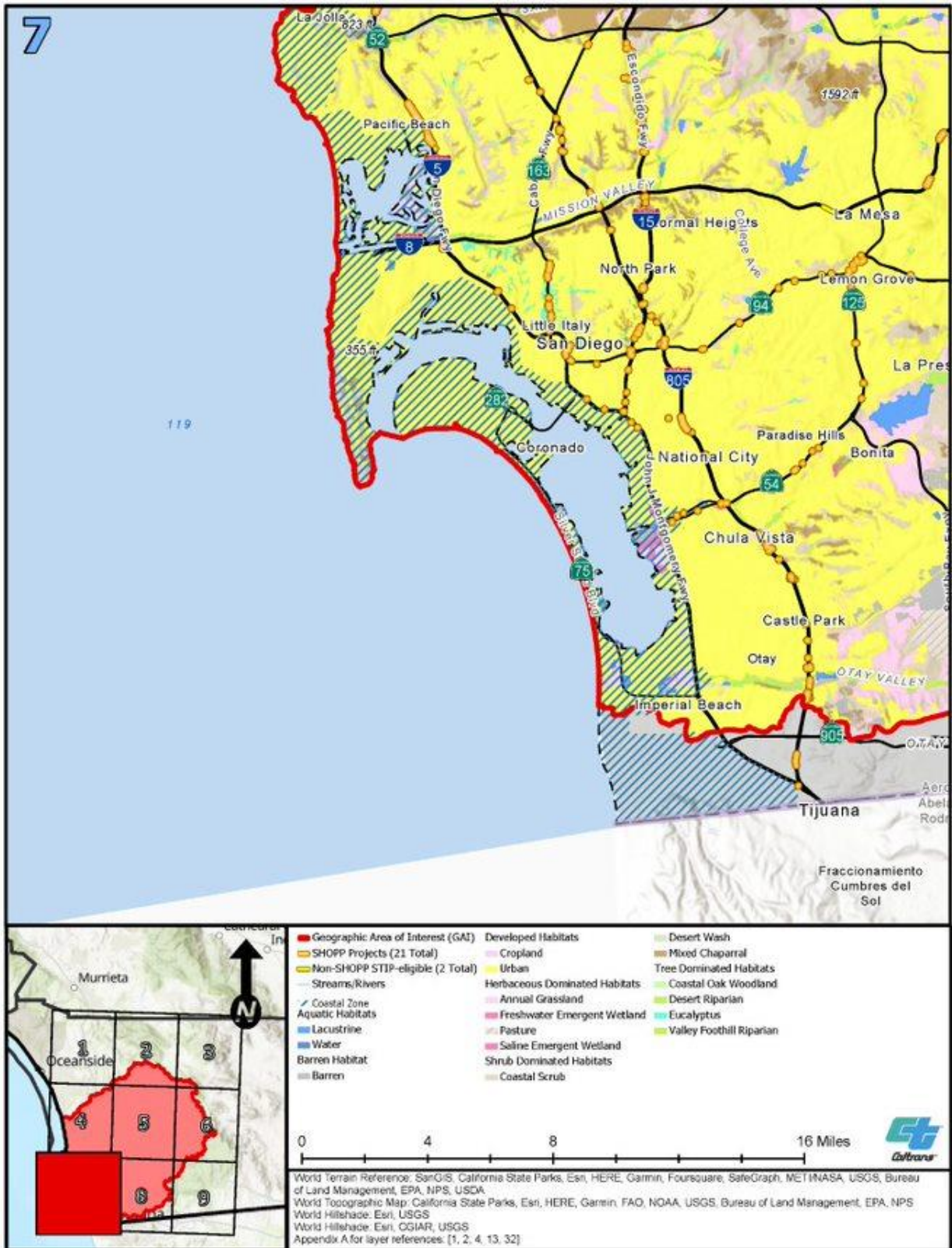


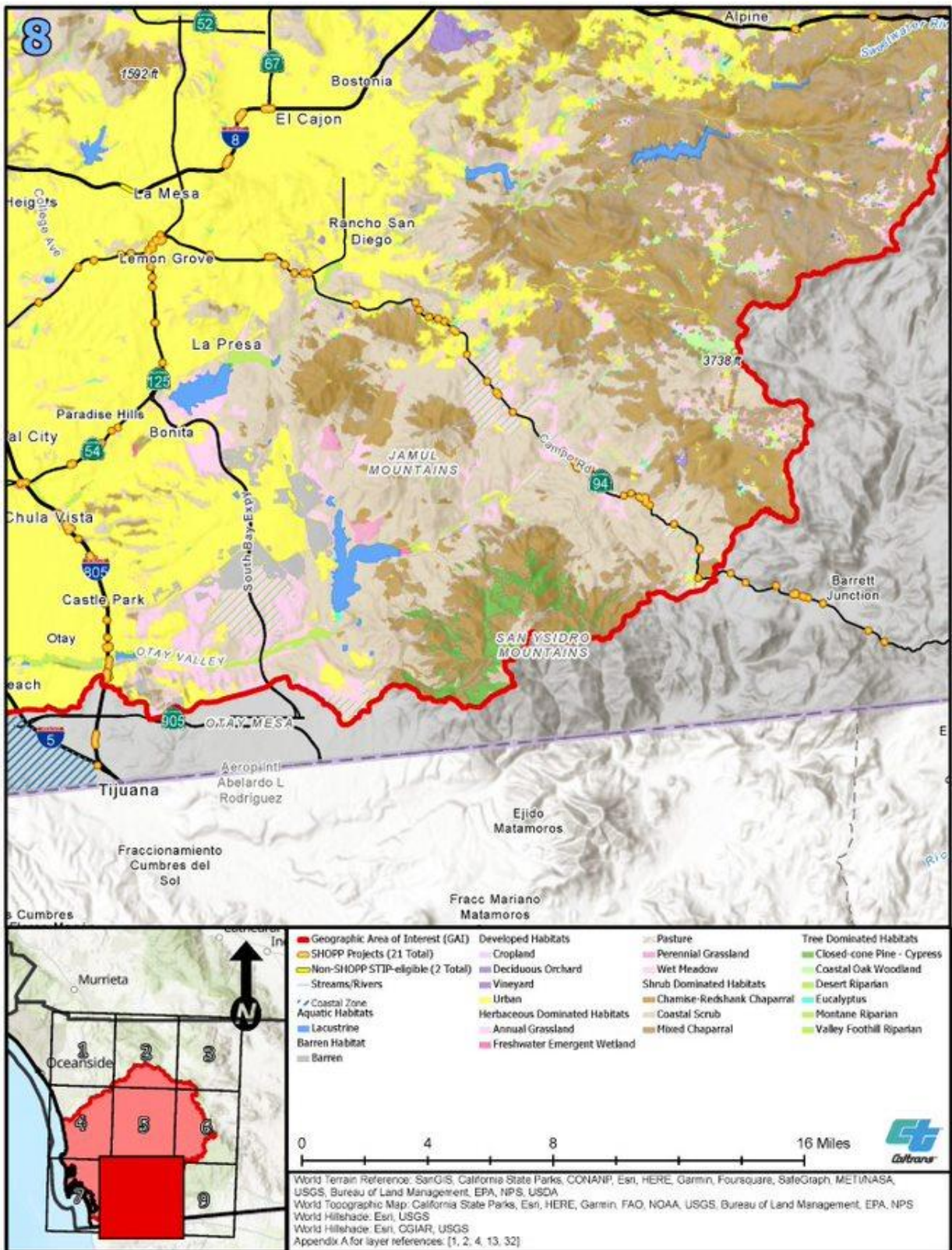


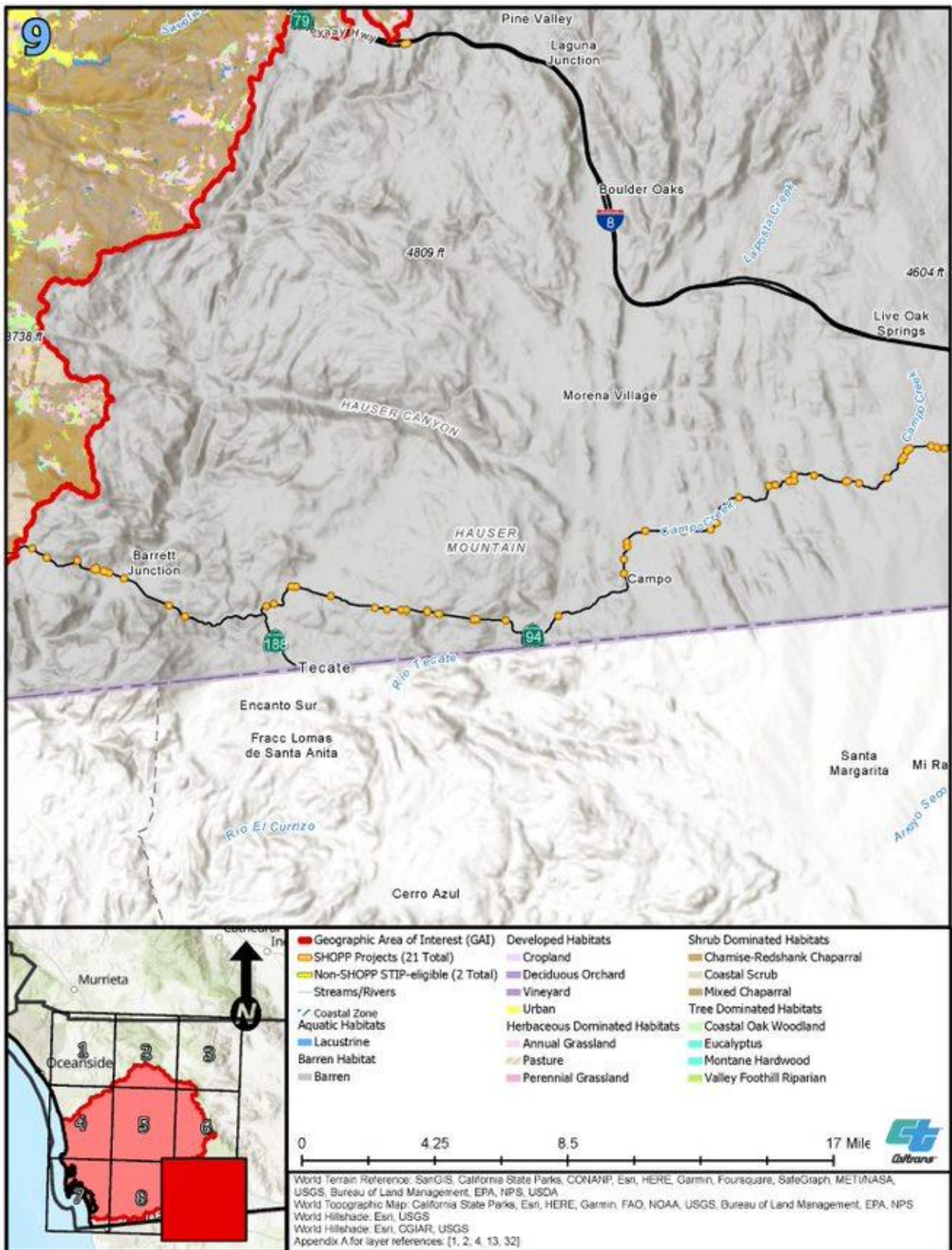












## APPENDIX E: COMPLETE SAMNA SPECIES RESULTS

Complete terrestrial species SAMNA results for the GAI are provided in Tables E-1 and E-2. Table E-1 consists of SAMNA results for the Southern California Coast Section within the GAI (starts on page E-3). Table E-2 consists of the SAMNA results for the Southern California Mountains and Valleys Section within the GAI (starts on page E-10). 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 2021).

SAMNA results are only as accurate as their foundational data and have not been ground-truthed. Regarding these results:

- Species without CWHR system-supplied home ranges but identified by the California Natural Diversity Database as potentially present will be incorporated into the analysis of specific advance mitigation projects and future transportation projects.
- Subspecies may or may not have CWHR-supplied or other documented sources showing their home ranges. When a subspecies did not have home range information that could 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 sources<sup>1</sup> 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.
- Only habitats with forecast impacts, and the special-status species that use those habitats, are included in this appendix.

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

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<sup>1</sup> For plants, this includes CNPS 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 National Park Service documents.

Habitats referenced in Tables E-1 and E-2 are mapped in Appendix D. The terrestrial species of mitigation need for this GAI include coastal California gnatcatcher (*Poliioptila californica californica*) and least Bell's vireo (*Vireo bellii pusillus*). 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 and E-2 and are provided in Tables 5-6 and 5-7 in Chapter 5 of the main text.

