



**ADVANCE MITIGATION PROGRAM
Mad-Redwood, Lower Eel, and South Fork Eel
Sub-basins Regional Advance Mitigation
Needs Assessment**

Appendices

Version 1.0

**Establishing Caltrans' Need for Advance Mitigation,
forecast fiscal years 2017/2018 to 2026/2027**

California Department of Transportation – District 1

July 2021

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APPENDICES

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APPENDIX A: GEOGRAPHIC INFORMATION SYSTEM 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 1 RAMNA GIS Sources

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
1	State Highway Network	Caltrans	8/1/2018	10/11/2018	http://www.dot.ca.gov/hq/tsip/gis/datalibrary/Metadata/NHS.html
2	SHOPP	Caltrans	2/27/2019	2/27/2019	Caltrans System Planning
3	STIP	California Transportation Commission	3/18/2019	3/18/2019	Caltrans System Planning
4	Ecoregion Section (GAI)	USFS	5/1/2017	10/18/2018	https://data.fs.usda.gov/geodata/edw/datasets.php?xmlKeyword=Ecomap
5	Ecological Subsections	USFS	5/1/2017	10/17/2018	https://data.fs.usda.gov/geodata/edw/datasets.php?xmlKeyword=Ecomap
6	Calfish PAD (Passage Assessment Database)	CDFW	10/03/2019	12/15/2019	https://map.dfg.ca.gov/metadata/ds0069.html?5.64.18vo
7	ACE Climate Resilience	CDFW	2/22/2018	10/17/2018	https://map.dfg.ca.gov/metadata/ds2738.html?5.66.18
8	CEHC	CDFW	10/1/2017	10/17/2018	Layer is a merge of Essential Connectivity Areas and Landscape Blocks
9	Essential Connectivity Areas - CEHC	CDFW	1/1/2014	10/17/2018	https://map.dfg.ca.gov/metadata/ds0620.html?5.66.18
10	Natural Landscape Blocks - CEHC	CDFW	10/1/2017	10/17/2018	https://map.dfg.ca.gov/metadata/ds0621.html?5.66.18
11	Potential Riparian Connections - CEHC	CDFW	3/1/2010	10/17/2018	https://map.dfg.ca.gov/metadata/ds0622.html?5.66.18
12	SWAP Terrestrial Targets - 2015	CDFW	2/1/2018	10/29/2018	https://map.dfg.ca.gov/metadata/ds1966.html?5.66.18

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
13	CalWater Hydrologic Areas	California Department of Water Resources	11/1/2016	10/19/2018	https://catalog.data.gov/dataset/calwater-2-233fac
14	California Conservation Easements	California Protected Areas Database	12/1/2016	10/11/2018	http://www.calands.org/cced
15	California Protected Areas Holdings	California Protected Areas Database	8/1/2017	10/11/2018	http://www.calands.org/data
16	Tribal Land Boundaries	Bureau of Indian Affairs	5/16/2017	10/11/2018	https://hub.arcgis.com/items/2e915ef3df48422283e5b2c7d89dfcba
17	U.S. Military Installations	U.S. Census Bureau	12/1/2017	10/11/2018	https://www.census.gov/cgi-bin/geo/shapefiles/index.php
18	County Boundaries	U.S. Census Bureau	7/8/2016	10/11/2018	https://data.ca.gov/dataset/ca-geographic-boundaries
19	County Parcels (Humboldt, Trinity, Mendocino)	Humboldt, Trinity, Mendocino Counties	4/30/2019	4/30/2019	Parcel data is distributed by the Department of Technology to internal Caltrans users through an FTP
20	USFWS Critical Habitat	FWS	10/1/2018	10/1/2018	https://ecos.fws.gov/ecp/report/table/critical-habitat.html
21	National Hydrology Dataset	USGS	9/26/2014	10/19/2018	https://www.usgs.gov/core-science-systems/ngp/national-hydrography
22	Corps Regulatory In-Lieu Fee & Bank Information Tracking System	Mitigation Service Banks	Not available	1/28/2019	https://ribits.usace.army.mil/ribits_apex/f?p=107:2
23	CDFW Approved Mitigation Service Areas	CDFW	7/23/2018	1/28/2019	https://map.dfg.ca.gov/metadata/ds2782.html?5.76.22

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
24	CalWater Hydrologic Areas	Department of Forestry and Fire Protection	11/1/2016	10/19/2018	https://frap.fire.ca.gov/mapping/gis-data/
25	Conservation Plan Boundaries, HCP and NCCP	CDFW, FWS	12/12/2017	1/28/2019	https://map.dfg.ca.gov/metadata/ds0760.html?5.80.28l
26	Coastal Zone and LCP	CCC	3/1/2018	3/1/2018	https://www.coastal.ca.gov/maps/czb/ ; https://www.coastal.ca.gov/maps/lcp/
27	Wetlands D1/D2 and Waters D1/D2 in Caltrans District 1 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2017/2018	SAMNA	1/1/2017	2/6/2019	http://www.dot.ca.gov/env/advancemitigation/
28	National Flood Hazard Layer	FEMA	6/29/2018	9/25/2019	https://www.fema.gov/national-flood-hazard-layer-nfh
29	RCIS Draft Boundaries	CDFW	9/10/2019	9/25/2019	Requested on 9/25/19, source date is 9/10/2019
30	Terrestrial Connectivity - ACE [ds2734]	CDFW	8/28/2019	9/25/2019	https://map.dfg.ca.gov/metadata/ds2734.html?5.80.28l
31	Terrestrial Biodiversity Summary - ACE [ds2739]	CDFW	2/22/2018	7/3/2019	https://map.dfg.ca.gov/metadata/ds2739.html?5.80.28l
32	Aquatic Biodiversity Summary - ACE [ds2768]	CDFW	2/22/2018	7/3/2019	https://map.dfg.ca.gov/metadata/ds2768.html?5.80.28l
33	Vegetation D1/D2 in Caltrans District 1 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2017/2018	SAMNA	1/1/2017	2/6/2019	http://www.dot.ca.gov/env/advancemitigation/
34	Salmonid Essential Fish Habitats	NOAA Fisheries	1/1/2014	3/17/2020	https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-groundfish-and-salmon

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
35	Fish Critical Habitat Areas	NOAA Fisheries	2014-2016	6/15/2020	https://www.fisheries.noaa.gov/resource/map/critical-habitat-salmon-and-steelhead-all-west-coast
36	Fish Passage Priorities	CDFW	4/27/2020	9/22/2020	https://map.dfg.ca.gov/metadata/ds2868.html?5.92.26
37	Eel River – National Wild and Scenic Rivers	National Wild and Scenic Rivers System	11/1/2016	10/15/2020	https://www.rivers.gov/rivers/eel.php
38	Areas of Special Biological Significance (“ASBS”)	California State Water Board	1/1/2005	10/15/2020	https://www.waterboards.ca.gov/water_issues/programs/ocean/asbs_map.shtml

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APPENDIX B: ECOREGION SUBSECTION DESCRIPTIONS

This RAMNA uses the USFS ecosystem classification and mapping hierarchy to describe the GAI. Documented by Cleland et al. (2007), six subsections occur in the portions of the Northern California Coast and Northern California Coast Ranges Sections located in the Mad-Redwood, Lower Eel, and South Fork Eel sub-basins that encompass the GAI. Each subsection's brief description, from Cleland et al. (2007), is provided in Table B-1.

Table B-1. Ecoregion Subsection Descriptions

Subsection	Code ^a	Brief Description	Acreage ^b	Subsection as Percentage of GAI
Northern Franciscan Redwood Forest	263Ab	Includes low mountains in the coastal fog zone with coast redwoods and Douglas-fir. Other vegetation includes western hemlock, western redcedar, Port Orford cedar, grand fir, Sitka spruce, red alder, and tanoak. Rock formations are of sedimentary origin.	72,957	2.0%
Humboldt Bay Flats and Terraces	263Ae	Includes beaches, dunes, and marine terraces, as well as wet forests, lakes, estuarine marshes, and tannic streams. Vegetation communities include dunes, grassland, coastal scrub, beach pine, bishop pine, Sitka spruce, and riparian communities with red alder, conifers, bigleaf maple, salmonberry, rhododendron, and willows.	253,864	7.0%
Central Franciscan	263Af	Includes low mountains in the coastal fog zone. Vegetation communities include redwood, Douglas-fir, tanoak, coast live oak, coastal sage (Franciscan), and north coastal shrub series. Rivers and streams in alluvial and bedrock channels drain to the Pacific Ocean. Rock formations are of sedimentary origin.	829,451	22.7%
Coastal Franciscan	263Ag	Includes central redwood forests that are a mixture of conifers and hardwoods. Vegetation characteristic of this area includes a multi-story canopy of redwood, Douglas-fir, tanoak, bigleaf maple, shrubs, and grasses, with coast live oaks more common in the south.	958,537	26.3%
Eastern Franciscan	M261Ba	Includes low to moderate elevation mountains ranges with rocks of volcanic origin. Vegetation consists of Douglas-fir, western hardwoods, white fir, ponderosa pine, tanoak, interior live oak, coast live oak, chaparral-mountain shrub, and annual grasslands. Rapid or moderately rapid rivers and streams occurring in deeply incised canyons with weak bedrock channels flow westerly to the Pacific Ocean.	187,667	5.1%

Subsection	Code ^a	Brief Description	Acreage ^b	Subsection as Percentage of GAI
Central Franciscan	M261Bb	Includes low to moderate elevation mountains ranges with rocks of volcanic origin. Vegetation consists of Douglas-fir, western hardwoods, white fir, ponderosa pine, tanoak, interior live oak, coast live oak, chaparral-mountain shrub, and annual grasslands. Rapid or moderately rapid rivers and streams occurring in deeply incised canyons with weak bedrock channels flow westerly to the Pacific Ocean.	1,345,783	36.9%
Total			3,648,259	100%

Source: Griffith et al. (2016)

^a USFS ecological unit subsection codes

^b Numbers were rounded to the nearest whole number.

References

- Cleland, D. T., Freeouf, J. A., Keys, Jr., J. E., Nowacki, G.J., Carpenter, C.A., McNab, W. H. 2007. *Ecological Subregions: Sections and Subsections of the Conterminous United States* [1:3,500,000] [CDROM]. Gen. Tech. Report WO-76D. Washington, D.C.: USDA, USFS.
- Griffith, G. E., J. M. Omernik, D. W. Smith, T. D. Cook, E. Tallyn, K. Moseley, and C. B. Johnson. 2016. "Ecoregions of California (poster)." USGS Open-File Report 2016-1021. Accessed October 2019. <https://www.calflora.org/entry/help/epa-er4.html>.

APPENDIX C: 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 2017, 2019). 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 C-1 indicates which USFS subsections of the Northern California Coast and Northern California Coast Ranges sections these habitat types occur in; subsection names and numbers are provided. A key map is provided after Table C-1 that references mapbook pages including zoomed in view of locations in the GAI and mapped landcover types.

Land cover types that occur in the GAI, based on the SAMNA Reporting Tool, are generally described below (CDFW 2019). Table C-1 indicates which subecoregion each of these habitat types occur in.

Tree-dominated Habitats: Tree-dominated habitats have at least 10 percent total tree canopy crown closure. In the GAI, tree-dominated habitats include blue oak woodland, blue oak-foothill pine, closed-cone pine-cypress, coastal oak woodland, Douglas fir, Eucalyptus, Jeffrey pine, Klamath mixed conifer, montane hardwood, montane hardwood-conifer, montane riparian, ponderosa pine, redwood, red fir, Sierran mixed conifer, valley foothill riparian, valley oak woodland, and white fir, which are found in all five subecoregions.