## References

- Caltrans (California Department of Transportation). 2021. *Statewide Advance Mitigation Needs Assessment Report*. State Highway Operation and Protection Program. Ten-Year Project Book. Second Quarter 2019/2020 Fiscal Year. April. Sacramento, California.
- 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 Southern California Coast Ecoregion Section in District 11, by Land Cover (acres)**

Common Name	Scientific Name	Status	Annual Grassland	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Mixed Chaparral	Pasture	Urban	Valley Foothill Riparian	Grand Total
<b>Plants</b>	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
San Diego thorn-mint	<i>Acanthomintha ilicifolia</i>	FT, SE	0.40	0.00	0.00	0.00	2.80	0.00	0.41	0.00	0.00	0.00	<b>3.60</b>
Munz's onion <sup>a</sup>	<i>Allium munzii</i>	FE, ST	0.40	0.00	0.00	0.00	2.80	0.00	0.41	0.00	0.00	0.00	<b>3.60</b>
San Diego ambrosia	<i>Ambrosia pumila</i>	FE	0.40	0.00	0.00	0.00	2.80	0.00	0.41	0.00	0.00	0.00	<b>3.60</b>
Del Mar manzanita	<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	FE	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00	<b>0.41</b>
Braunton's milk-vetch <sup>a</sup>	<i>Astragalus brauntonii</i>	FE	0.40	0.00	0.00	0.00	2.80	0.00	0.41	0.00	0.00	0.00	<b>3.60</b>
Ventura marsh milk-vetch <sup>a</sup>	<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	FE, SE	0.00	0.00	0.00	0.00	2.51	0.00	0.00	0.00	0.00	0.00	<b>2.51</b>
Coastal dunes milk-vetch	<i>Astragalus tener</i> var. <i>titi</i>	FE, SE	0.00	0.00	0.00	0.00	2.51	0.00	0.00	0.00	0.00	0.00	<b>2.51</b>
San Jacinto Valley crownscale <sup>a</sup>	<i>Atriplex coronata</i> var. <i>notatior</i>	FE	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.16</b>
Encinitas baccharis	<i>Baccharis vanessae</i>	FT, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00	<b>0.41</b>
Nevin's barberry	<i>Berberis nevinii</i>	FE, SE	0.00	0.00	0.00	0.00	2.80	0.00	0.41	0.00	0.00	0.00	<b>3.21</b>
Thread-leaved brodiaea	<i>Brodiaea filifolia</i>	FT, SE	0.40	0.00	0.00	0.00	2.80	0.00	0.41	0.00	0.00	0.00	<b>3.60</b>
Dunn's mariposa lily	<i>Calochortus dunnii</i>	FS, SR	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.24</b>
Salt marsh bird's-beak	<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	FE, SE	0.00	0.00	0.00	0.00	2.51	0.00	0.00	0.00	0.00	0.00	<b>2.51</b>
Orcutt's spineflower	<i>Chorizanthe orcuttiana</i>	FE, SE	0.00	0.00	0.00	0.00	2.51	0.00	0.41	0.00	0.00	0.00	<b>2.92</b>
Otay tarplant	<i>Deinandra conjugens</i>	FT, SE	0.40	0.00	0.00	0.00	2.80	0.00	0.00	0.00	0.00	0.00	<b>3.19</b>
Gaviota tarplant <sup>a</sup>	<i>Deinandra increscens</i> ssp. <i>villosa</i>	FE, SE	0.16	0.00	0.00	0.00	2.51	0.00	0.00	0.00	0.00	0.00	<b>2.67</b>
Mojave tarplant	<i>Deinandra mohavensis</i>	FS, SE	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.00	<b>0.29</b>
Cuyamaca larkspur <sup>a</sup>	<i>Delphinium hesperium</i> ssp. <i>cuyamacae</i>	FS, SR	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.24</b>
Beach spectaclepod <sup>a</sup>	<i>Dithyrea maritima</i>	FS, ST	0.00	0.00	0.00	0.00	2.51	0.00	0.00	0.00	0.00	0.00	<b>2.51</b>
Slender-horned spineflower <sup>a</sup>	<i>Dodecahema leptoceras</i>	FE, SE	0.00	0.00	0.00	0.00	2.80	0.00	0.41	0.00	0.00	0.00	<b>3.21</b>

Common Name	Scientific Name	Status	Annual Grassland	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Mixed Chaparral	Pasture	Urban	Valley Foothill Riparian	Grand Total
Cuyamaca Lake downingia <sup>a</sup>	<i>Downingia concolor</i> var. <i>brevior</i>	SE	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.24</b>
Short-leaved dudleya	<i>Dudleya brevifolia</i>	SE	0.00	0.00	0.00	0.00	2.51	0.00	0.41	0.00	0.00	0.00	<b>2.92</b>
Laguna Beach dudleya <sup>a</sup>	<i>Dudleya stolonifera</i>	FT, ST	0.16	0.00	0.00	0.00	2.51	0.00	0.41	0.00	0.00	0.00	<b>3.08</b>
Santa Ana River woollystar <sup>a</sup>	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	FE, SE	0.00	0.00	0.00	0.00	2.51	0.00	0.41	0.00	0.00	0.00	<b>2.92</b>
San Diego button-celery	<i>Eryngium aristulatum</i> var. <i>parishii</i>	FE, SE	0.40	0.00	0.00	0.00	2.80	0.00	0.00	0.00	0.00	0.00	<b>3.19</b>
Roderick's fritillary	<i>Fritillaria roderickii</i>	SE	0.40	0.00	0.00	0.00	2.80	0.00	0.00	0.00	0.00	0.00	<b>3.19</b>
Orcutt's hazardia	<i>Hazardia orcuttii</i>	ST	0.00	0.00	0.00	0.00	2.51	0.00	0.41	0.00	0.00	0.00	<b>2.92</b>
Contra Costa goldfields <sup>a</sup>	<i>Lasthenia conjugens</i>	FE	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.16</b>
Parish's meadowfoam <sup>a</sup>	<i>Limnanthes alba</i> ssp. <i>parishii</i>	FS, SE	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.24</b>
Willow monardella	<i>Monardella viminea</i>	FE, SE	0.00	0.00	0.00	0.00	2.51	0.00	0.41	0.00	0.00	0.35	<b>3.27</b>
Spreading navarretia	<i>Navarretia fossalis</i>	FT	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.40</b>
California Orcutt grass	<i>Orcuttia californica</i>	FE, SE	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.40</b>
Baja California birdbush	<i>Ornithostaphylos oppositifolia</i>	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.00	<b>0.41</b>
Lyon's pentachaeta <sup>a</sup>	<i>Pentachaeta lyonii</i>	FE, SE	0.16	0.00	0.00	0.00	2.51	0.00	0.41	0.00	0.00	0.00	<b>3.08</b>
San Diego mesa mint	<i>Pogogyne abramsii</i>	FE, SE	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.16</b>
Otay Mesa mint	<i>Pogogyne nudiuscula</i>	FE, SE	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.16</b>
Small-leaved rose	<i>Rosa minutifolia</i>	SE	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.00	<b>0.29</b>
Big-leaved crownbeard <sup>a</sup>	<i>Verbesina dissita</i>	FT, ST	0.00	0.00	0.00	0.00	2.51	0.00	0.41	0.00	0.00	0.00	<b>2.92</b>
<b>Invertebrates</b>	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
San Diego fairy shrimp	<i>Branchinecta sandiegonensis</i>	FE	0.24	0.00	0.34	0.00	1.75	0.00	0.00	0.00	0.00	0.00	<b>2.33</b>
Quino checkerspot butterfly <sup>b</sup>	<i>Euphydryas editha quino</i>	FE <sup>c</sup>	0.00	0.00	0.00	0.00	0.61	0.00	0.06	0.00	0.00	0.00	<b>0.67</b>
Hermes copper butterfly	<i>Lycaena hermes</i>	FT, FS	0.00	0.00	0.00	0.00	0.45	0.00	0.06	0.00	0.00	0.00	<b>0.51</b>
Riverside fairy shrimp	<i>Streptocephalus woottoni</i>	FE	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.01</b>



Common Name	Scientific Name	Status	Annual Grassland	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Mixed Chaparral	Pasture	Urban	Valley Foothill Riparian	Grand Total
<b>Amphibians</b>	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	0.00	0.07	0.41	0.00	0.00	0.51	<b>0.99</b>
Southern California slender salamander <sup>c</sup>	<i>Batrachoseps major</i>	FE, SE	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.03</b>
Ensatina <sup>d</sup>	<i>Ensatina eschscholtzii</i>	FS	0.00	0.00	0.00	0.20	2.80	1.48	0.41	0.00	0.00	0.51	<b>5.40</b>
California red-legged frog	<i>Rana draytonii</i>	FT, SSC	0.40	0.00	0.00	0.20	2.80	1.48	0.41	0.00	0.00	0.51	<b>5.80</b>
Western spadefoot	<i>Spea hammondi</i>	FS, SSC	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.00	0.00	0.00	<b>5.62</b>
<b>Reptiles</b>	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
California legless lizard	<i>Anniella pulchra</i>	FS, SSC	0.00	0.00	0.34	0.20	2.80	1.48	0.41	0.00	0.00	0.51	<b>5.74</b>
Orange-throated whiptail	<i>Aspidoscelis hyperythra</i>	FS	0.00	0.00	0.34	0.20	2.80	0.00	0.41	0.00	0.00	0.00	<b>3.74</b>
Coachwhip	<i>Masticophis [Coluber] flagellum<sup>e</sup></i>	None	0.24	0.00	0.00	0.20	0.29	0.00	0.00	0.16	0.00	0.16	<b>1.05</b>
Striped racer <sup>f</sup>	<i>Masticophis [Coluber] lateralis<sup>e</sup></i>	FT, ST	0.00	0.00	0.34	0.20	2.80	1.48	0.41	0.00	0.00	0.51	<b>5.74</b>
Red diamond rattlesnake	<i>Crotalus ruber</i>	FS, SSC	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.00	0.00	0.51	<b>6.17</b>
Ring-necked snake	<i>Diadophis punctatus</i>	FS	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.04</b>
Blainville's horned lizard	<i>Phrynosoma blainvillii</i>	FS, SSC	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.00	0.00	0.51	<b>6.14</b>
Gophersnake	<i>Pituophis catenifer</i>	None	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.04</b>
Western skink	<i>Plestiodon skiltonianus</i>	FS	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.16	0.00	0.51	<b>6.30</b>
Western patch-nosed snake	<i>Salvadora hexalepis</i>	SSC	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.00	0.00	0.51	<b>6.17</b>
Two-striped gartersnake	<i>Thamnophis hammondi</i>	FS, SSC	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.00	0.00	0.51	<b>6.14</b>
Common gartersnake	<i>Thamnophis sirtalis</i>	SSC	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.16	0.00	0.51	<b>6.30</b>
<b>Birds</b>	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
Red-winged blackbird <sup>g</sup>	<i>Agelaius phoeniceus</i>	SSC	0.40	0.00	0.00	0.00	2.80	1.48	0.00	0.00	44.74	0.51	<b>49.93</b>
Tricolored blackbird	<i>Agelaius tricolor</i>	FS, ST, SSC	0.40	0.00	0.00	0.00	0.00	1.48	0.00	0.00	44.74	0.51	<b>47.13</b>
Rufous-crowned sparrow	<i>Aimophila ruficeps</i>	None	0.40	0.00	0.34	0.00	2.80	1.48	0.41	0.00	0.00	0.51	<b>5.94</b>
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC	0.40	0.00	0.00	0.00	0.00	1.48	0.00	0.00	0.00	0.00	<b>1.88</b>

Common Name	Scientific Name	Status	Annual Grassland	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Mixed Chaparral	Pasture	Urban	Valley Foothill Riparian	Grand Total
Golden eagle	<i>Aquila chrysaetos</i>	FS, SFP, SFS	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.07</b>
Great egret	<i>Ardea alba</i>	SFS	0.40	0.00	0.00	0.20	0.00	1.48	0.00	0.00	44.74	0.51	<b>47.33</b>
Great blue heron	<i>Ardea herodias</i>	SFS	0.40	0.00	0.00	0.20	2.80	1.48	0.00	0.00	44.74	0.51	<b>50.12</b>
Bell's sparrow	<i>Artemisospiza belli</i>	None	0.00	0.00	0.34	0.00	2.80	0.00	0.41	0.00	0.00	0.00	<b>3.55</b>
Short-eared owl	<i>Asio flammeus</i>	SSC	0.40	0.00	0.34	0.20	2.72	1.48	0.41	0.00	44.49	0.51	<b>50.55</b>
Long-eared owl	<i>Asio otus</i>	SSC	0.40	0.00	0.34	0.20	0.00	1.48	0.41	0.16	0.00	0.51	<b>3.51</b>
Burrowing owl	<i>Athene cunicularia</i>	FS, SSC	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.07</b>
California quail <sup>h</sup>	<i>Callipepla californica</i>	SSC	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.00	44.74	0.51	<b>50.88</b>
Cactus wren	<i>Campylorhynchus brunneicapillus</i>	None	0.00	0.00	0.00	0.00	2.80	0.00	0.41	0.00	44.74	0.00	<b>47.94</b>
San Diego cactus wren	<i>Campylorhynchus brunneicapillus sandiegensis</i>	FS, SSC	0.00	0.00	0.00	0.00	0.95	0.00	0.00	0.00	42.97	0.00	<b>43.92</b>
Northern harrier	<i>Circus [cyaneus] hudsonius<sup>e</sup></i>	SSC	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.00	44.74	0.51	<b>50.90</b>
Marsh wren	<i>Cistothorus palustris</i>	None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	<b>0.51</b>
White-tailed kite	<i>Elanus leucurus</i>	FS, SFP	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.00	44.74	0.51	<b>50.90</b>
Peregrine falcon	<i>Falco peregrinus</i>	SFS, SFP	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.00	44.74	0.51	<b>50.90</b>
Common yellowthroat <sup>i</sup>	<i>Geothlypis trichas</i>	SSC	0.40	0.00	0.00	0.00	0.00	1.48	0.00	0.00	0.00	0.51	<b>2.39</b>
Bald eagle	<i>Haliaeetus leucocephalus</i>	FS, SE, SFP, SFS	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.00	0.00	0.51	<b>6.17</b>
Yellow-breasted chat	<i>Icteria virens</i>	SSC	0.00	0.00	0.00	0.00	1.14	0.00	0.00	0.00	0.00	0.23	<b>1.37</b>
Loggerhead shrike	<i>Lanius ludovicianus</i>	SSC	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.00	44.74	0.51	<b>50.90</b>
Song sparrow <sup>j</sup>	<i>Melospiza melodia</i>	SSC	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.00	44.74	0.51	<b>50.88</b>
Osprey	<i>Pandion haliaetus</i>	SFS	0.40	0.03	0.00	0.20	0.00	1.48	0.41	0.00	0.00	0.51	<b>3.03</b>
Savannah sparrow	<i>Passerculus sandwichensis</i>	SE	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.16	0.00	0.51	<b>6.30</b>
American white pelican <sup>k</sup>	<i>Pelecanus erythrorhynchos</i>	SSC	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.03</b>
California towhee <sup>l</sup>	<i>Melospiza [Pipilo] crissalis<sup>e</sup></i>	FT, SE	0.00	0.00	0.34	0.20	2.80	1.48	0.41	0.00	44.74	0.51	<b>50.48</b>
Spotted towhee <sup>m</sup>	<i>Pipilo maculatus</i>	SSC	0.00	0.00	0.34	0.20	2.80	1.48	0.41	0.00	44.74	0.51	<b>50.48</b>