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 alpine dwarf-shrub, chamise-redshank chaparral, coastal scrub, mixed chaparral, and montane chaparral, which are found in all five subecoregions.

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 all five subecoregions.

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, marine, and riverine, which are found in all five subecoregions.

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, urban, and vineyard, which are found in all five subecoregions.

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

References

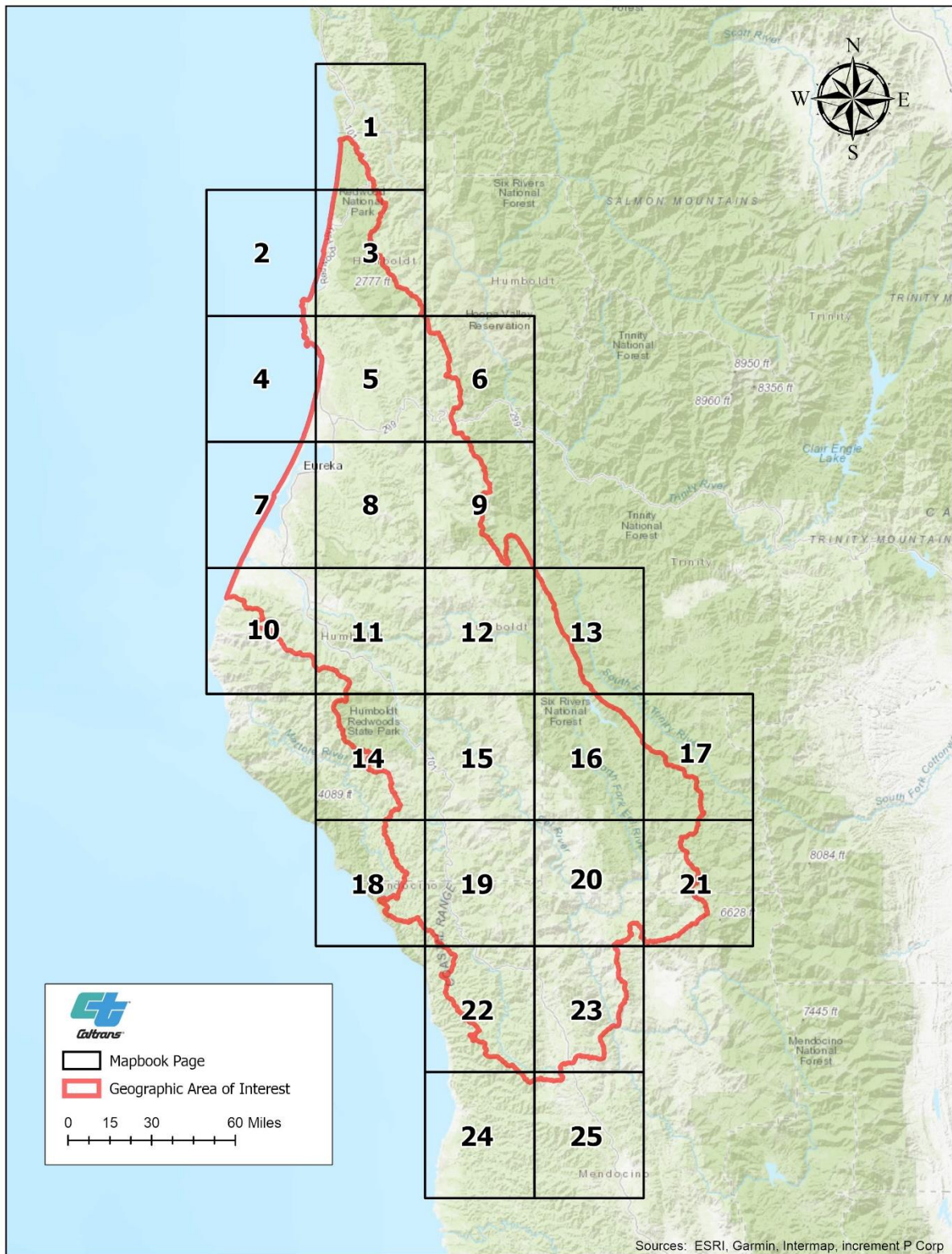
- Caltrans. 2017. "Vegetation_D1 in Caltrans District 1 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2017/2018" (data file). Accessed February 6, 2019. <http://www.dot.ca.gov/env/advancemitigation/>.
- . 2019. *Statewide Advance Mitigation Needs Assessment Report*. State Highway Operation and Protection Program Ten-Year Project Book Second Quarter 2017/2018 Fiscal Year. Caltrans Headquarters Office of Strategic Biological Planning, Advance Mitigation and Innovation, Division of Environmental Analysis. Sacramento, California.
- CDFW. 2019. California Wildlife Habitat Relationships (CWHR) System supported by the California Interagency Wildlife Task Group and maintained by the CDFW. Database Version 9.0.
- Mayer, 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>.

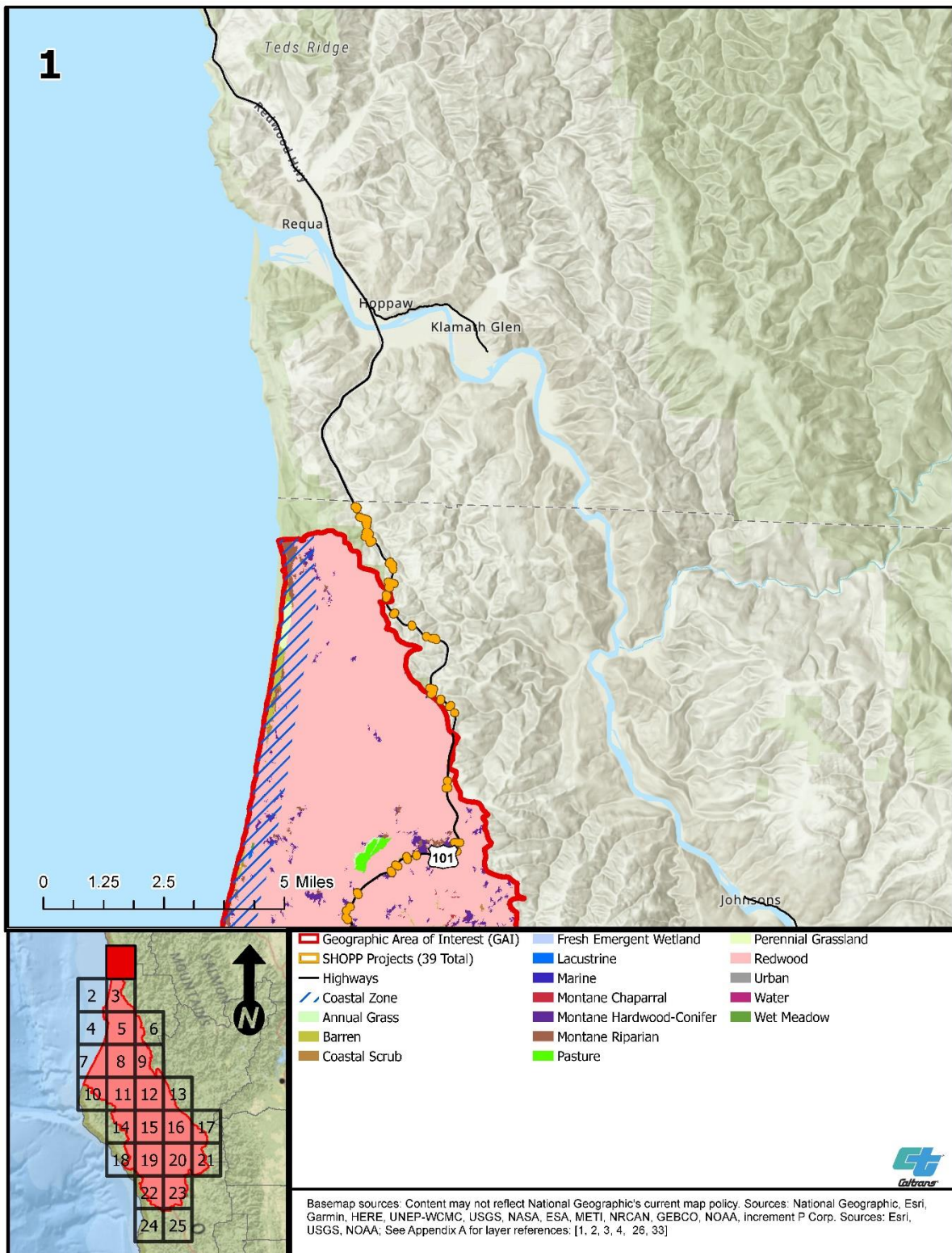
Table C-1. Land Cover Types in the Northern California Coast and Northern California Coast Ranges Sections within the GAI

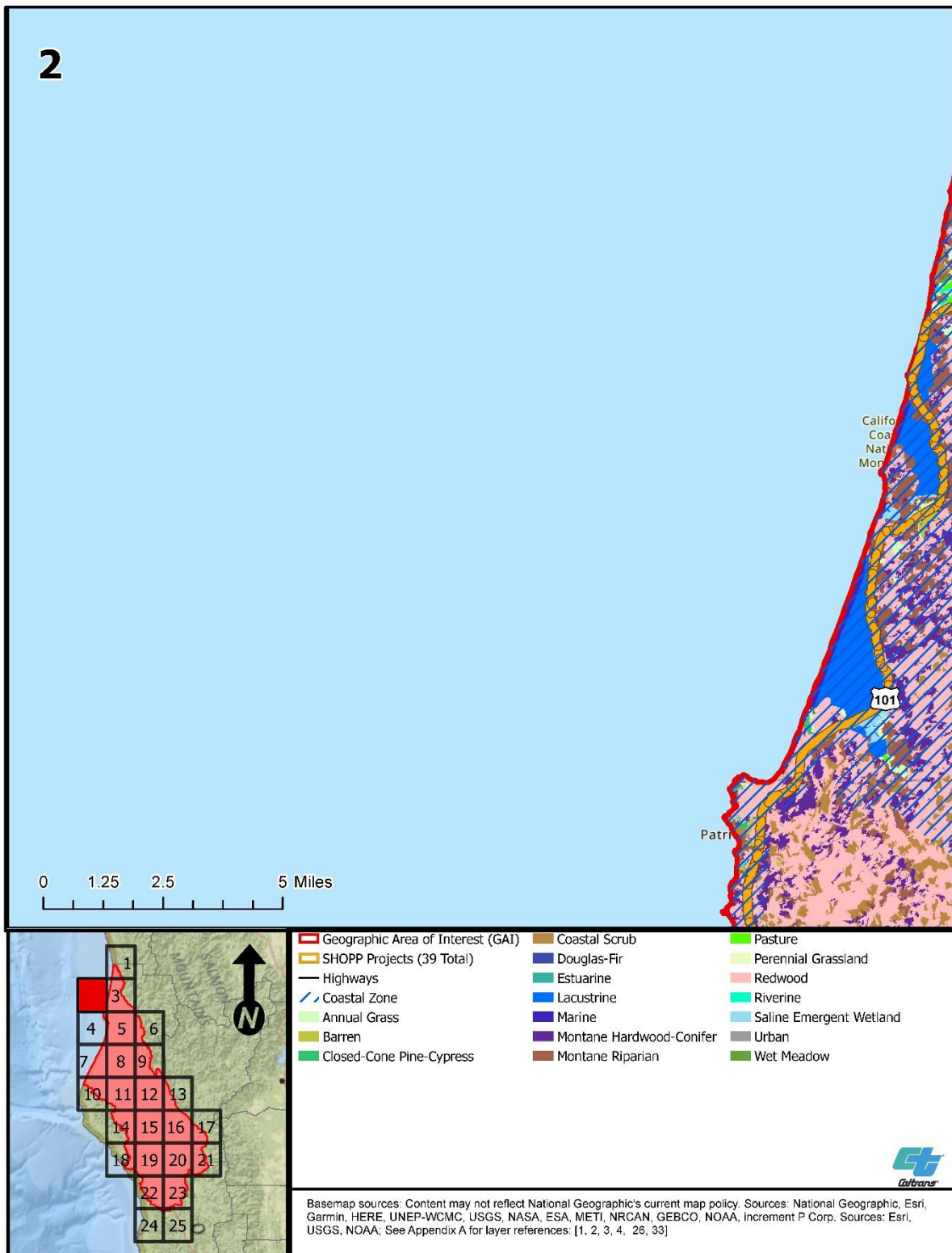
Land Cover Type	Northern Franciscan Redwood Forest Subcoregion (263Ab)	Humboldt Bay Flats and Terraces Subcoregion (263Ae)	Central Franciscan Subcoregion (263Af)	Coastal Franciscan Subcoregion (263Ag)	Eastern Franciscan Subcoregion (M261Ba)	Central Franciscan Subcoregion (M261Bb)
Tree-dominated Habitats	See below	See below	See below	See below	See below	See below
Blue Oak Woodland	NP	NP	Present	NP	NP	Present
Blue Oak-Foothill Pine	NP	NP	Present	NP	Present	Present
Closed-Cone Pine-Cypress	NP	Present	Present	Present	NP	Present
Coastal Oak Woodland	Present	Present	Present	Present	Present	Present
Douglas Fir	Present	NP	Present	Present	Present	Present
Eucalyptus	NP	Present	NP	NP	NP	NP
Jeffrey Pine	NP	NP	Present	Present	Present	Present
Klamath Mixed Conifer	NP	NP	Present	Present	Present	Present
Montane Hardwood	Present	Present	Present	Present	Present	Present
Montane Hardwood-Conifer	Present	Present	Present	Present	Present	Present
Montane Riparian	Present	Present	Present	Present	Present	Present
Ponderosa Pine	NP	NP	Present	Present	Present	Present
Redwood	Present	Present	Present	Present	NP	Present
Red Fir	NP	NP	Present	NP	Present	Present
Sierran Mixed Conifer	NP	NP	Present	Present	Present	Present
Valley Oak Woodland	NP	NP	Present	NP	NP	Present
Valley Foothill Riparian	NP	Present	Present	NP	NP	Present
White Fir	NP	NP	Present	NP	Present	Present
Shrub-dominated Habitats	See below	See below	See below	See below	See below	See below
Alpine Dwarf-Shrub	NP	NP	NP	NP	Present	NP
Chamise-Redshank Chaparral	NP	NP	Present	Present	Present	Present
Coastal Scrub	Present	Present	Present	Present	NP	Present
Mixed Chaparral	Present	NP	Present	Present	Present	Present
Montane Chaparral	Present	NP	Present	Present	Present	Present
Herbaceous-dominated Habitats	See below	See below	See below	See below	See below	See below
Annual Grass	Present	Present	Present	Present	Present	Present
Fresh Emergent Wetland	NP	NP	Present	NP	NP	NP

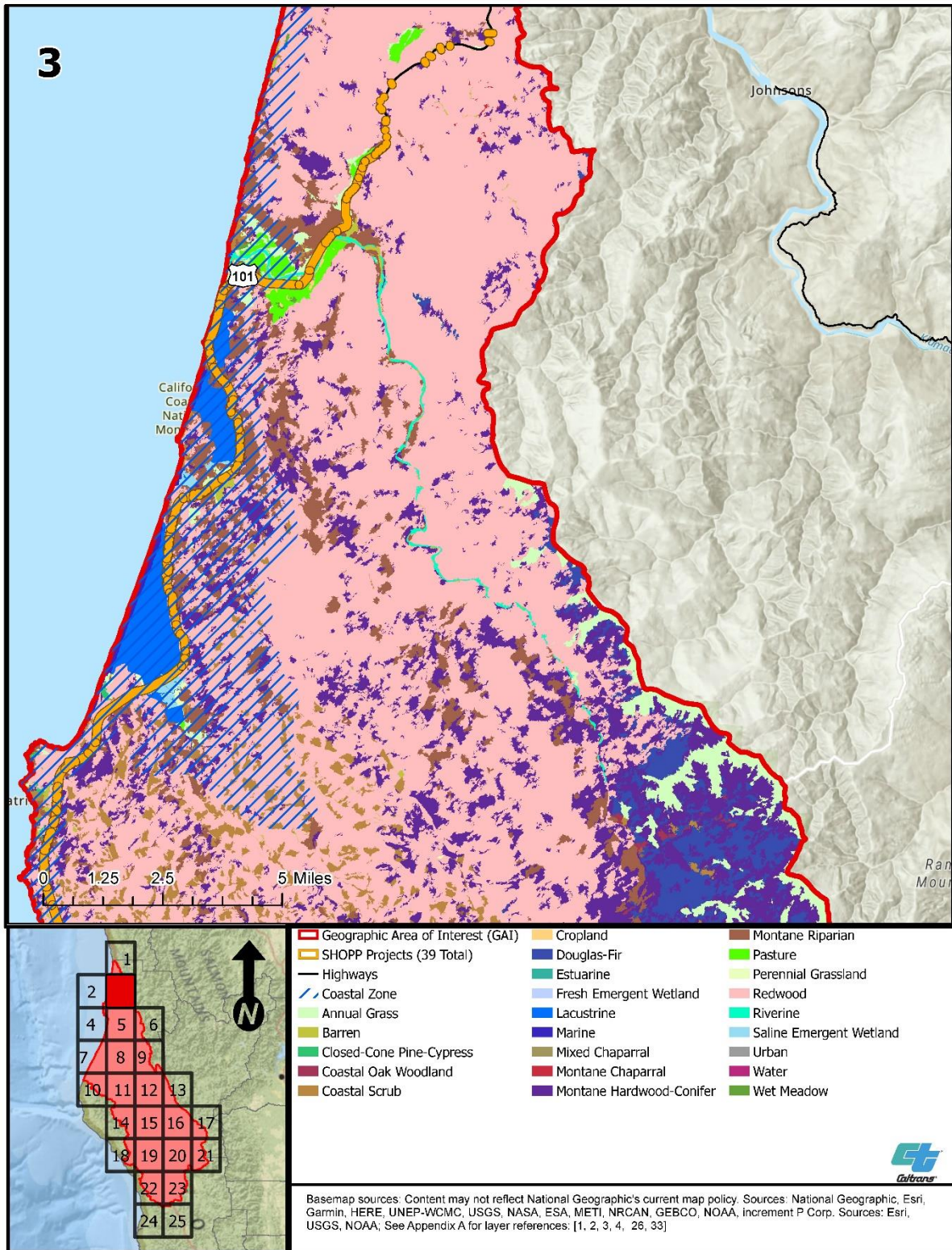
Land Cover Type	Northern Franciscan Redwood Forest Subecoregion (263Ab)	Humboldt Bay Flats and Terraces Subecoregion (263Ae)	Central Franciscan Subecoregion (263Af)	Coastal Franciscan Subecoregion (263Ag)	Eastern Franciscan Subecoregion (M261Ba)	Central Franciscan Subecoregion (M261Bb)
Pasture	Present	Present	Present	Present	NP	Present
Perennial Grassland	Present	Present	Present	Present	Present	Present
Saline Emergent Wetland	NP	Present	Present	NP	NP	Present
Wet Meadow	NP	NP	Present	NP	NP	Present
Aquatic Habitats	See below	See below	See below	See below	See below	See below
Lacustrine	Present	Present	Present	Present	Present	Present
Marine	NP	Present	NP	NP	NP	NP
Riverine	NP	Present	Present	Present	Present	Present
Developed Habitats	See below	See below	See below	See below	See below	See below
Cropland	NP	Present	Present	Present	NP	Present
Urban	Present	Present	Present	Present	Present	Present
Vineyard	NP	NP	Present	Present	NP	NP
Non-vegetated Habitats	See below	See below	See below	See below	See below	See below
Barren	Present	Present	Present	Present	Present	Present

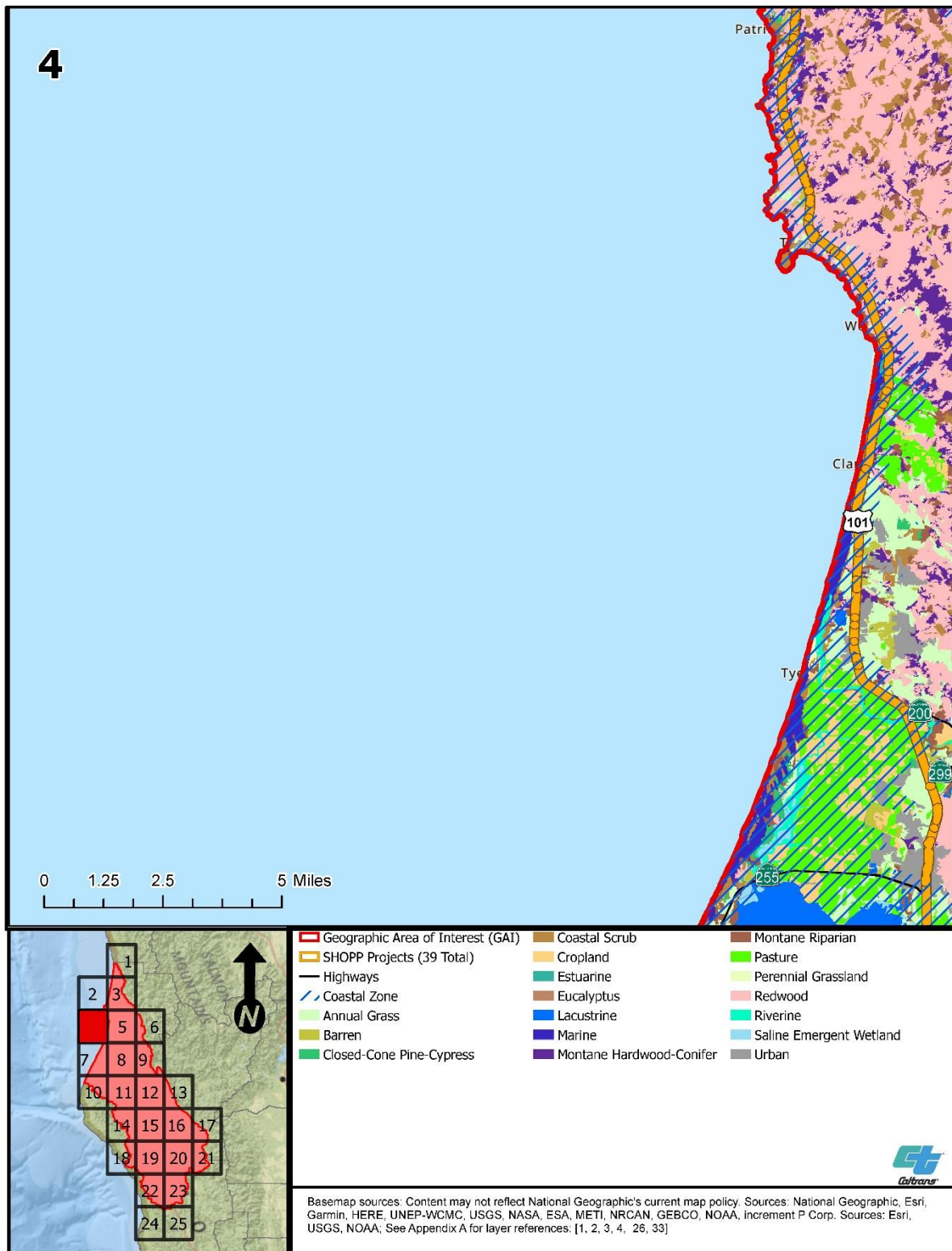
Sources: Caltrans 2017, 2019
NP = not present