Common Name	Scientific Name	Status	Annual Grassland	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Mixed Chaparral	Pasture	Urban	Valley Foothill Riparian	Grand Total
California gnatcatcher	<i>Polioptila californica</i>	FT, SSC	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.00	0.00	0.51	<b>6.14</b>
Vesper sparrow	<i>Pooecetes gramineus</i>	None	0.40	0.00	0.00	0.20	0.00	1.48	0.41	0.00	0.00	0.00	<b>2.49</b>
Oregon vesper sparrow	<i>Pooecetes gramineus affinis</i>	SSC	0.31	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.51</b>
Purple martin <sup>n</sup>	<i>Progne subis</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.96	0.00	<b>5.96</b>
Light-footed clapper rail	<i>Rallus obsoletus [longirostris] levipes<sup>9</sup></i>	FE, SE, SFP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
Yellow warbler	<i>Setophaga petechia</i>	SSC	0.00	0.00	0.34	0.20	2.80	1.48	0.41	0.00	44.74	0.51	<b>50.48</b>
Least tern	<i>Sternula antillarum</i>	FE, SE, SFP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
Bewick's wren <sup>o</sup>	<i>Thryomanes bewickii</i>	SSC	0.00	0.00	0.34	0.20	2.80	1.48	0.41	0.00	44.74	0.51	<b>50.48</b>
Bell's vireo	<i>Vireo bellii</i>	None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	<b>0.23</b>
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	0.23	<b>0.23</b>
Hutton's vireo <sup>p</sup>	<i>Vireo huttoni</i>	SSC	0.00	0.00	0.00	0.20	1.21	0.07	0.15	0.00	43.32	0.23	<b>45.17</b>
<b>Mammals</b>	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
Pallid bat	<i>Antrozous pallidus</i>	FS, SSC	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.07</b>
Ringtail	<i>Bassariscus astutus</i>	SFP	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.16	0.00	0.51	<b>6.33</b>
California pocket mouse	<i>Chaetodipus californicus</i>	SSC	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.00	0.00	0.00	<b>5.62</b>
San Diego pocket mouse	<i>Chaetodipus fallax</i>	SSC	0.40	0.00	0.34	0.00	2.80	0.00	0.41	0.00	0.00	0.00	<b>3.95</b>
Hog-nosed bat	<i>Choeronycteris mexicana</i>	SSC	0.00	0.00	0.00	0.00	0.00	1.48	0.00	0.00	44.71	0.00	<b>46.19</b>
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	FS, SSC	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.07</b>
Stephens' kangaroo rat <sup>9</sup>	<i>Dipodomys stephensi</i>	FT, ST	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	<b>0.06</b>
Spotted bat	<i>Euderma maculatum</i>	FS, SSC	0.40	0.00	0.00	0.20	2.80	1.48	0.00	0.00	44.74	0.51	<b>50.12</b>
Western mastiff bat	<i>Eumops perotis</i>	FS, SSC	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.07</b>
Western red bat	<i>Lasiurus blossevillii</i>	SSC	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.04</b>
Western yellow bat	<i>Lasiurus xanthinus</i>	SSC	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.51	<b>0.71</b>
Black-tailed jackrabbit	<i>Lepus californicus</i>	SSC	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.04</b>

Common Name	Scientific Name	Status	Annual Grassland	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Coastal Scrub	Eucalyptus	Mixed Chaparral	Pasture	Urban	Valley Foothill Riparian	Grand Total
California leaf-nosed bat <sup>f</sup>	<i>Macrotus californicus</i>	FS, SSC	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	<b>0.16</b>
California vole <sup>e</sup>	<i>Microtus californicus</i>	SSC	0.40	0.00	0.00	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>50.70</b>
Small-footed myotis	<i>Myotis ciliolabrum</i>	FS	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.07</b>
Long-eared myotis	<i>Myotis evotis</i>	FS	0.00	0.03	0.34	0.20	2.80	1.48	0.41	0.16	0.00	0.51	<b>5.93</b>
Fringed myotis	<i>Myotis thysanodes</i>	FS	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.07</b>
Yuma myotis	<i>Myotis yumanensis</i>	FS	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.04</b>
Desert woodrat	<i>Neotoma lepida</i>	SSC	0.00	0.00	0.34	0.00	2.80	0.00	0.41	0.00	0.00	0.00	<b>3.55</b>
Big-eared woodrat <sup>t</sup>	<i>Neotoma macrotis</i>	FS, SSC	0.00	0.00	0.34	0.20	2.80	1.48	0.41	0.00	0.00	0.51	<b>5.74</b>
Pocketed free-tailed bat	<i>Nyctinomops femorosaccus</i>	SSC	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	44.74	0.00	<b>44.77</b>
Big free-tailed bat	<i>Nyctinomops macrotis</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.91	0.00	<b>43.91</b>
Southern grasshopper mouse	<i>Onychomys torridus</i>	SSC	0.40	0.00	0.00	0.00	2.80	0.00	0.41	0.00	0.00	0.51	<b>4.12</b>
Little pocket mouse	<i>Perognathus longimembris</i>	FE, SSC	0.00	0.00	0.34	0.01	2.62	0.00	0.41	0.00	0.00	0.00	<b>3.39</b>
Deer mouse <sup>u</sup>	<i>Peromyscus maniculatus</i>	SSC	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.07</b>
Mountain lion <sup>v</sup>	<i>Puma concolor</i>	SSC <sup>v</sup>	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.16	0.00	0.51	<b>6.30</b>
Broad-footed mole <sup>w</sup>	<i>Scapanus latimanus</i>	SSC	0.40	0.00	0.00	0.20	2.80	1.48	0.00	0.16	0.00	0.51	<b>5.55</b>
Ornate shrew <sup>x</sup>	<i>Sorex ornatus</i>	SSC	0.40	0.00	0.00	0.20	2.80	1.48	0.41	0.00	0.00	0.51	<b>5.80</b>
Western spotted skunk <sup>y</sup>	<i>Spilogale gracilis</i>	SSC	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.04</b>
Brush rabbit <sup>z</sup>	<i>Sylvilagus bachmani</i>	FE, SE	0.40	0.00	0.34	0.20	2.80	1.48	0.41	0.16	44.74	0.51	<b>51.04</b>
American badger	<i>Taxidea taxus</i>	SSC	0.40	0.03	0.34	0.20	2.80	1.48	0.41	0.16	0.00	0.51	<b>6.33</b>
Not applicable	Not applicable	<b>Total</b>	<b>0.40</b>	<b>0.03</b>	<b>0.34</b>	<b>0.20</b>	<b>2.80</b>	<b>1.48</b>	<b>0.41</b>	<b>0.16</b>	<b>44.74</b>	<b>0.51</b>	<b>51.07</b>

Notes: FE = federally endangered, FS = federal 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

<sup>a</sup> This plant species does not occur in the Southern California Coast Ecoregion Section within the GAI.

<sup>b</sup> Quino checkerspot butterfly. Petitioned for listing as endangered under the California Endangered Species Act on June 29, 2020.

<sup>c</sup> Southern California slender salamander. Only the desert subspecies is special status and it does not occur in the GAI.

<sup>d</sup> *Ensatina*. Two subspecies occur in the GAI: the Monterey subspecies occurs in the Southern California Coast Ecoregion Section but it is not special status. The large-blotched subspecies, which is special status, occurs in the Southern California Mountains and Valleys Ecoregion, but does not occur in the Southern California Coast Ecoregion Section within the GAI.

<sup>e</sup> Latin name or regulatory status has changed since August 20, 2019, when the SAMNA model was developed (Caltrans 2019).

<sup>f</sup> Striped racer. Only the Alameda subspecies is special status and it does not occur in the GAI.

- <sup>g</sup> Red-winged blackbird. Only the Kern subspecies is special status and it does not occur in the GAI.
- <sup>h</sup> California quail. Only the Catalina subspecies is special status and it does not occur in the GAI.
- <sup>i</sup> Common yellowthroat. Only the San Francisco subspecies is special status and it does not occur in the GAI.
- <sup>j</sup> Song sparrow. There are five subspecies that are special status, none of which occur in the GAI.
- <sup>k</sup> American white pelican. Only considered special status in its nesting range, and it does not nest in the GAI.
- <sup>l</sup> California towhee. Only the Inyo subspecies is special status and it does not occur in the GAI.
- <sup>m</sup> Spotted towhee. Only the San Clemente subspecies is special status and it does not occur in the GAI.
- <sup>n</sup> Purple martin. Only considered special status in its nesting range, and it does not nest in the Southern California Coast Ecoregion Section within the GAI.
- <sup>o</sup> Bewick's wren. Only the San Clemente subspecies is special status and it does not occur in the GAI.
- <sup>p</sup> Hutton's vireo. Only the Catalina subspecies is special status and it does not occur in the GAI.
- <sup>q</sup> Stephens' kangaroo rat. Does not occur in the Southern California Coast Ecoregion Section within the GAI.
- <sup>r</sup> California leaf-nosed bat. Considered extirpated from the GAI.
- <sup>s</sup> California vole. There are six subspecies that are special status, none of which occur in the GAI.
- <sup>t</sup> Big-eared woodrat. Only the Monterey subspecies is special status and it does not occur in the GAI.
- <sup>u</sup> Deer mouse. Only the Anacapa and San Clemente subspecies are special status and they do not occur in the GAI.
- <sup>v</sup> Mountain lion. At present, only the Yuma subspecies is considered special status and it does not occur in the GAI. On April 21, 2020, the Southern California/Central Coast ESU of mountain lion was listed as a candidate species under CESA. This ESU would include the GAI.
- <sup>w</sup> Broad-footed mole. Only the Alameda Island subspecies is special status and it does not occur in the GAI.
- <sup>x</sup> Ornate shrew. There are five special-status subspecies of ornate shrew, none of which occurs in the GAI.
- <sup>y</sup> Western spotted skunk. Only the Channel Islands subspecies is special status and it does not occur in the GAI.
- <sup>z</sup> Brush rabbit. Only the riparian subspecies is special status and it does not occur in the GAI.

**Table E-2. Complete SAMNA Results for the Southern California Mountains and Valleys Ecoregion Section in District 11, by Land Cover (acres)**

Common Name	Scientific Name	Status	Annual Grassland	Chamise-Redshank Chaparral	Coastal Oak Woodland	Coastal Scrub	Deciduous Orchard	Desert Wash	Eucalyptus	Jeffrey Pine	Mixed Chaparral	Montane Hardwood-Conifer	Pasture	Perennial Grassland	Sierran Mixed Conifer	Urban	Valley Foothill Riparian	Wet Meadow	Grand Total
<b>Plants</b>	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
San Diego thorn-mint	<i>Acanthomintha ilicifolia</i>	FT, SE	0.75	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.78
Munz's onion <sup>a</sup>	<i>Allium munzii</i>	FE, ST	0.75	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.78
San Diego ambrosia	<i>Ambrosia pumila</i>	FE	0.75	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.78
Braunton's milk-vetch <sup>a</sup>	<i>Astragalus brauntonii</i>	FE	0.75	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.78
Encinitas baccharis	<i>Baccharis vanessae</i>	FT, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
Nevin's barberry	<i>Berberis nevinii</i>	FE, SE	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
Thread-leaved brodiaea	<i>Brodiaea filifolia</i>	FT, SE	0.75	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.78
Dunn's mariposa lily	<i>Calochortus dunnii</i>	FS, SR	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56
Vail Lake ceanothus <sup>a</sup>	<i>Ceanothus ophiochilus</i>	FT, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
Otay tarplant	<i>Deinandra conjugens</i>	FT, SE	0.75	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96
Mojave tarplant <sup>a</sup>	<i>Deinandra mohavensis</i>	FS, SE	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
Cuyamaca larkspur	<i>Delphinium hesperium</i> ssp. <i>cuyamacae</i>	FS, SR	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.07	0.99
Slender-horned spineflower <sup>a</sup>	<i>Dodecahema leptoceras</i>	FE, SE	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
Cuyamaca Lake downingia	<i>Downingia concolor</i> var. <i>brevior</i>	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	0.07	0.82
San Diego button-celery	<i>Eryngium aristulatum</i> var. <i>parishii</i>	FE, SE	0.75	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96
Mexican flannelbush	<i>Fremontodendron mexicanum</i>	FE, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
Roderick's fritillary	<i>Fritillaria roderickii</i>	SE	0.75	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96
Parish's meadowfoam	<i>Limnanthes alba</i> ssp. <i>parishii</i>	FS, SE	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.07	0.99
Spreading navarretia	<i>Navarretia fossalis</i>	FT	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	0.07	0.82
Dehesa nolina	<i>Nolina interrata</i>	FS, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
California Orcutt grass	<i>Orcuttia californica</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	0.75
Gander's ragwort	<i>Packera ganderi</i>	SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81
San Bernardino blue grass	<i>Poa atropurpurea</i>	FE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.07
Small-leaved rose <sup>a</sup>	<i>Rosa minutifolia</i>	SE	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03
<b>Invertebrates</b>	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
San Diego fairy shrimp	<i>Branchinecta sandiegonensis</i>	FE	0.01	0.00	0.00	0.27	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

Common Name	Scientific Name	Status	Annual Grassland	Chamise-Redshank Chaparral	Coastal Oak Woodland	Coastal Scrub	Deciduous Orchard	Desert Wash	Eucalyptus	Jeffrey Pine	Mixed Chaparral	Montane Hardwood-Conifer	Pasture	Perennial Grassland	Sierran Mixed Conifer	Urban	Valley Foothill Riparian	Wet Meadow	Grand Total
Quino checkerspot butterfly <sup>b</sup>	<i>Euphydryas editha quino</i>	FE <sup>b</sup>	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07
Hermes copper butterfly	<i>Lycaena hermes</i>	FT, FS	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68
Riverside fairy shrimp	<i>Streptocephalus woottoni</i>	FE	0.01	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	0.01
<b>Amphibians</b>	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	0.00	0.03	0.06	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.99
Southern California slender salamander <sup>c</sup>	<i>Batrachoseps major</i>	FE, SE	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
Ensatina	<i>Ensatina eschscholtzii</i>	FS	0.00	0.00	0.60	1.22	0.00	0.00	0.06	0.00	0.81	0.18	0.00	0.00	0.11	0.00	0.09	0.07	3.13
California red-legged frog	<i>Rana draytonii</i>	FT, SSC	0.75	0.00	0.60	1.22	0.00	0.00	0.06	0.00	0.81	0.18	0.00	0.39	0.00	0.00	0.09	0.07	4.17
Western spadefoot	<i>Spea hammondi</i>	FS, SSC	0.24	0.02	0.13	1.12	0.00	0.00	0.06	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.67
California newt	<i>Taricha torosa</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.04	0.00	0.00	0.05	0.00	0.00	0.00	0.14
<b>Reptiles</b>	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
California legless lizard	<i>Anniella pulchra</i>	FS, SSC	0.00	0.18	0.60	1.22	0.00	0.03	0.06	0.00	0.81	0.00	0.00	0.39	0.00	0.00	0.09	0.00	3.37
Orange-throated whiptail	<i>Aspidoscelis hyperythra</i>	FS	0.00	0.18	0.28	1.22	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.15
Coachwhip	<i>Masticophis [Coluber] flagellum<sup>e</sup></i>	None	0.75	0.18	0.60	1.22	0.00	0.03	0.06	0.00	0.78	0.00	0.08	0.39	0.00	0.00	0.09	0.00	4.17
Striped racer <sup>d</sup>	<i>Masticophis [Coluber] lateralis<sup>e</sup></i>	FT, ST	0.00	0.18	0.60	1.22	0.00	0.00	0.06	0.00	0.81	0.18	0.00	0.00	0.11	0.00	0.09	0.07	3.31
Red diamond rattlesnake	<i>Crotalus ruber</i>	FS, SSC	0.75	0.18	0.60	1.22	0.00	0.03	0.06	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.09	0.00	3.73
Ring-necked snake	<i>Diadophis punctatus</i>	FS	0.75	0.18	0.60	1.22	0.00	0.00	0.06	0.00	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.00	7.67
California mountain kingsnake	<i>Lampropeltis zonata</i>	None	0.48	0.00	0.32	0.00	0.00	0.00	0.00	0.02	0.46	0.18	0.00	0.00	0.11	0.00	0.06	0.07	1.70
California mountain kingsnake (San Diego Population)	<i>Lampropeltis multifasciata</i>	None	0.05	0.00	0.24	0.00	0.00	0.00	0.00	0.02	0.15	0.18	0.00	0.00	0.11	0.00	0.06	0.07	0.87
Blainville's horned lizard	<i>Phrynosoma blainvillii</i>	FS, SSC	0.75	0.18	0.60	1.22	0.00	0.00	0.06	0.00	0.81	0.18	0.00	0.39	0.00	0.00	0.09	0.00	4.28
Gophersnake	<i>Pituophis catenifer</i>	None	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.07	7.82
Western skink	<i>Plestiodon skiltonianus</i>	FS	0.75	0.18	0.60	1.22	0.03	0.00	0.06	0.00	0.81	0.18	0.08	0.39	0.11	0.00	0.09	0.00	4.49
Western patch-nosed snake	<i>Salvadora hexalepis</i>	SSC	0.75	0.18	0.60	1.22	0.00	0.03	0.06	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.09	0.00	3.73
Common sagebrush lizard <sup>f</sup>	<i>Sceloporus graciosus</i>	FS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.46	0.18	0.00	0.00	0.11	0.00	0.00	0.00	0.77
Two-striped gartersnake	<i>Thamnophis hammondi</i>	FS, SSC	0.75	0.18	0.60	1.22	0.00	0.00	0.06	0.02	0.81	0.18	0.00	0.00	0.00	0.00	0.09	0.07	3.97
Common gartersnake	<i>Thamnophis sirtalis</i>	SSC	0.75	0.18	0.60	1.22	0.03	0.00	0.06	0.02	0.81	0.18	0.08	0.39	0.11	0.00	0.09	0.07	4.58

Common Name	Scientific Name	Status	Annual Grassland	Chamise-Redshank Chaparral	Coastal Oak Woodland	Coastal Scrub	Deciduous Orchard	Desert Wash	Eucalyptus	Jeffrey Pine	Mixed Chaparral	Montane Hardwood-Conifer	Pasture	Perennial Grassland	Sierran Mixed Conifer	Urban	Valley Foothill Riparian	Wet Meadow	Grand Total
<b>Birds</b>	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
Red-winged blackbird <sup>g</sup>	<i>Agelaius phoeniceus</i>	SSC	0.75	0.00	0.00	1.22	0.03	0.00	0.06	0.00	0.00	0.00	0.00	0.39	0.00	3.21	0.09	0.07	<b>5.82</b>
Tricolored blackbird	<i>Agelaius tricolor</i>	FS, ST, SSC	0.75	0.00	0.00	0.00	0.03	0.00	0.06	0.00	0.00	0.00	0.00	0.39	0.00	3.21	0.09	0.07	<b>4.60</b>
Rufous-crowned sparrow	<i>Aimophila ruficeps</i>	None	0.75	0.18	0.00	1.22	0.00	0.00	0.06	0.00	0.81	0.00	0.00	0.39	0.00	0.00	0.09	0.00	<b>3.50</b>
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC	0.75	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	<b>1.12</b>
Golden eagle	<i>Aquila chrysaetos</i>	FS, SFP, SFS	0.75	0.18	0.60	1.22	0.00	0.03	0.06	0.02	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.07	<b>7.79</b>
Great egret	<i>Ardea alba</i>	SFS	0.03	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	<b>0.22</b>
Great blue heron	<i>Ardea herodias</i>	SFS	0.75	0.00	0.60	1.22	0.00	0.00	0.06	0.00	0.00	0.18	0.00	0.39	0.11	3.21	0.09	0.07	<b>6.67</b>
Bell's sparrow	<i>Artemisiospiza belli</i>	None	0.00	0.18	0.00	1.22	0.00	0.00	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>2.21</b>
Short-eared owl <sup>h</sup>	<i>Asio flammeus</i>	SSC	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>0.03</b>
Long-eared owl	<i>Asio otus</i>	SSC	0.75	0.18	0.60	0.00	0.00	0.00	0.06	0.00	0.81	0.18	0.08	0.39	0.11	0.00	0.09	0.07	<b>3.31</b>
Burrowing owl	<i>Athene cunicularia</i>	FS, SSC	0.03	0.00	0.04	0.68	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.15	0.00	0.00	<b>0.99</b>
California quail <sup>i</sup>	<i>Callipepla californica</i>	SSC	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.00	0.81	0.18	0.00	0.39	0.11	3.21	0.09	0.07	<b>7.72</b>
Cactus wren	<i>Campylorhynchus brunneicapillus</i>	None	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00	3.08	0.00	0.00	<b>4.78</b>
San Diego cactus wren	<i>Campylorhynchus brunneicapillus sandiegensis</i>	FS, SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	<b>0.11</b>
Northern harrier	<i>Circus hudsonius<sup>e</sup></i>	SSC	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.00	0.39	0.11	3.21	0.09	0.07	<b>7.74</b>
Marsh wren	<i>Cistothorus palustris</i>	None	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.07	<b>0.16</b>
Olive-sided flycatcher	<i>Contopus cooperi</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.46	0.18	0.00	0.00	0.11	0.00	0.00	0.00	<b>0.77</b>
White-tailed kite	<i>Elanus leucurus</i>	FS, SFP	0.75	0.18	0.60	1.22	0.03	0.00	0.06	0.00	0.81	0.00	0.00	0.39	0.00	3.21	0.09	0.07	<b>7.41</b>
Peregrine falcon	<i>Falco peregrinus</i>	SFS, SFP	0.75	0.18	0.60	1.22	0.00	0.00	0.06	0.02	0.81	0.18	0.00	0.39	0.11	3.21	0.09	0.07	<b>7.68</b>
Common yellowthroat <sup>j</sup>	<i>Geothlypis trichas</i>	SSC	0.75	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.09	0.07	<b>1.36</b>
Bald eagle	<i>Haliaeetus leucocephalus</i>	FS, SE, SFP, SFS	0.75	0.18	0.60	1.22	0.00	0.00	0.06	0.02	0.81	0.18	0.00	0.39	0.11	0.00	0.09	0.07	<b>4.47</b>
Yellow-breasted chat	<i>Icteria virens</i>	SSC	0.00	0.00	0.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	<b>1.30</b>
Loggerhead shrike	<i>Lanius ludovicianus</i>	SSC	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.00	0.39	0.00	3.21	0.09	0.07	<b>7.63</b>
Song sparrow <sup>k</sup>	<i>Melospiza melodia</i>	SSC	0.75	0.18	0.60	1.22	0.03	0.00	0.06	0.02	0.81	0.18	0.00	0.39	0.11	3.21	0.09	0.07	<b>7.72</b>
Osprey	<i>Pandion haliaetus</i>	SFS	0.62	0.00	0.28	0.00	0.00	0.00	0.06	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.03	0.00	<b>1.47</b>
Savannah sparrow <sup>l</sup>	<i>Passerculus sandwichensis</i>	SE	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.00	0.81	0.00	0.08	0.39	0.00	0.00	0.09	0.07	<b>4.30</b>
California towhee <sup>m</sup>	<i>Melospiza [Pipilo] crissalis</i>	FT, SE	0.00	0.18	0.60	1.22	0.03	0.00	0.06	0.00	0.81	0.18	0.00	0.00	0.00	3.21	0.09	0.00	<b>6.38</b>



Common Name	Scientific Name	Status	Annual Grassland	Chamise-Redshank Chaparral	Coastal Oak Woodland	Coastal Scrub	Deciduous Orchard	Desert Wash	Eucalyptus	Jeffrey Pine	Mixed Chaparral	Montane Hardwood-Conifer	Pasture	Perennial Grassland	Sierran Mixed Conifer	Urban	Valley Foothill Riparian	Wet Meadow	Grand Total
Spotted towhee <sup>n</sup>	<i>Pipilo maculatus</i>	SSC	0.00	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.00	0.00	0.11	3.21	0.09	0.00	6.53
California gnatcatcher	<i>Polioptila californica</i>	FT, SSC	0.22	0.00	0.05	0.94	0.00	0.00	0.06	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.03	0.00	1.39
Vesper sparrow	<i>Poocetes gramineus</i>	None	0.75	0.00	0.50	0.00	0.00	0.00	0.06	0.00	0.54	0.00	0.00	0.32	0.00	0.00	0.00	0.00	2.16
Oregon vesper sparrow	<i>Poocetes gramineus affinis</i>	SSC	0.75	0.00	0.50	0.00	0.00	0.00	0.06	0.00	0.41	0.00	0.00	0.32	0.00	0.00	0.00	0.00	2.03
Purple martin	<i>Progne subis</i>	SSC	0.75	0.00	0.60	0.00	0.00	0.00	0.06	0.00	0.00	0.18	0.00	0.39	0.11	3.10	0.09	0.07	5.34
Yellow warbler	<i>Setophaga petechia</i>	SSC	0.00	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.00	0.00	0.11	3.21	0.09	0.00	6.53
Spotted owl	<i>Strix occidentalis</i>	None	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.02	0.00	0.18	0.00	0.00	0.11	0.00	0.06	0.00	0.61
California spotted owl	<i>Strix occidentalis occidentalis</i>	FS, SSC	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.02	0.00	0.18	0.00	0.00	0.11	0.00	0.06	0.00	0.61
Bewick's wren <sup>o</sup>	<i>Thryomanes bewickii</i>	SSC	0.00	0.18	0.60	1.22	0.03	0.03	0.06	0.00	0.81	0.18	0.00	0.00	0.00	3.21	0.09	0.00	6.40
Hutton's vireo <sup>p</sup>	<i>Vireo huttoni</i>	SSC	0.00	0.18	0.58	1.22	0.03	0.00	0.06	0.00	0.81	0.15	0.00	0.00	0.05	3.08	0.09	0.00	6.25
Gray vireo	<i>Vireo vicinior</i>	FS, SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
<b>Mammals</b>	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
Pallid bat	<i>Antrozous pallidus</i>	FS, SSC	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.07	7.82
Ringtail	<i>Bassariscus astutus</i>	SFP	0.75	0.18	0.60	1.22	0.00	0.03	0.06	0.02	0.81	0.18	0.08	0.39	0.11	0.00	0.09	0.07	4.57
California pocket mouse	<i>Chaetodipus californicus</i>	SSC	0.75	0.18	0.60	1.22	0.00	0.00	0.06	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.62
San Diego pocket mouse	<i>Chaetodipus fallax</i>	SSC	0.75	0.18	0.00	1.22	0.00	0.03	0.00	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.98
Hog-nosed bat	<i>Choeronycteris mexicana</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.75
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	FS, SSC	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.07	7.82
Merriam's kangaroo rat	<i>Dipodomys merriami</i>	None	0.53	0.00	0.00	0.10	0.00	0.03	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
Stephens' kangaroo rat	<i>Dipodomys stephensi</i>	FT, ST	0.64	0.00	0.00	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.73
Spotted bat	<i>Euderma maculatum</i>	FS, SSC	0.75	0.00	0.60	1.22	0.00	0.03	0.06	0.02	0.00	0.18	0.00	0.39	0.11	3.21	0.09	0.07	6.72
Western mastiff bat	<i>Eumops perotis</i>	FS, SSC	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.00	0.81	0.18	0.08	0.39	0.00	3.21	0.09	0.07	7.69
Western red bat	<i>Lasiurus blossevillii</i>	SSC	0.75	0.18	0.60	1.22	0.00	0.00	0.06	0.02	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.07	7.76
Western yellow bat	<i>Lasiurus xanthinus</i>	SSC	0.00	0.00	0.60	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.71
Black-tailed jackrabbit	<i>Lepus californicus</i>	SSC	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.07	7.82
California leaf-nosed bat <sup>q</sup>	<i>Macrotus californicus</i>	FS, SSC	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
California vole <sup>r</sup>	<i>Microtus californicus</i>	SSC	0.75	0.00	0.60	1.22	0.03	0.00	0.06	0.00	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.07	7.60
Small-footed myotis	<i>Myotis ciliolabrum</i>	FS	0.75	0.18	0.60	1.22	0.03	0.00	0.06	0.02	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.07	7.79
Long-eared myotis	<i>Myotis evotis</i>	FS	0.00	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.08	0.39	0.11	0.00	0.09	0.07	3.86
Fringed myotis	<i>Myotis thysanodes</i>	FS	0.75	0.18	0.60	1.22	0.00	0.03	0.06	0.02	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.00	7.72
Yuma myotis	<i>Myotis yumanensis</i>	FS	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.07	7.82