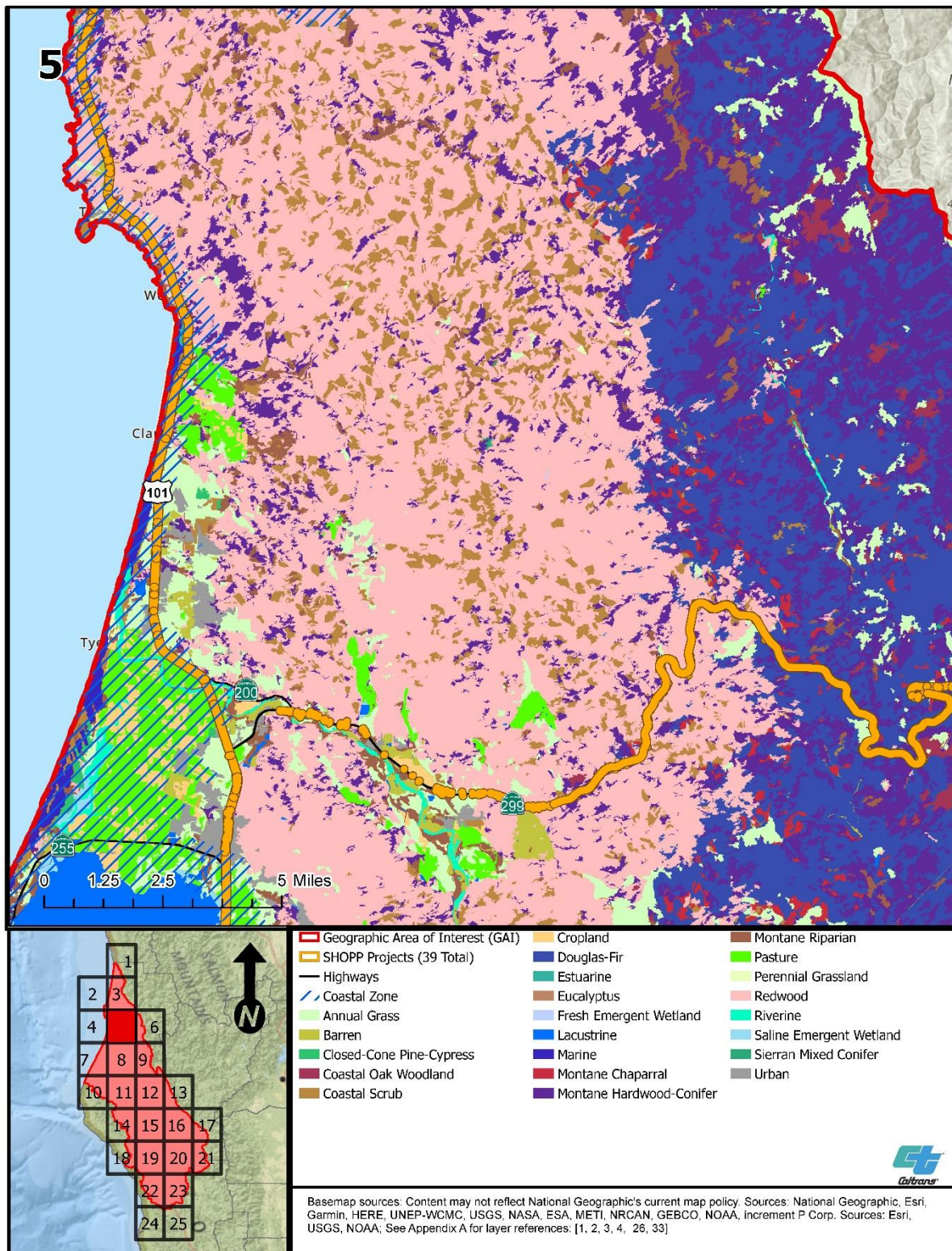


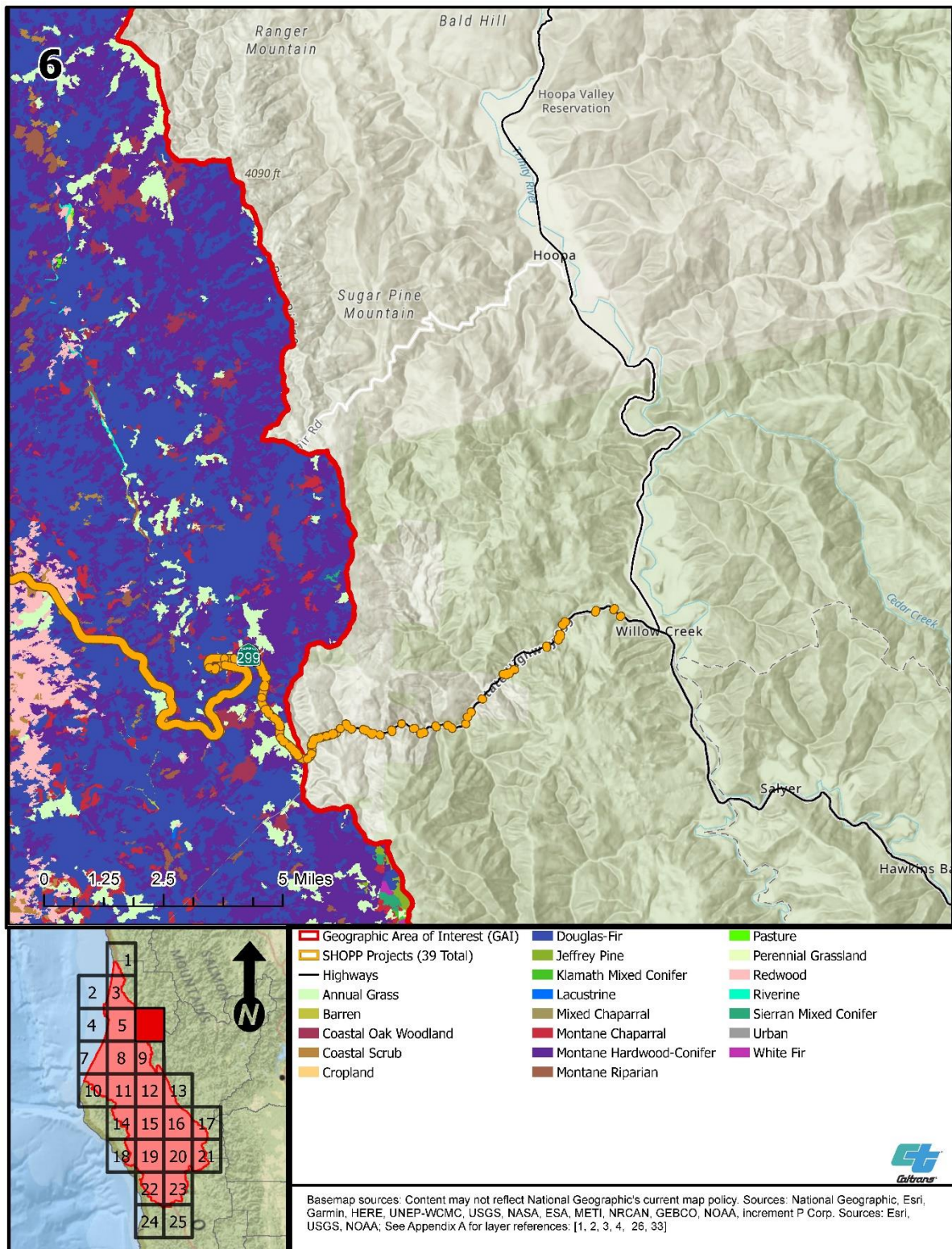


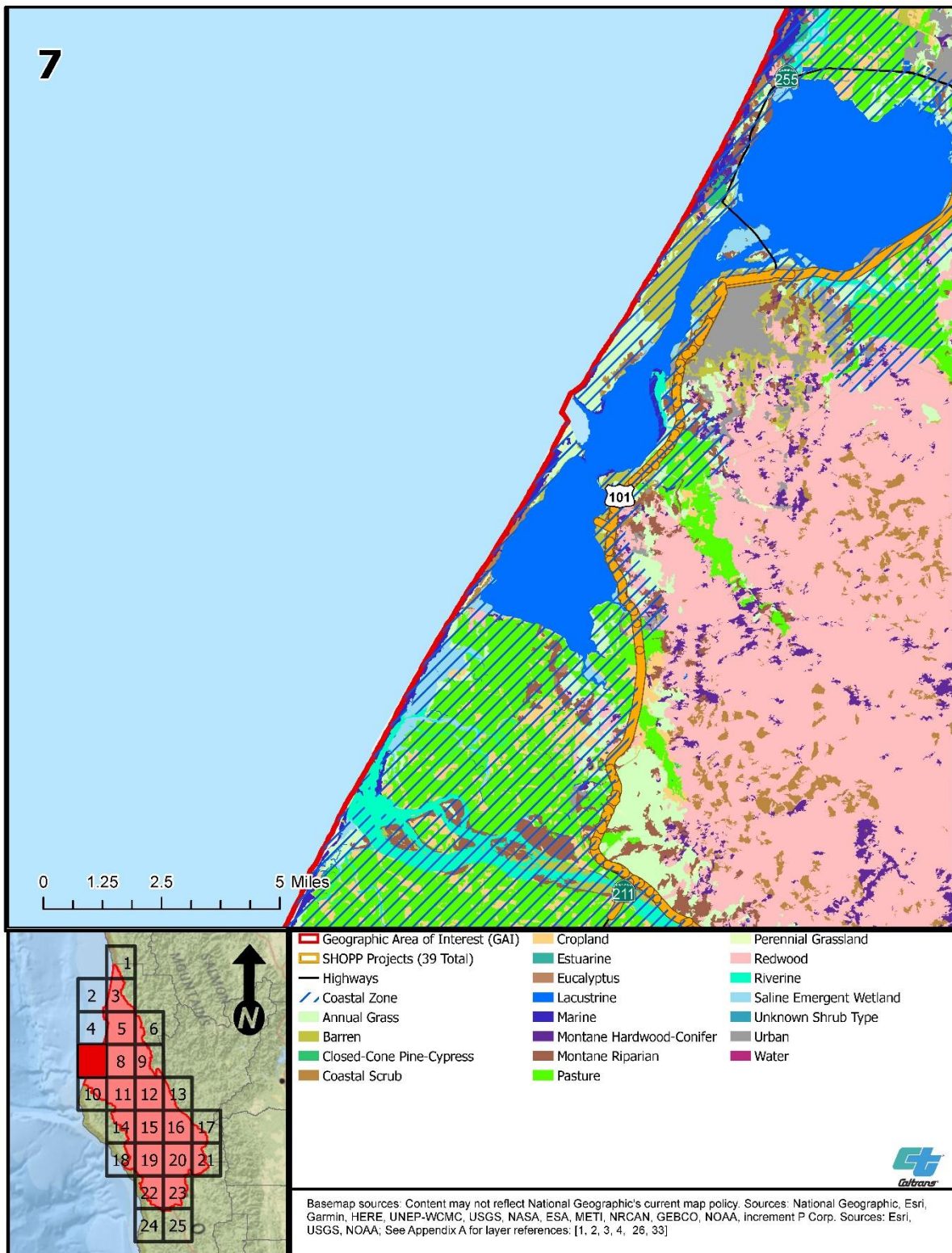