Common Name	Scientific Name	Status	Annual Grassland	Chamise-Redshank Chaparral	Coastal Oak Woodland	Coastal Scrub	Deciduous Orchard	Desert Wash	Eucalyptus	Jeffrey Pine	Mixed Chaparral	Montane Hardwood-Conifer	Pasture	Perennial Grassland	Sierran Mixed Conifer	Urban	Valley Foothill Riparian	Wet Meadow	Grand Total
Desert woodrat	<i>Neotoma lepida</i>	SSC	0.00	0.18	0.00	1.22	0.00	0.03	0.00	0.00	0.81	0.18	0.00	0.00	0.00	0.00	0.00	0.00	2.41
Big-eared woodrat <sup>s</sup>	<i>Neotoma macrotis</i>	FS, SSC	0.00	0.18	0.60	1.22	0.00	0.00	0.06	0.00	0.81	0.18	0.00	0.39	0.11	0.00	0.09	0.07	3.70
Pocketed free-tailed bat	<i>Nyctinomops femorosaccus</i>	SSC	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.21	0.00	0.00	3.24
Southern grasshopper mouse	<i>Onychomys torridus</i>	SSC	0.75	0.00	0.00	1.22	0.00	0.03	0.00	0.00	0.81	0.00	0.00	0.39	0.00	0.00	0.09	0.00	3.29
Bighorn sheep <sup>t</sup>	<i>Ovis canadensis</i>	FS, SFP	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
Little pocket mouse	<i>Perognathus longimembris</i>	SSC	0.00	0.05	0.48	0.10	0.00	0.03	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
Deer mouse <sup>u</sup>	<i>Peromyscus maniculatus</i>	SSC	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.07	7.82
Mountain lion <sup>v</sup>	<i>Puma concolor</i>	SSC <sup>w</sup>	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.08	0.39	0.11	0.00	0.09	0.07	4.60
Broad-footed mole <sup>w</sup>	<i>Scapanus latimanus</i>	SSC	0.75	0.00	0.60	1.22	0.03	0.00	0.06	0.02	0.00	0.18	0.08	0.39	0.11	0.00	0.09	0.07	3.59
Ornate shrew <sup>x</sup>	<i>Sorex ornatus</i>	SSC	0.75	0.00	0.60	1.22	0.00	0.00	0.06	0.00	0.81	0.18	0.00	0.39	0.11	0.00	0.09	0.07	4.28
Western spotted skunk <sup>y</sup>	<i>Spilogale gracilis</i>	SSC	0.75	0.18	0.60	1.22	0.03	0.00	0.06	0.02	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.07	7.79
Brush rabbit <sup>z</sup>	<i>Sylvilagus bachmani</i>	FE, SE	0.75	0.18	0.60	1.22	0.03	0.00	0.06	0.00	0.81	0.18	0.08	0.39	0.11	3.21	0.09	0.00	7.71
American badger	<i>Taxidea taxus</i>	SSC	0.75	0.18	0.60	1.22	0.03	0.03	0.06	0.02	0.81	0.18	0.08	0.39	0.11	0.00	0.09	0.07	4.60
Not applicable	Not applicable	<b>Total</b>	<b>0.75</b>	<b>0.18</b>	<b>0.60</b>	<b>1.22</b>	<b>0.03</b>	<b>0.03</b>	<b>0.06</b>	<b>0.02</b>	<b>0.81</b>	<b>0.18</b>	<b>0.08</b>	<b>0.39</b>	<b>0.11</b>	<b>3.21</b>	<b>0.09</b>	<b>0.07</b>	<b>7.83</b>

Notes: FE = federally endangered, FS = federal 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

<sup>a</sup> This plant species does not occur in the Southern California Mountains and Valleys Ecoregion Section within the GAI.

<sup>b</sup> Quino checkerspot butterfly. Petitioned for listing as endangered under the California Endangered Species Act on June 29, 2020.

<sup>c</sup> Southern California slender salamander. Only the desert subspecies is special status and it does not occur in the GAI.

<sup>d</sup> Striped racer. Only the Alameda subspecies is special status and it does not occur in the GAI.

<sup>e</sup> Latin name or regulatory status has changed since August 20, 2019, when the SAMNA model was developed (Caltrans 2019).

<sup>f</sup> Common sagebrush lizard. Only the northern subspecies is special status and it does not occur in the GAI.

<sup>g</sup> Red-winged blackbird. Only the Kern subspecies is special status and it does not occur in the GAI.

<sup>h</sup> Short-eared owl. The species is only considered special status in its nesting range, and it does not nest in the Southern California Mountains and Valleys Ecoregion Section within the GAI.

<sup>i</sup> California quail. Only the Catalina subspecies is special status and it does not occur in the GAI.

<sup>j</sup> Common yellowthroat. Only the San Francisco subspecies is special status and it does not occur in the GAI.

<sup>k</sup> Song sparrow. There are five subspecies that are special status, none of which occur in the GAI.

<sup>l</sup> Savannah sparrow. Only the Belding's subspecies is listed as endangered and it does not nest in the Southern California Mountains and Valleys Ecoregion Section within the GAI.

<sup>m</sup> California towhee. Only the Inyo subspecies is special status and it does not occur in the GAI.

<sup>n</sup> Spotted towhee. Only the San Clemente subspecies is special status and it does not occur in the GAI.

<sup>o</sup> Bewick's wren. Only the San Clemente subspecies is special status and it does not occur in the GAI.

<sup>p</sup> Hutton's vireo. Only the Catalina subspecies is special status and it does not occur in the GAI.

<sup>q</sup> California leaf-nosed bat. Considered extirpated from the GAI.

<sup>r</sup> California vole. There are six subspecies that are special status, none of which occur in the GAI.

<sup>s</sup> Big-eared woodrat. Only the Monterey subspecies is special status and it does not occur in the GAI.

<sup>t</sup> Bighorn sheep. This special-status species does not occur in the GAI.

<sup>u</sup> Deer mouse. Only the Anacapa and San Clemente subspecies are special status and they do not occur in the GAI.

<sup>v</sup> Mountain lion. At present, only the Yuma subspecies is considered special status and it does not occur in the GAI. On April 21, 2020, the Southern California/Central Coast ESU of mountain lion was listed as a candidate species under CESA. This ESU would include the GAI.

<sup>w</sup> Broad-footed mole. Only the Alameda Island subspecies is special status and it does not occur in the GAI.

<sup>x</sup> Ornate shrew. There are five special-status subspecies of ornate shrew, none of which occurs in the GAI.

<sup>y</sup> Western spotted skunk. Only the Channel Islands subspecies is special status and it does not occur in the GAI.

<sup>z</sup> Brush rabbit. Only the riparian subspecies is special status and it does not occur in the GAI.

## APPENDIX F: LIST OF 303(d) IMPAIRED WATERS

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

**Table F-1. Impaired Waters in the GAI**

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? <sup>a</sup>
San Diego	Alpine Creek	Indicator Bacteria	Required, not established yet	No
San Diego	Alvarado Creek	Nitrogen	Required, not established yet	Yes
San Diego	Carroll Canyon	Benthic Community Effects	Required, not established yet	Yes
San Diego	Chocolate Creek	Nitrogen	Required, not established yet	Yes
San Diego	Chollas Creek	Diazinon	Being addressed with EPA-approved TMDL	Yes
San Diego	Cloverdale Creek	Phosphorus	Required, not established yet	Yes
San Diego	El Capitan Lake	pH	Required, not established yet	Yes
San Diego	Eucalyptus Hills Creek	Diazinon	Required, not established yet	Yes
San Diego	Famosa Slough and Channel	Eutrophic	Required, not established yet	Yes
San Diego	Felicita Creek	Aluminum	Required, not established yet	Yes
San Diego	Forester Creek	Total Dissolved Solids	Required, not established yet	Yes
San Diego	Green Valley Creek	Chloride	Required, not established yet	Yes
San Diego	Harbison Canyon	Indicator Bacteria	Required, not established yet	No
San Diego	Hodges, Lake	Mercury	Required, not established yet	Yes
San Diego	Jamacha Creek	Indicator Bacteria	Required, not established yet	No

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? <sup>a</sup>
San Diego	Jamul Creek	Toxicity	Required, not established yet	Yes
San Diego	Kit Carson Creek	Total Dissolved Solids	Required, not established yet	Yes
San Diego	La Zanja Canyon	Indicator Bacteria	Required, not established yet	No
San Diego	Long Canyon Creek (Lower Sweetwater Watershed)	Indicator Bacteria	Required, not established yet	No
San Diego	Los Coches Creek	Nitrogen	Required, not established yet	Yes
San Diego	Los Penasquitos Creek	Total Dissolved Solids	Required, not established yet	Yes
San Diego	Los Penasquitos Lagoon	Sedimentation/ Siltation	Being addressed with EPA-approved TMDL	Yes
San Diego	Loveland Reservoir	Oxygen, Dissolved	Required, not established yet	Yes
San Diego	Mexican Canyon Creek (eastern tributary to Sweetwater River, Upper)	Indicator Bacteria	Required, not established yet	No
San Diego	Mexican Canyon Creek (western tributary to Sweetwater River, Upper)	Indicator Bacteria	Required, not established yet	No
San Diego	Mission Bay	PCBs (polychlorinated biphenyls)	Required, not established yet	Yes
San Diego	Mission Bay (area at mouth of Rose Creek only)	Eutrophic	Required, not established yet	Yes
San Diego	Mission Bay (area at mouth of Tecolote Creek only)	Lead	Required, not established yet	Yes
San Diego	Mission Bay at Quivira Basin	Copper	Required, not established yet	Yes
San Diego	Mission Bay Shoreline, at Bahia Point	Indicator Bacteria	Required, not established yet	No
San Diego	Mission Bay Shoreline, at Bonita Cove	Indicator Bacteria	Required, not established yet	No
San Diego	Mission Bay Shoreline, at Bonita Cove (eastern shore)	Indicator Bacteria	Required, not established yet	No
San Diego	Mission Bay Shoreline, at Campland	Indicator Bacteria	Required, not established yet	No

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? <sup>a</sup>
San Diego	Mission Bay Shoreline, at De Anza Cove	Indicator Bacteria	Required, not established yet	No
San Diego	Mission Bay Shoreline, at Enchanted Cove	Trash	Being addressed with action other than TMDL	Yes
San Diego	Mission Bay Shoreline, at Fanual Park	Indicator Bacteria	Required, not established yet	No
San Diego	Mission Bay Shoreline, at Leisure Lagoon	Indicator Bacteria	Required, not established yet	No
San Diego	Mission Bay Shoreline, at North Cove Beach at Vacation Isle	Indicator Bacteria	Required, not established yet	No
San Diego	Mission Bay Shoreline, at North Crown Point	Indicator Bacteria	Required, not established yet	No
San Diego	Mission Bay Shoreline, at Ski Beach at Vacation Isle	Indicator Bacteria	Required, not established yet	No
San Diego	Mission Bay Shoreline, at Tecolote Shores	Indicator Bacteria	Being addressed with EPA-approved TMDL	No
San Diego	Mission Bay Shoreline, at Visitors Center	Indicator Bacteria	Required, not established yet	No
San Diego	Otay Reservoir, Lower	pH	Required, not established yet	Yes
San Diego	Pacific Ocean Shoreline, Coronado HA, at G Ave, Central Beach	Trash	Being addressed with action other than TMDL	Yes
San Diego	Pacific Ocean Shoreline, Imperial Beach Pier	PCBs (polychlorinated biphenyls)	Required, not established yet	Yes
San Diego	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Penasquitos River mouth	Indicator Bacteria	Being addressed with EPA-approved TMDL	No
San Diego	Pacific Ocean Shoreline, Mission San Diego HSA, at Ocean Beach pier at Narrangaset	Trash	Being addressed with action other than TMDL	Yes
San Diego	Pacific Ocean Shoreline, Otay Valley HA, at Carnation Ave and Camp Surf Jetty	Indicator Bacteria	Required, not established yet	No

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? <sup>a</sup>
San Diego	Pacific Ocean Shoreline, Point Loma HA, at Bermuda Ave	Indicator Bacteria	Required, not established yet	No
San Diego	Pacific Ocean Shoreline, Point Loma HA, at Sunset Cliffs and Froude Street	Trash	Being addressed with action other than TMDL	Yes
San Diego	Pacific Ocean Shoreline, Rancho Santa Fe HSA, at Powerhouse Park	Trash	Being addressed with action other than TMDL	Yes
San Diego	Pacific Ocean Shoreline, San Diego HU, at Stub Jetty, south of the San Diego River outlet, near Cape May Avenue	Indicator Bacteria	Being addressed with EPA-approved TMDL	No
San Diego	Pacific Ocean Shoreline, San Diego HU, at the San Diego River outlet, at Dog Beach	Indicator Bacteria	Being addressed with EPA-approved TMDL	No
San Diego	Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth at San Dieguito River Beach	Indicator Bacteria	Being addressed with EPA-approved TMDL	No
San Diego	Pacific Ocean Shoreline, San Elijo HSA, at Cardiff State Beach at parking lot entrance	Trash	Being addressed with action other than TMDL	Yes
San Diego	Pacific Ocean Shoreline, Scripps HA, at Belmont Park at Mission Beach (near San Fernando Place)	Trash	Being addressed with action other than TMDL	Yes
San Diego	Pacific Ocean Shoreline, Scripps HA, at Childrens Pool	Indicator Bacteria	Being addressed with EPA-approved TMDL	No
San Diego	Pacific Ocean Shoreline, Scripps HA, at Crystal Pier	Trash	Being addressed with action other than TMDL	Yes
San Diego	Pacific Ocean Shoreline, Scripps HA, at North Lane at Windansea Beach	Trash	Being addressed with action other than TMDL	Yes
San Diego	Pacific Ocean Shoreline, Scripps HA, at Pacific Beach Drive, Pacific Beach	Trash	Being addressed with action other than TMDL	Yes

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? <sup>a</sup>
San Diego	Pacific Ocean Shoreline, Scripps HA, at Pacific Beach Point, Pacific Beach	Indicator Bacteria	Being addressed with EPA-approved TMDL	No
San Diego	Pacific Ocean Shoreline, Scripps HA, at Tourmaline Surf Park, Pacific Beach	Trash	Being addressed with action other than TMDL	Yes
San Diego	Pacific Ocean Shoreline, Scripps HA, at Vallecitos Court at La Jolla Shores Beach	Indicator Bacteria	Being addressed with EPA-approved TMDL	No
San Diego	Pacific Ocean Shoreline, Tijuana HU, at Cortez Avenue	Indicator Bacteria	Required, not established yet	No
San Diego	Pacific Ocean Shoreline, Tijuana HU, at end of Seacoast Drive	Indicator Bacteria	Required, not established yet	No
San Diego	Pacific Ocean Shoreline, Tijuana HU, at Monument Road	Indicator Bacteria	Required, not established yet	No
San Diego	Pacific Ocean Shoreline, Tijuana HU, at the US Border	Indicator Bacteria	Required, not established yet	No
San Diego	Pacific Ocean Shoreline, Tijuana HU, at Tijuana River mouth	Indicator Bacteria	Required, not established yet	No
San Diego	Pacific Ocean Shoreline, Torrey Pines State Beach, at North Beach Entrance parking lot	Trash	Being addressed with action other than TMDL	Yes
San Diego	Paleta Creek	Lead	Required, not established yet	Yes
San Diego	Paradise Creek, HSA 908.320	Phosphorus	Required, not established yet	Yes
San Diego	Poggi Canyon Creek	Nitrogen	Required, not established yet	Yes
San Diego	Poway Creek	Selenium	Required, not established yet	Yes
San Diego	Rose Creek	Selenium	Required, not established yet	Yes
San Diego	San Diego Bay	PCBs (polychlorinated biphenyls)	Required, not established yet	Yes