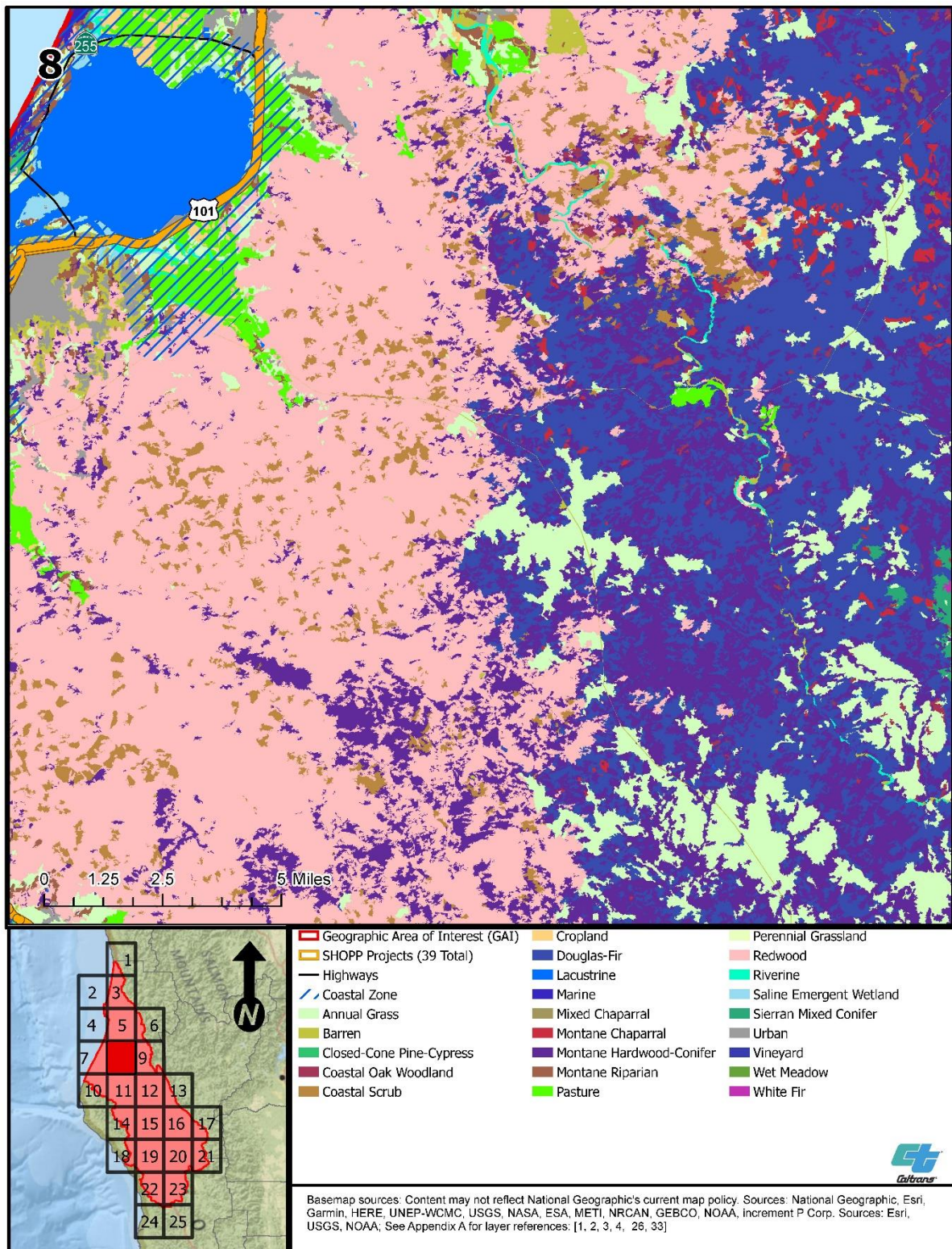


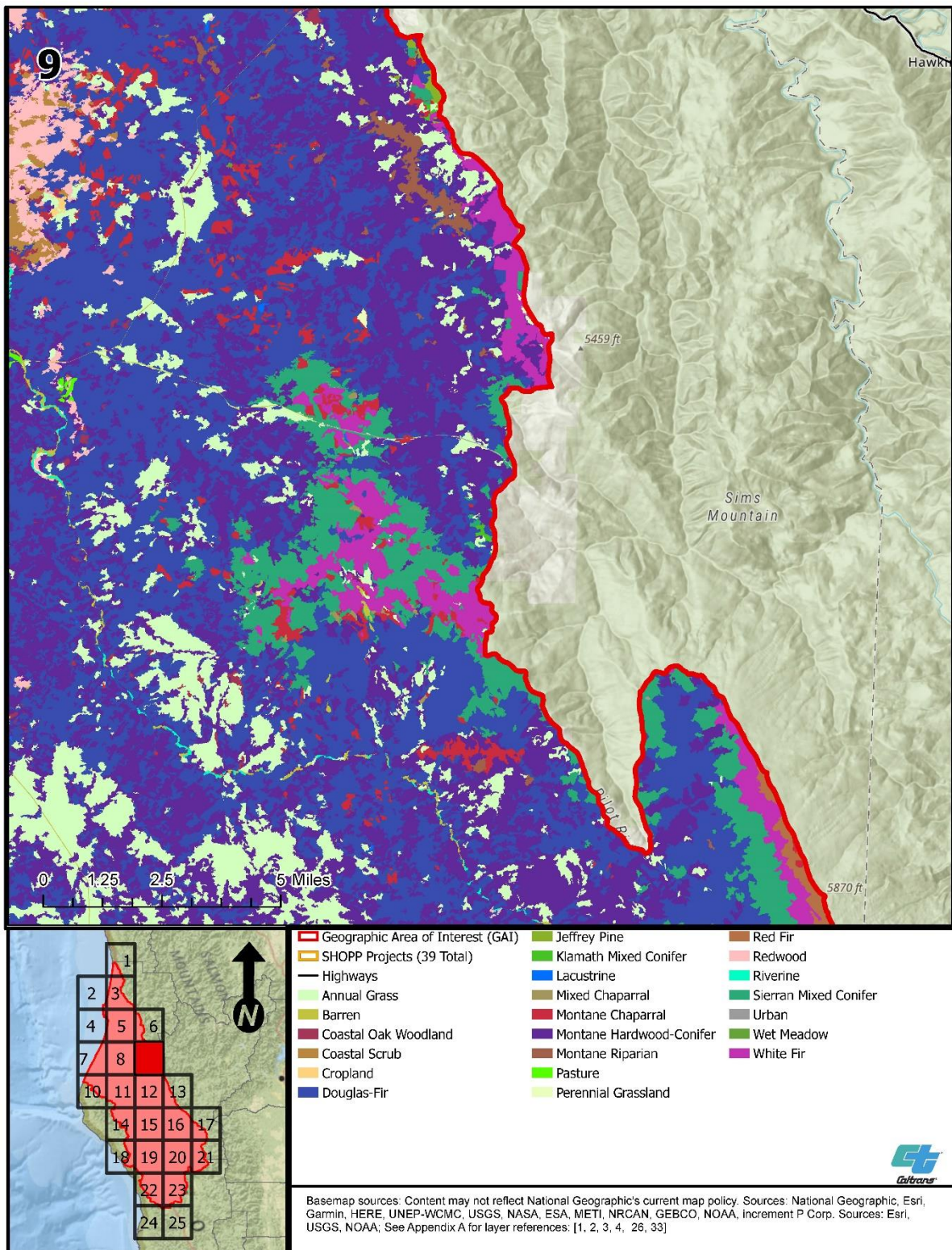


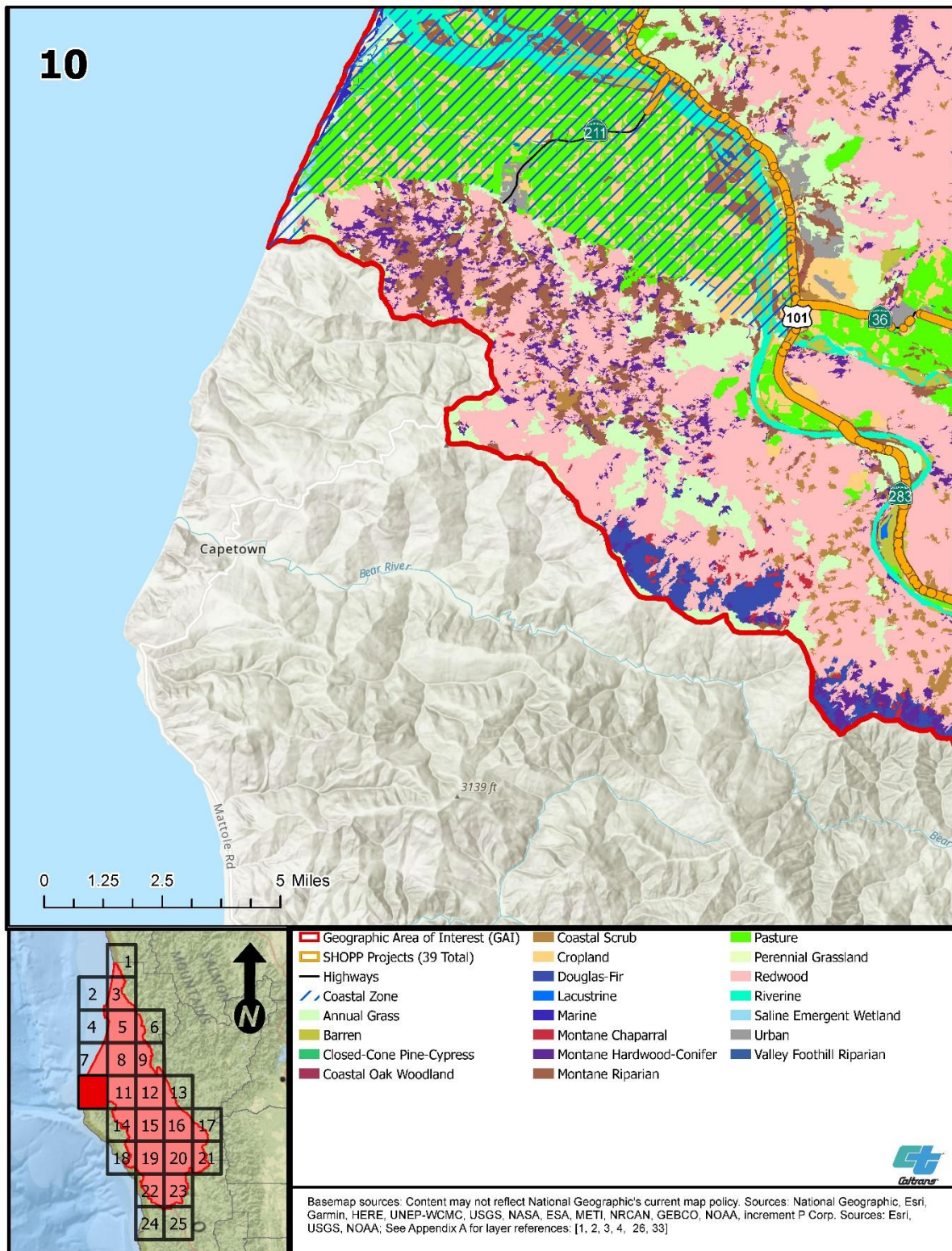


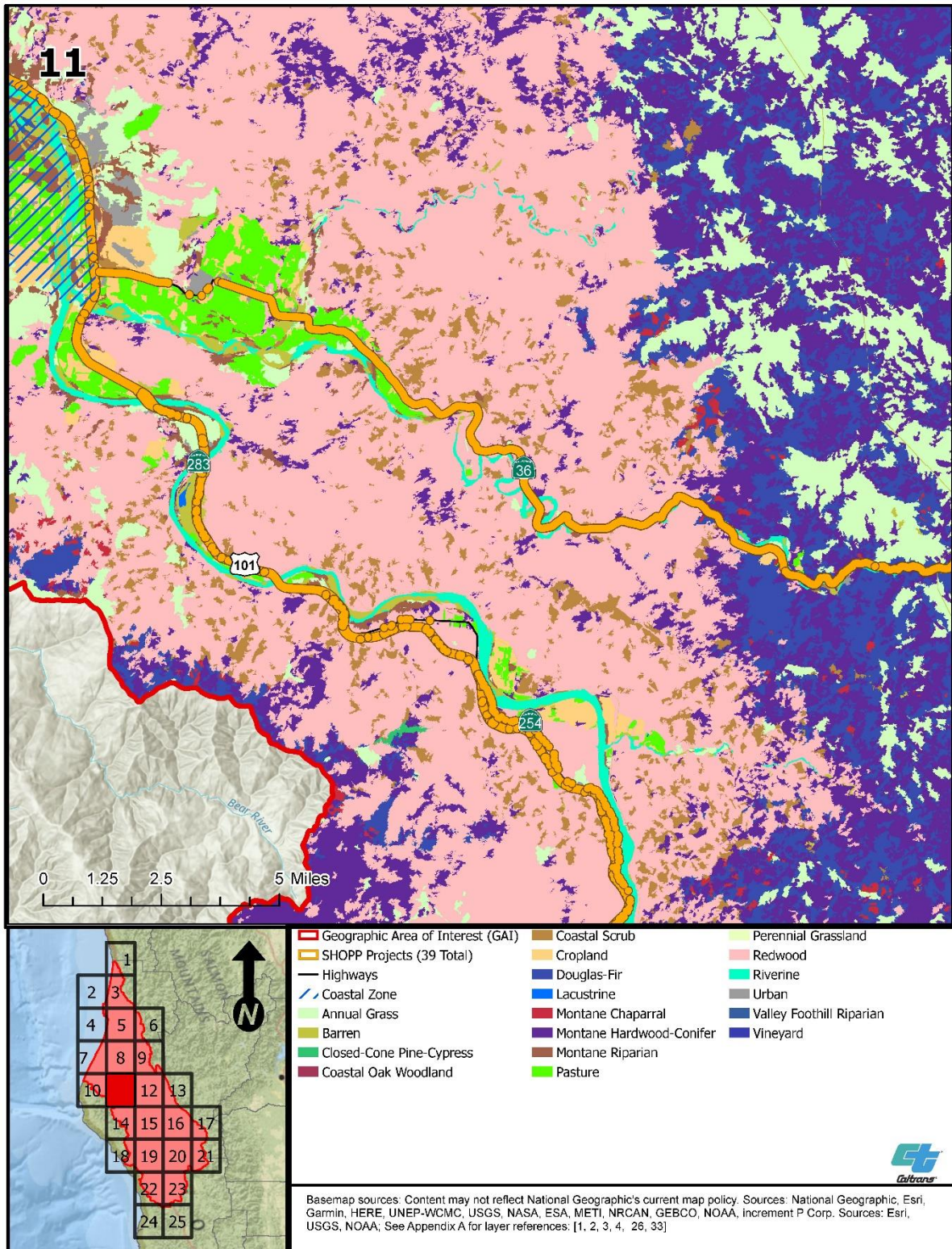


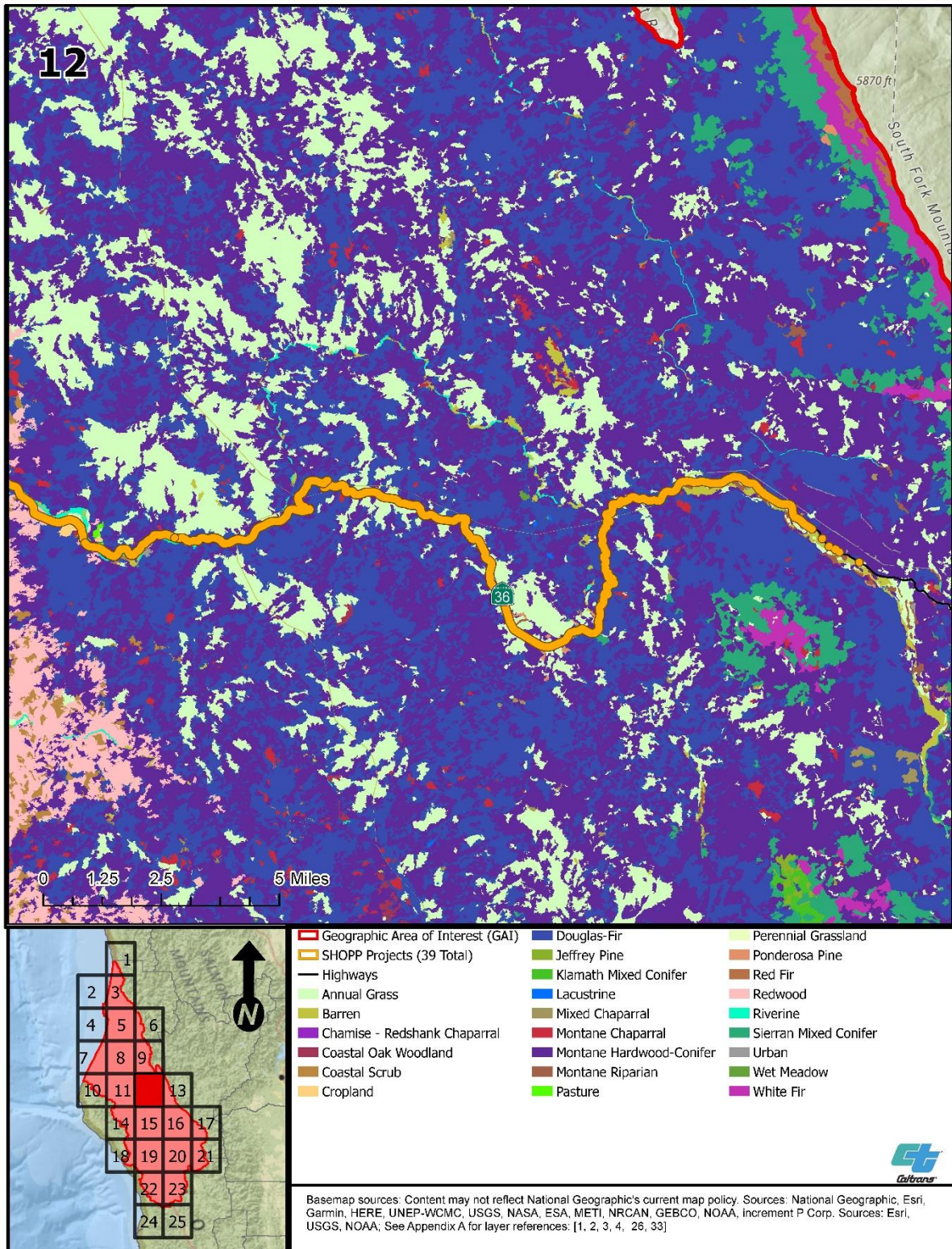


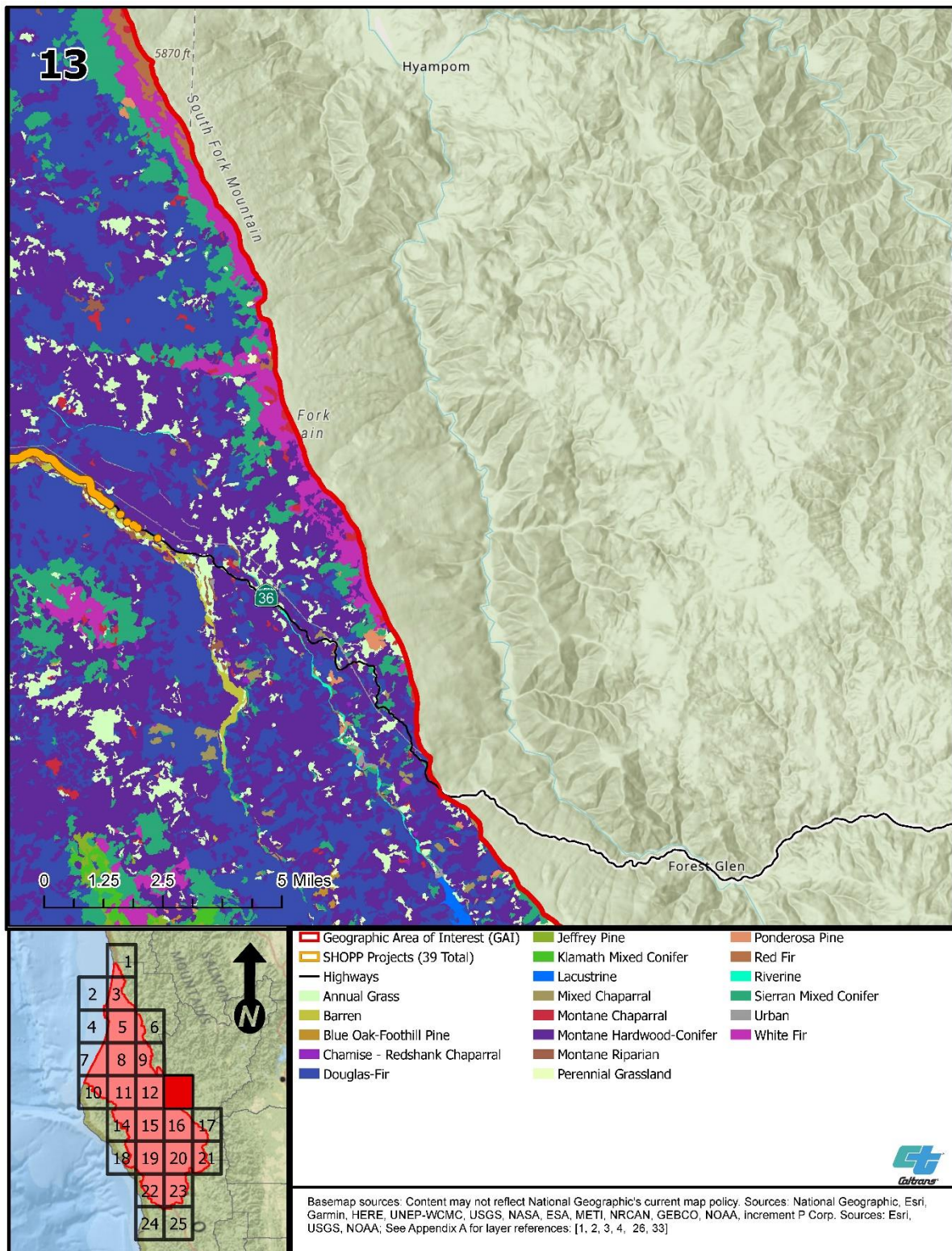