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? <sup>a</sup>
San Diego	San Diego Bay Shoreline, 32nd St San Diego Naval Station	Sediment Toxicity	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, at Americas Cup Harbor	Copper	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, at Bayside Park (J Street)	Indicator Bacteria	Required, not established yet	No
San Diego	San Diego Bay Shoreline, at Coronado Cays	Copper	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, at Glorietta Bay	Copper	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, at Harbor Island (East Basin)	Copper	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, at Harbor Island (West Basin)	Copper	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, at Marriott Marina	Copper	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, between Sampson and 28th Streets	Mercury	Being addressed with action other than TMDL	Yes
San Diego	San Diego Bay Shoreline, Chula Vista Marina	Copper	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, Downtown Anchorage	Benthic Community Effects	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, G Street Pier	Indicator Bacteria	Required, not established yet	No
San Diego	San Diego Bay Shoreline, near Chollas Creek	Sediment Toxicity	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, near Coronado Bridge	Benthic Community Effects	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, near sub base	Benthic Community Effects	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, near Switzer Creek	PAHs (polycyclic aromatic hydrocarbons)	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, North of 24th Street Marine Terminal	Benthic Community Effects	Required, not established yet	Yes
San Diego	San Diego Bay Shoreline, Seventh Street Channel	Benthic Community Effects	Required, not established yet	Yes



Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? <sup>a</sup>
San Diego	San Diego Bay Shoreline, Shelter Island Shoreline Park	Indicator Bacteria	Being addressed with EPA-approved TMDL	No
San Diego	San Diego Bay Shoreline, Tidelands Park	Indicator Bacteria	Required, not established yet	No
San Diego	San Diego Bay Shoreline, Vicinity of B St and Broadway Piers	Benthic Community Effects	Required, not established yet	Yes
San Diego	San Diego Bay, Shelter Island Yacht Basin	Copper, Dissolved	Being addressed with EPA-approved TMDL	Yes
San Diego	San Diego River (Lower)	Phosphorus	Required, not established yet	Yes
San Diego	San Diego River (Upper)	Oxygen, Dissolved	Required, not established yet	Yes
San Diego	San Dieguito River	Benthic Community Effects	Required, not established yet	Yes
San Diego	San Dieguito River, unnamed tributary below Hodges Dam	Indicator Bacteria	Required, not established yet	No
San Diego	San Vicente Creek (San Diego County)	Ammonia as Nitrogen	Required, not established yet	Yes
San Diego	San Vicente Reservoir	Chloride	Required, not established yet	Yes
San Diego	Santa Ysabel Creek (above Sutherland Reservoir)	Toxicity	Required, not established yet	Yes
San Diego	Soledad Canyon	Sediment Toxicity	Required, not established yet	Yes
San Diego	Steele Canyon	Indicator Bacteria	Required, not established yet	No
San Diego	Sutherland Reservoir	pH	Required, not established yet	Yes
San Diego	Sweetwater Reservoir	Oxygen, Dissolved	Required, not established yet	Yes
San Diego	Sweetwater River, Lower (below Sweetwater Reservoir)	Nitrogen	Required, not established yet	Yes
San Diego	Sweetwater River, North Fork, unnamed tributary at Tavern Road	Manganese	Required, not established yet	Yes

Sub-basin	Impaired Water	Impairment	TMDL Status	Relevant to RAMNA? <sup>a</sup>
San Diego	Switzer Creek	Copper	Required, not established yet	Yes
San Diego	Sycamore Canyon	Oxygen, Dissolved	Required, not established yet	Yes
San Diego	Tecolote Creek, South Fork	Indicator Bacteria	Required, not established yet	No
San Diego	Telegraph Canyon Creek	Selenium	Required, not established yet	Yes

Source: SWRCB (2021)

<sup>a</sup> 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 May 13, 2022.  
[https://www.waterboards.ca.gov/water\\_issues/programs/water\\_quality\\_assessment/2018\\_integrated\\_report.html](https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html).

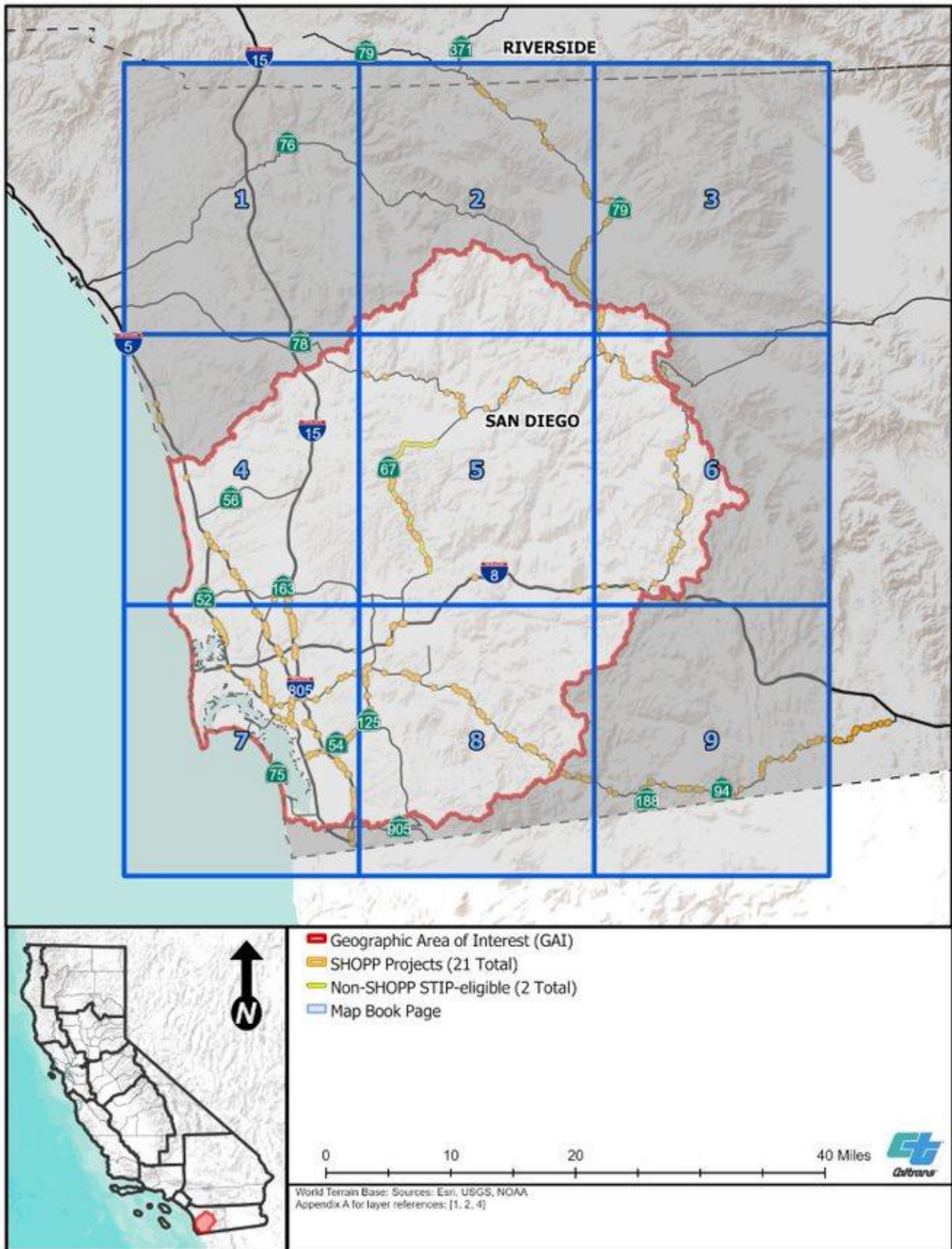
## APPENDIX G: AQUATIC RESOURCE LOCATIONS

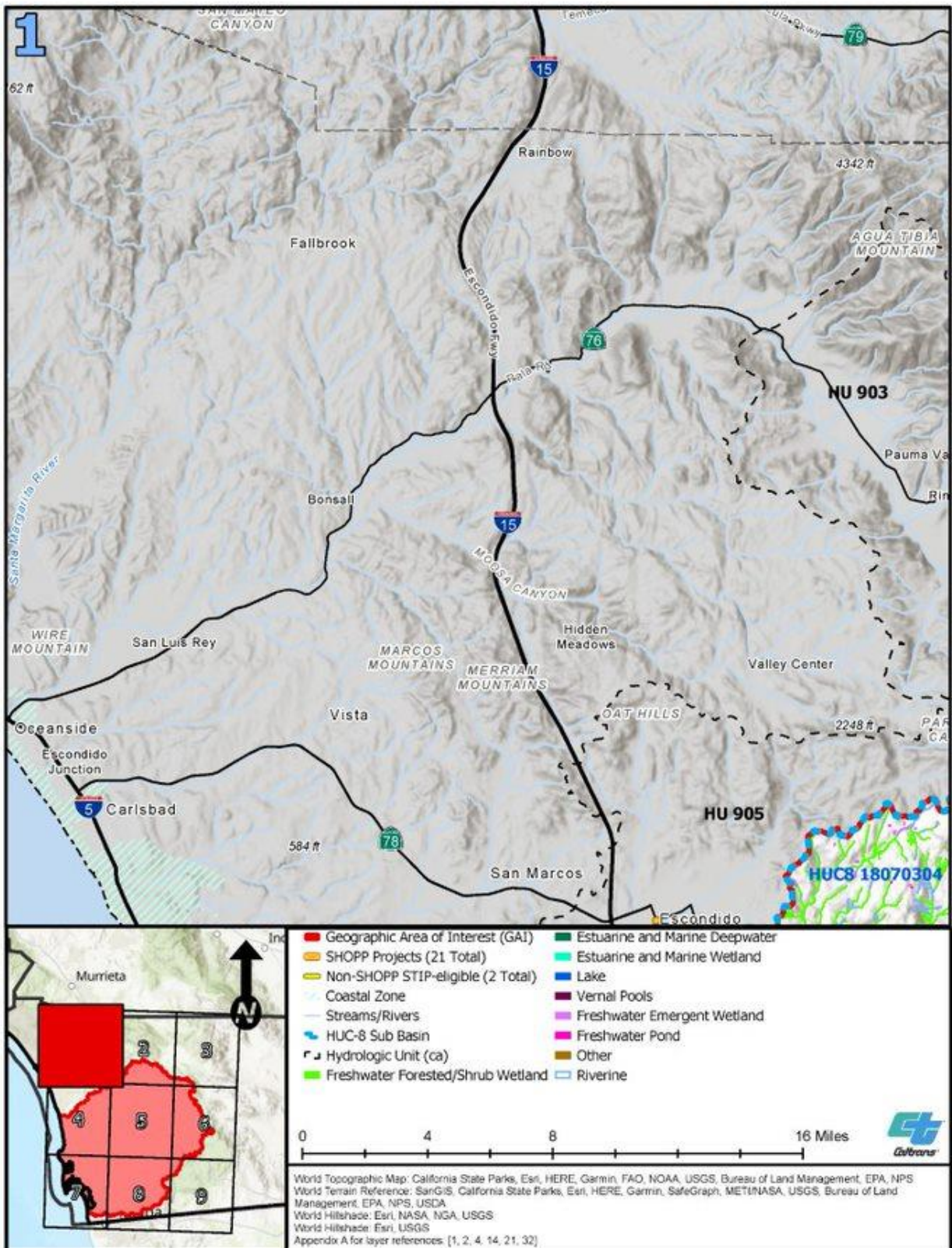
Aquatic resource locations are shown by HUC-8 sub-basin and HU in the following maps, which also include the coastal zone and major landmarks for perspective. These locations were excerpted from the SAMNA Reporting Tool's water and wetland layers (Caltrans 2021a, 2021b). These nine maps correspond with the land cover maps in Appendix D. Hydrologic units are described in Chapter 2, which includes a crosswalk table of HUC-8 subbasins and HUs (Table 2-4).

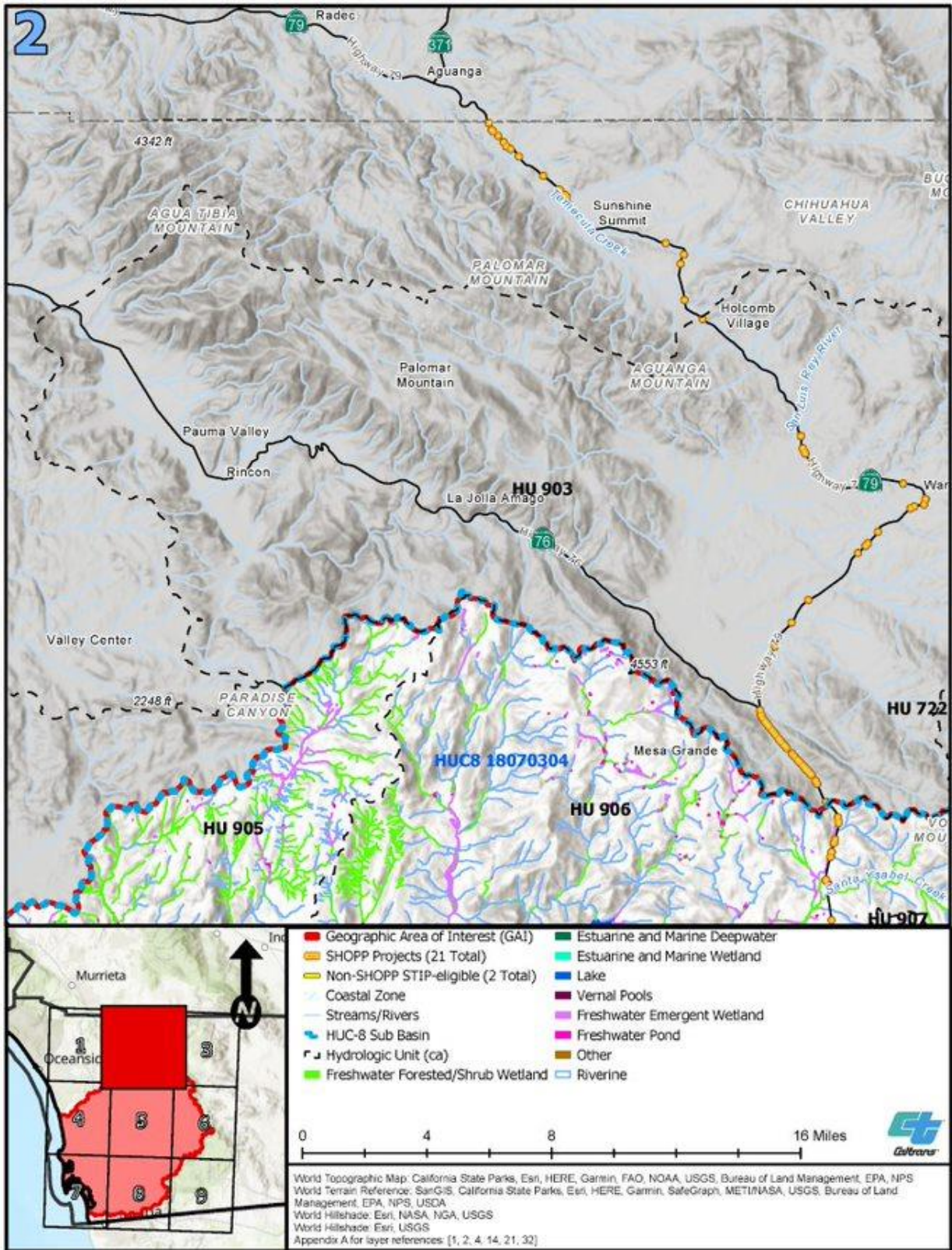
Few sources of information are known to be available that can be used to describe existing and relevant wetland, riparian, and littoral resources. The FWS National Wetlands Inventory (2021) and the San Francisco Estuary Institute California Aquatic Resource Inventory (2018) are the only known datasets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