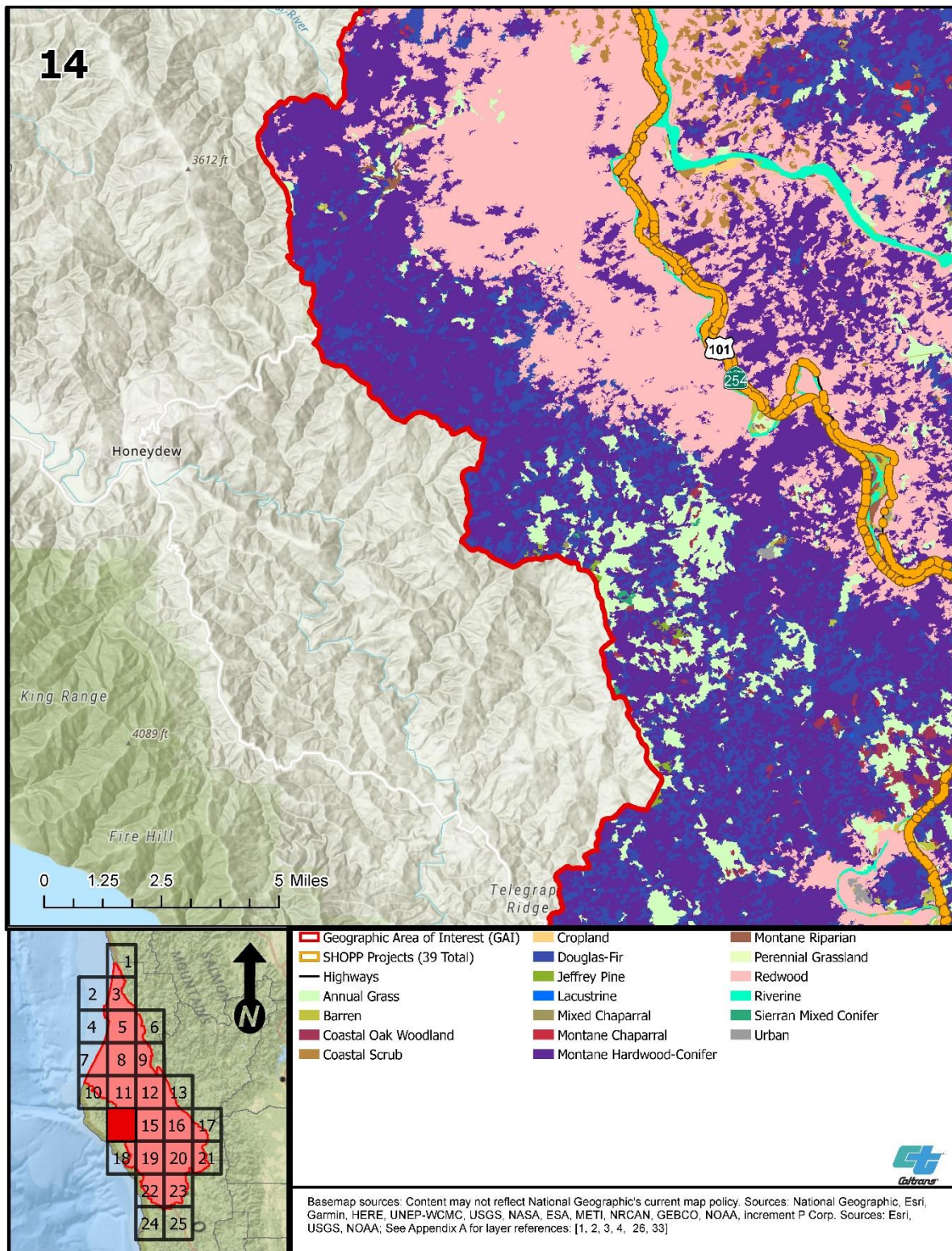


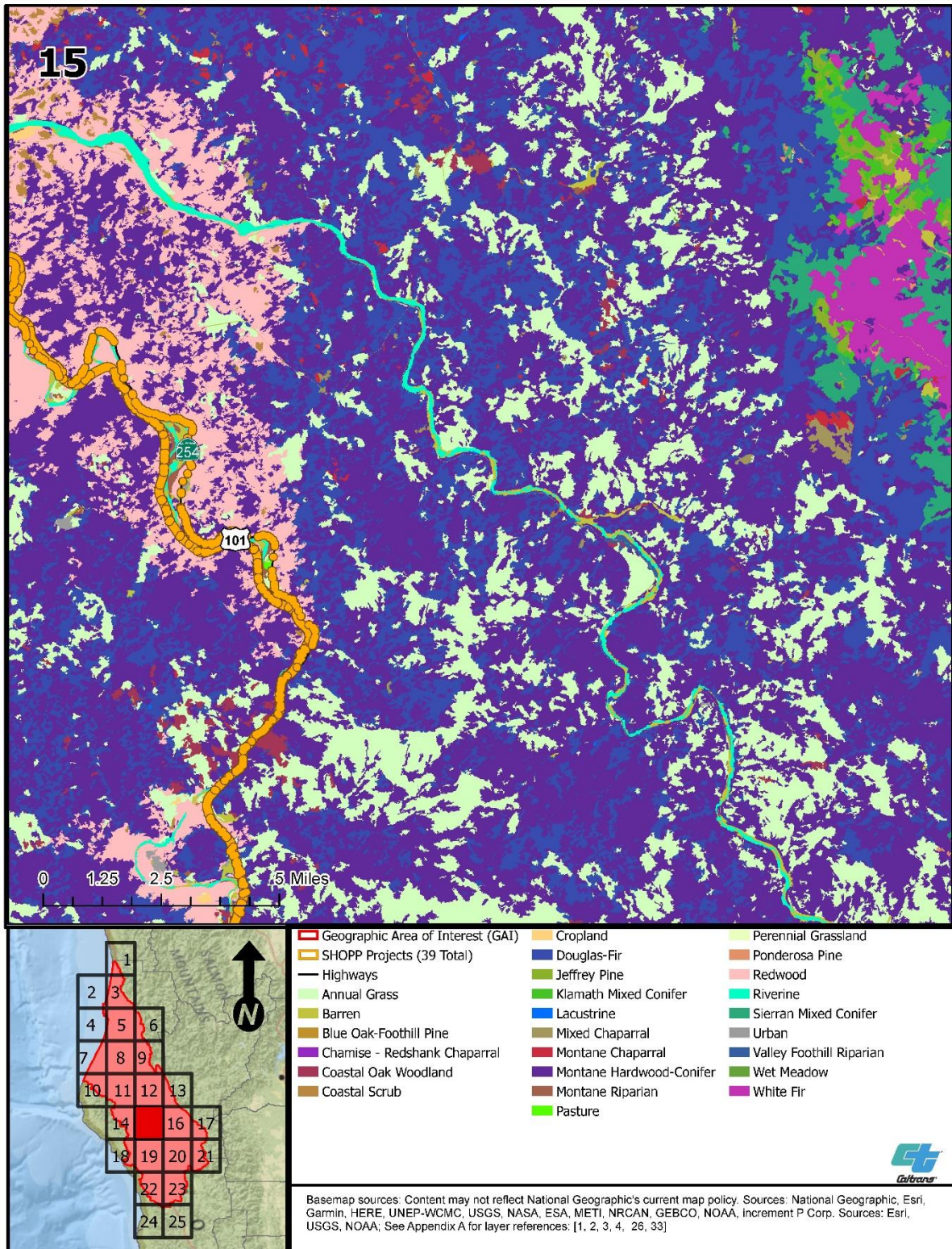


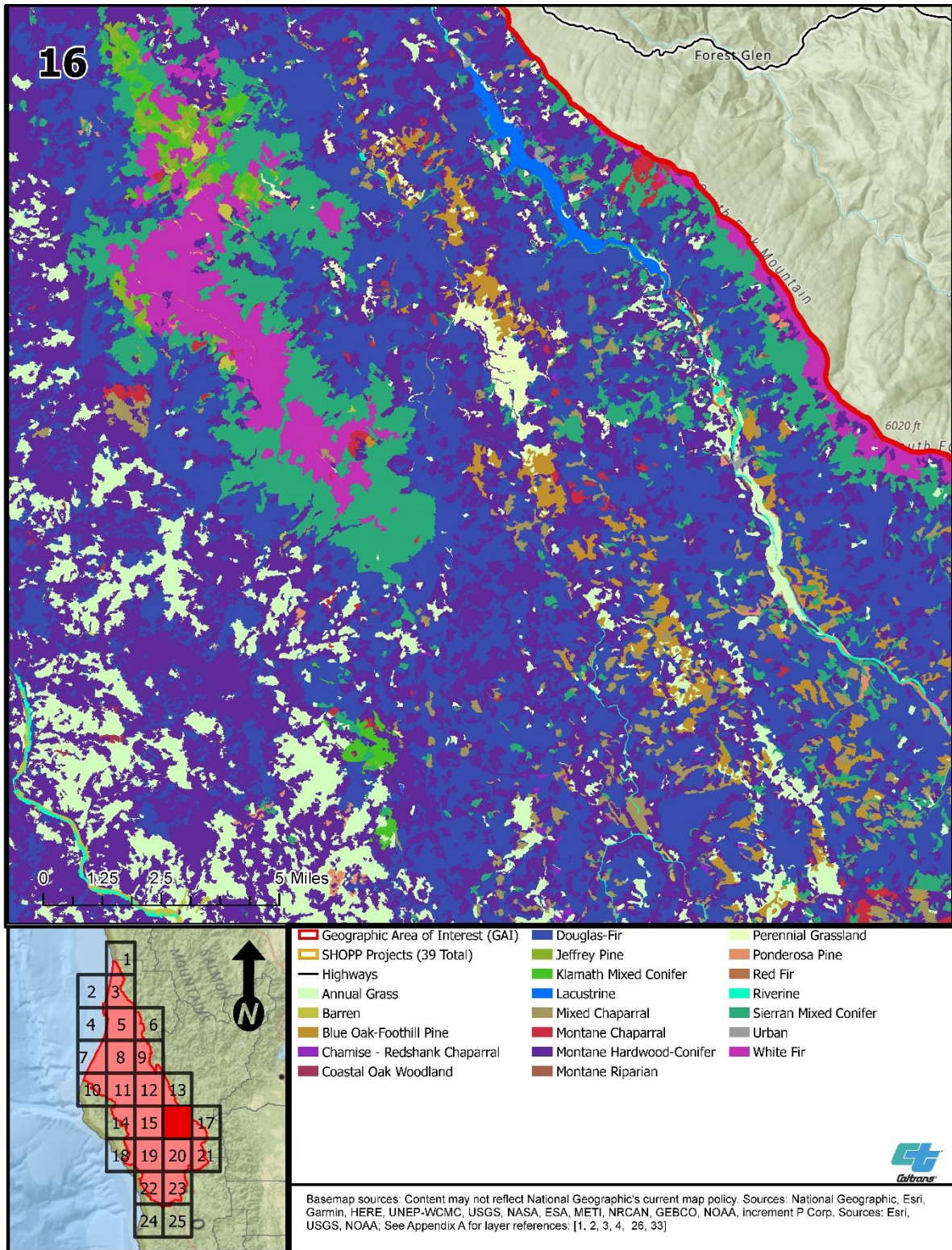