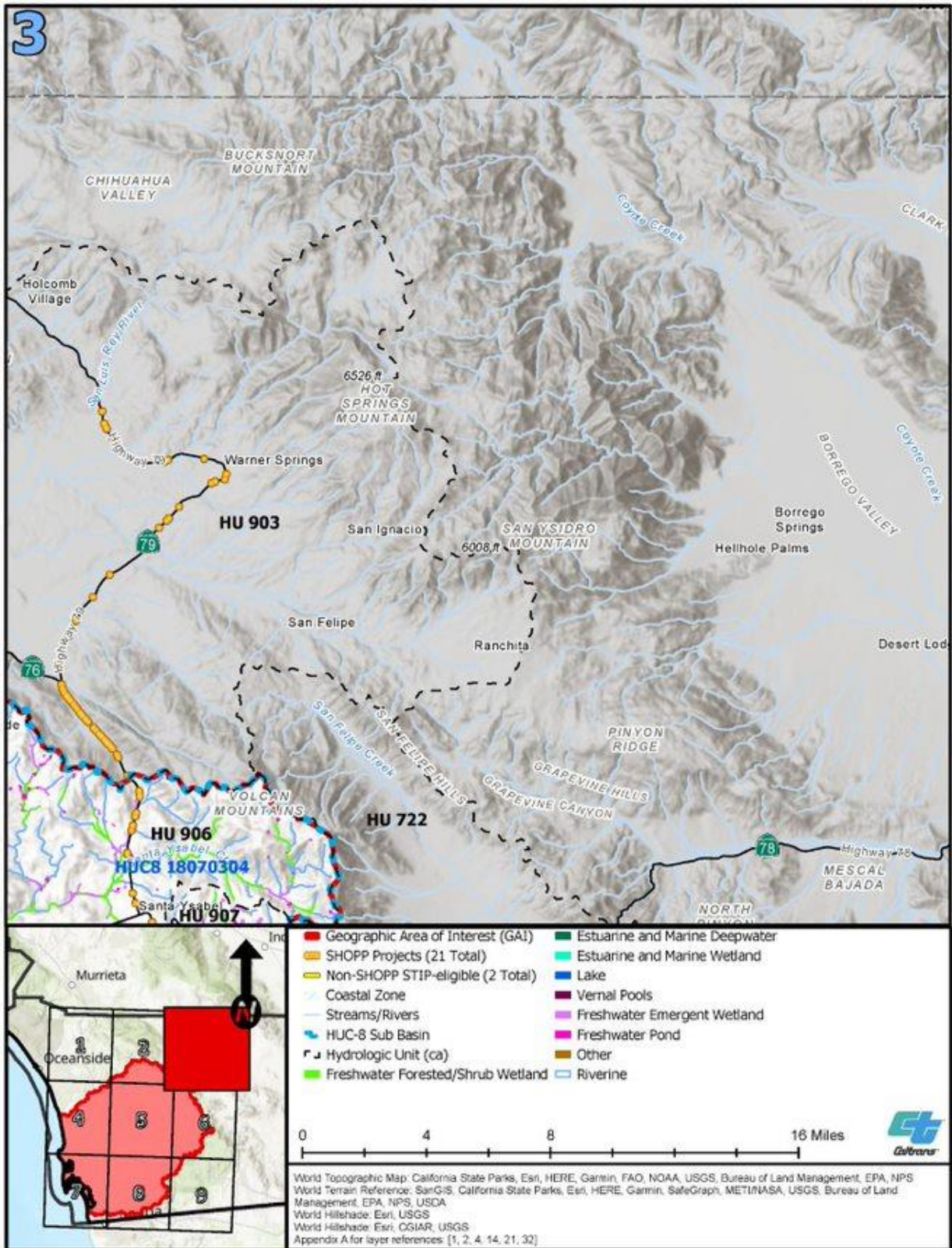
### References

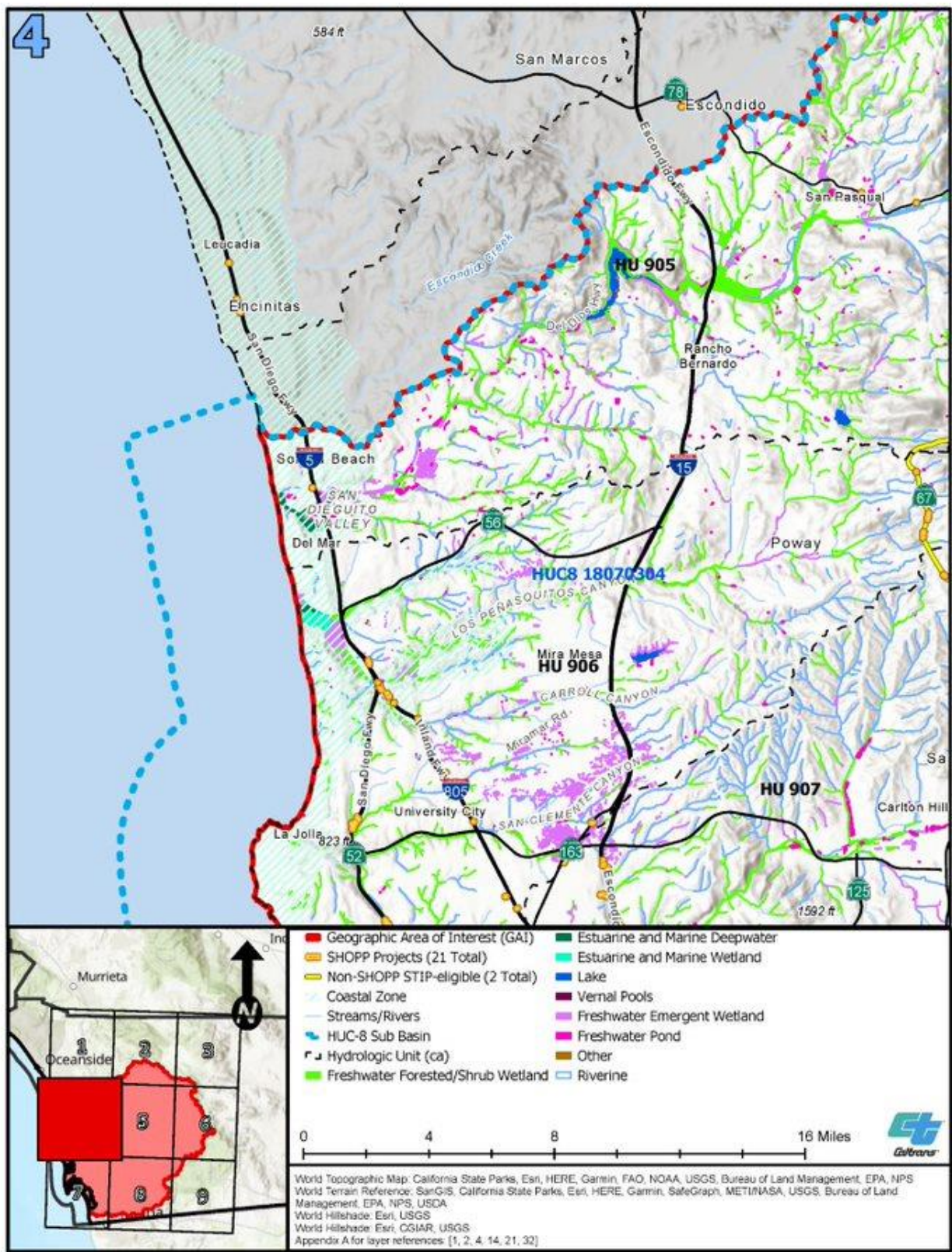
- Caltrans (California Department of Transportation). 2021a. "Waters\_D11 in Caltrans District 11 Geospatial Data for the Advance Mitigation Needs Assessment for the First Quarter of FY 2021/2022" (data file). Accessed June 15, 2022. <http://www.dot.ca.gov/env/advancemitigation/>.
- . 2021b. "Wetlands\_D11 in Caltrans District 11 Geospatial Data for the Advance Mitigation Needs Assessment for the First Quarter of FY 2021/2022" (data file). Accessed June 15, 2022. <http://www.dot.ca.gov/env/advancemitigation/>.
- FWS (U.S. Fish and Wildlife Service). 2021. "National Wetlands Inventory. Wetlands Mapper." Accessed March 24, 2021. <https://www.fws.gov/wetlands/data/mapper.html>.
- San Francisco Estuary Institute. 2018. "California Aquatic Resource Inventory (CARI)." Accessed March 24, 2021. <https://www.sfei.org/cari#sthash.SnPvzyAU.dpbs>.



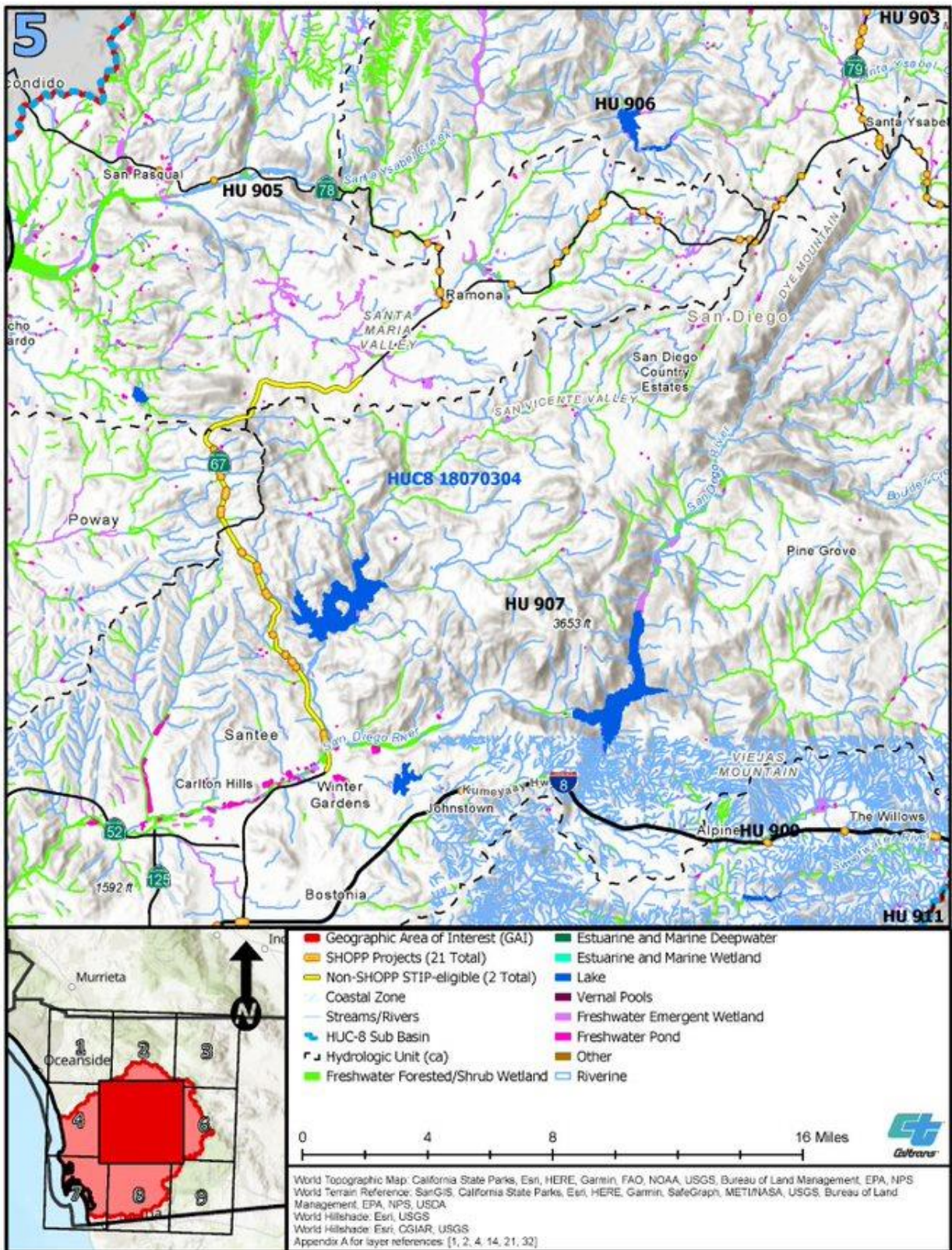


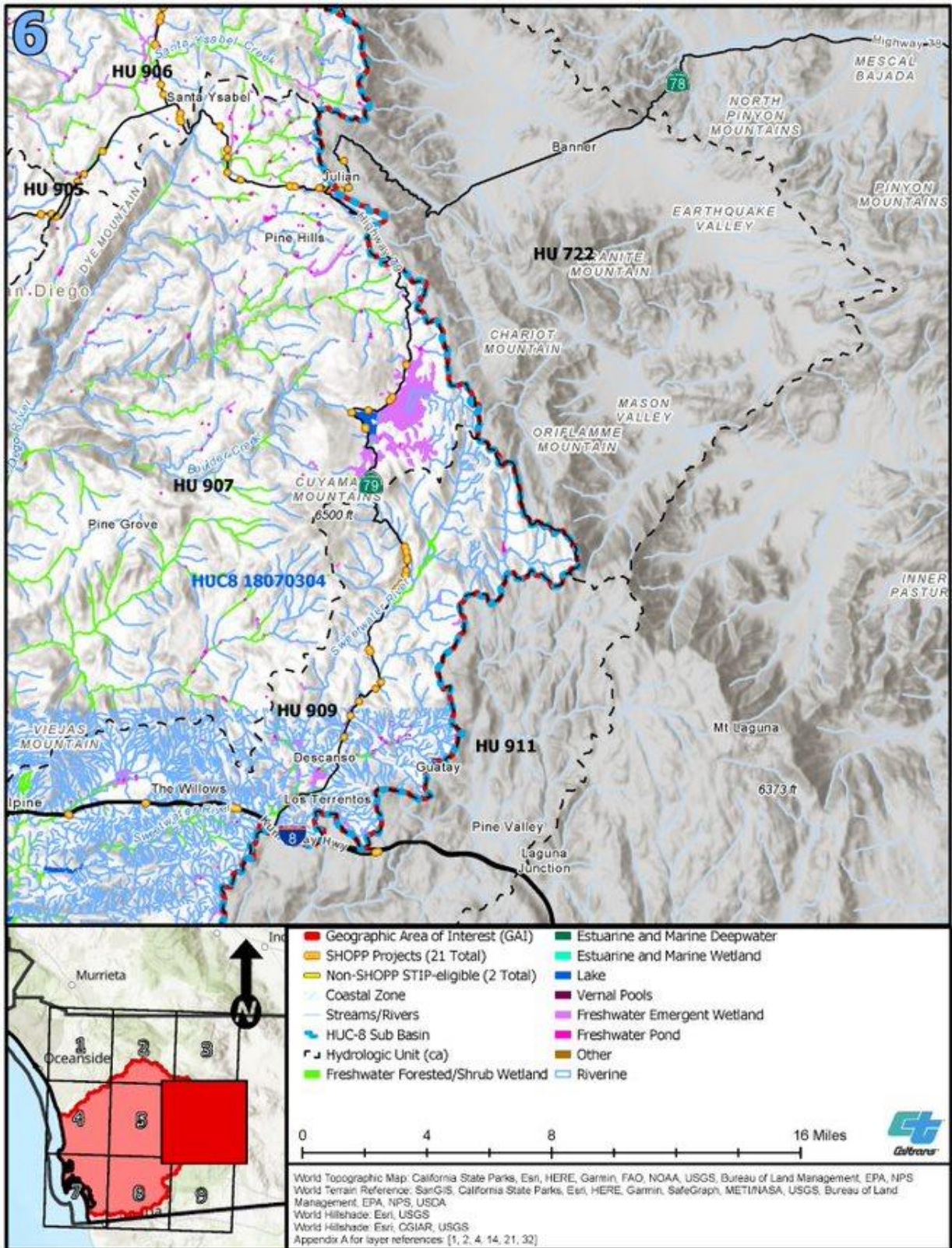


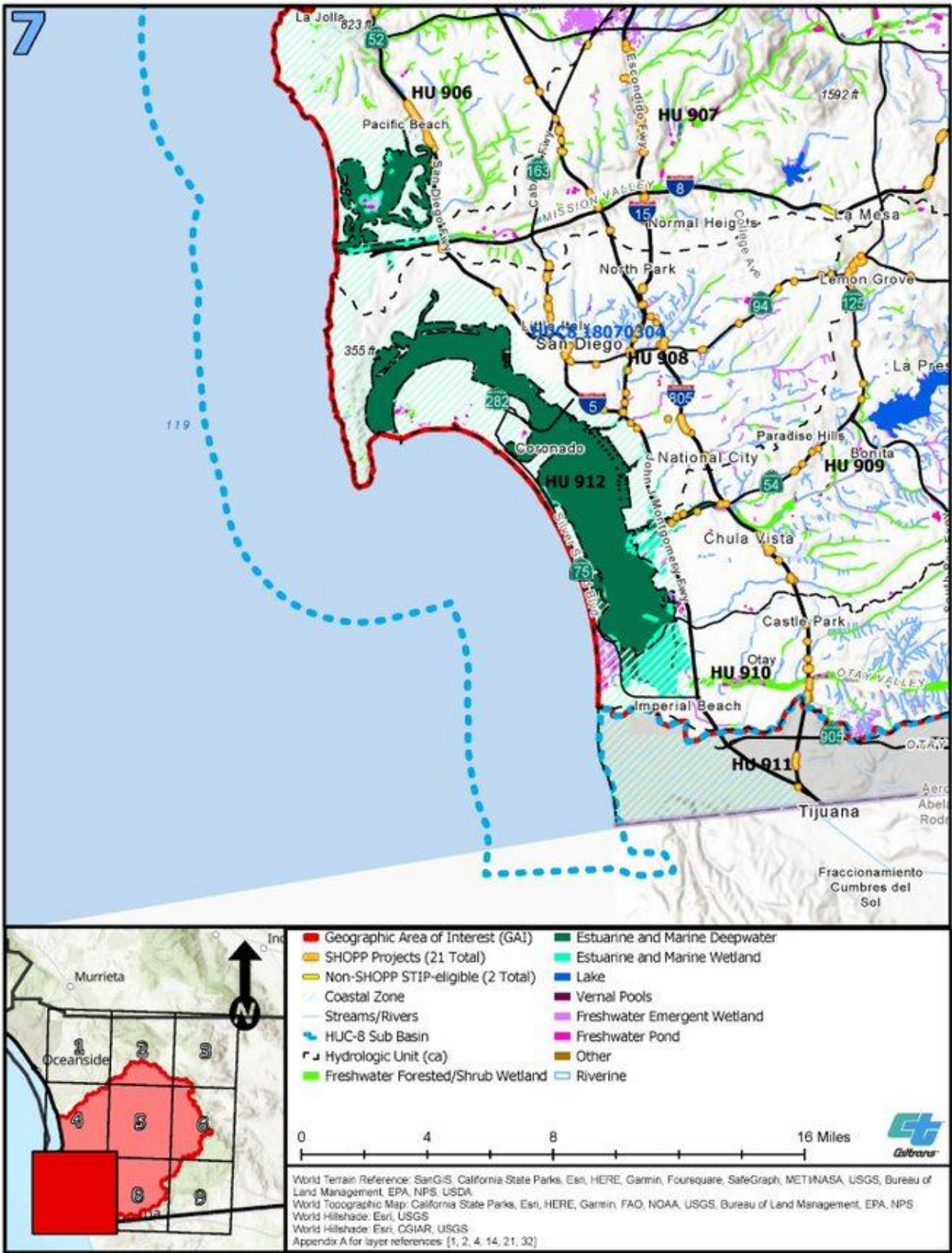


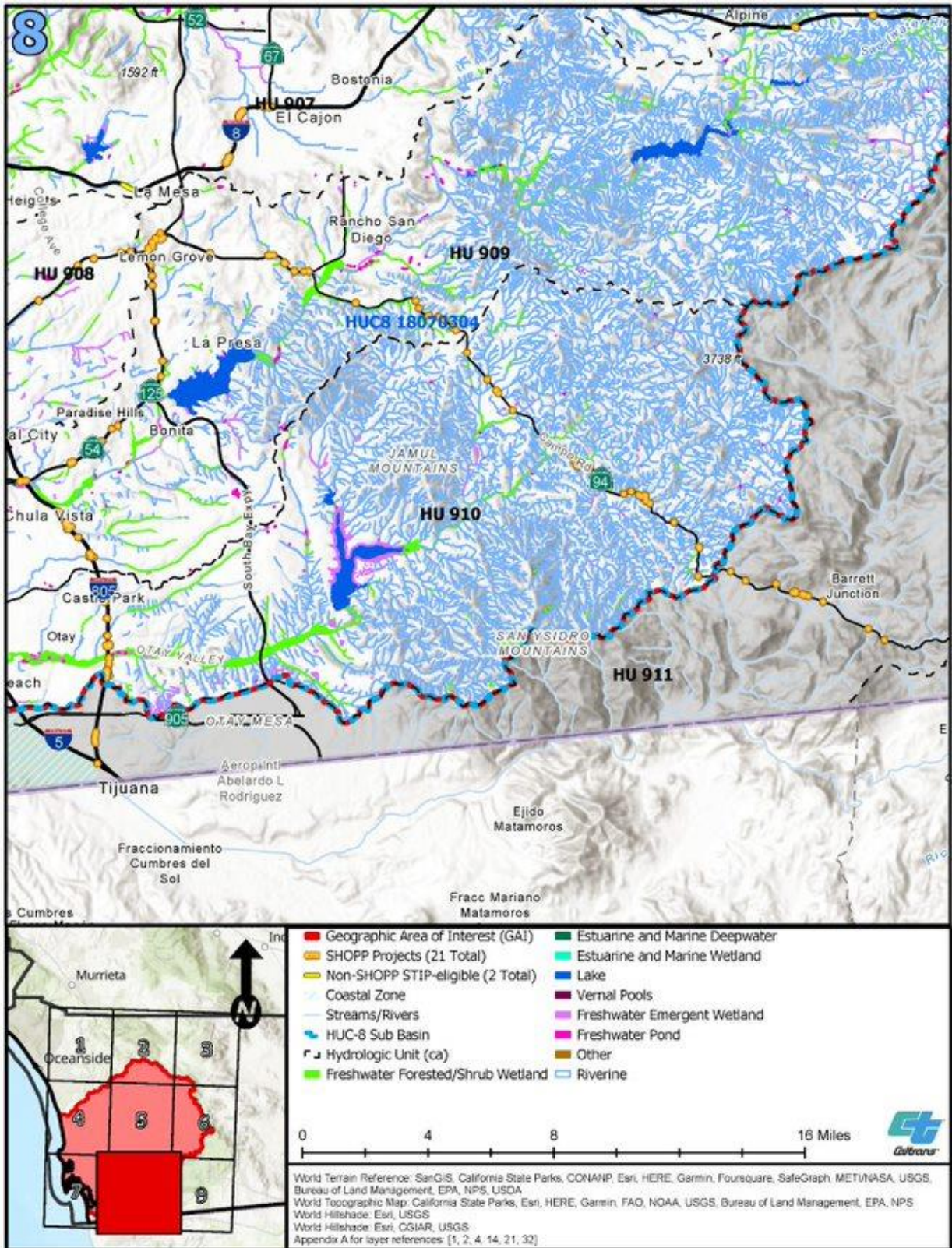


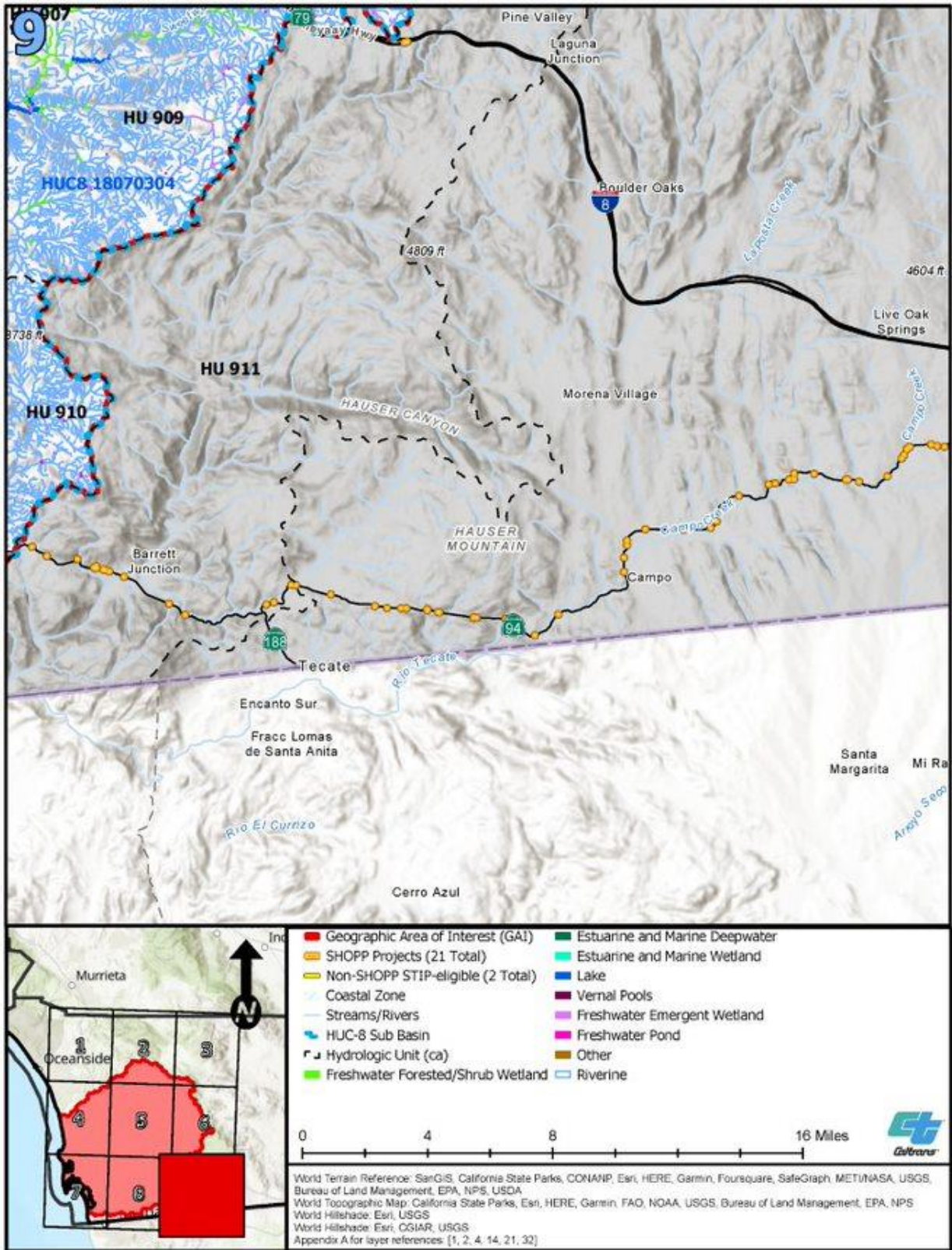












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