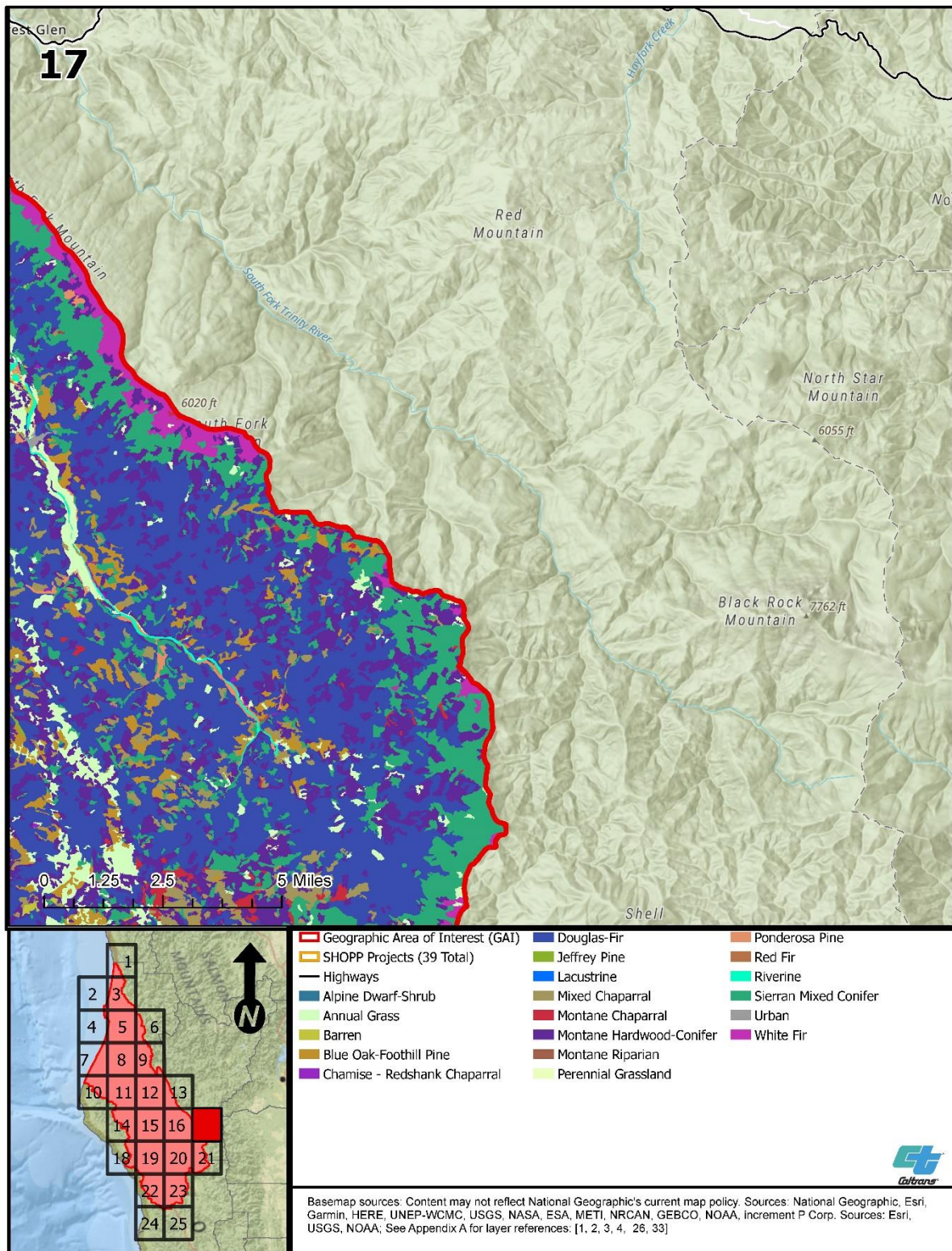


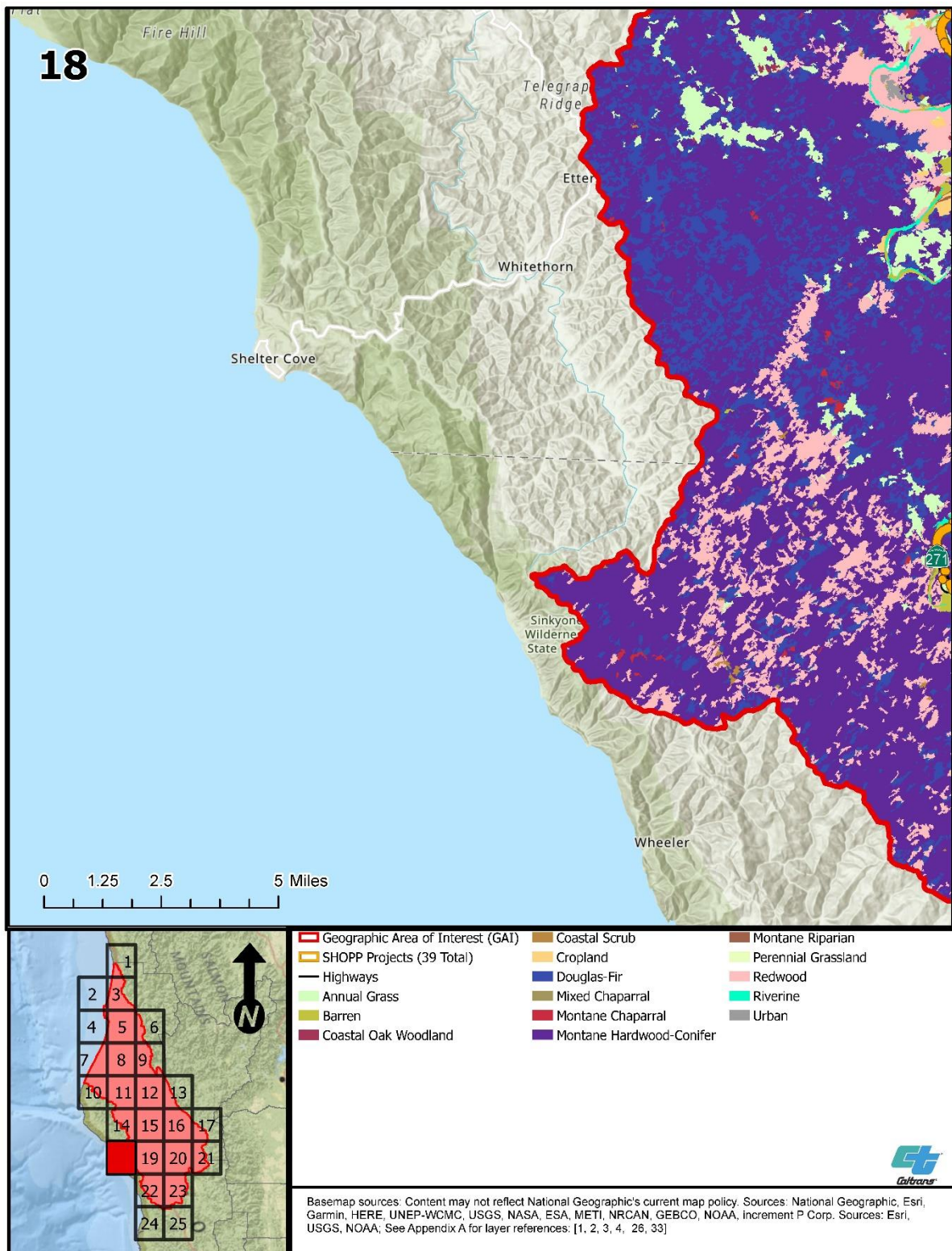


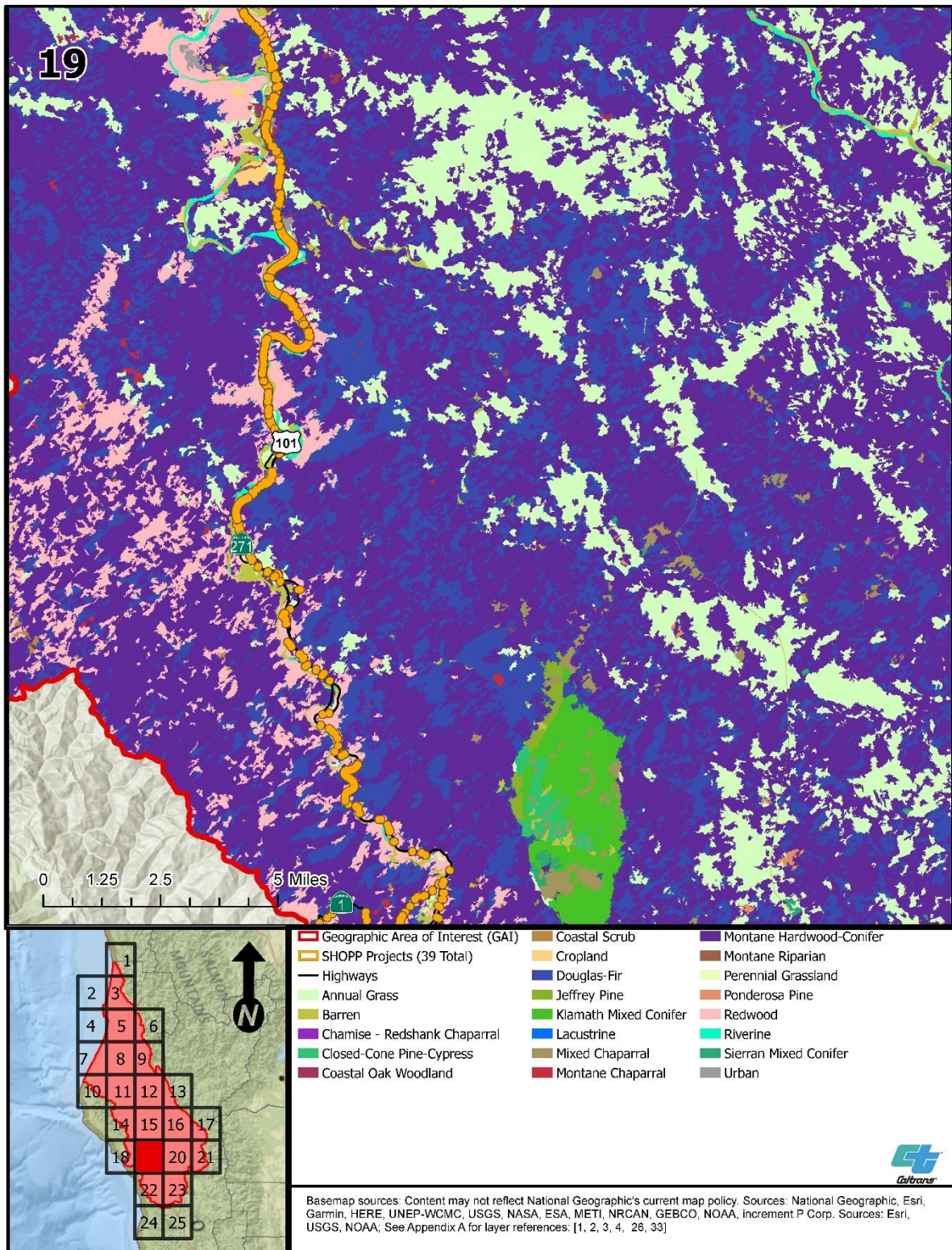


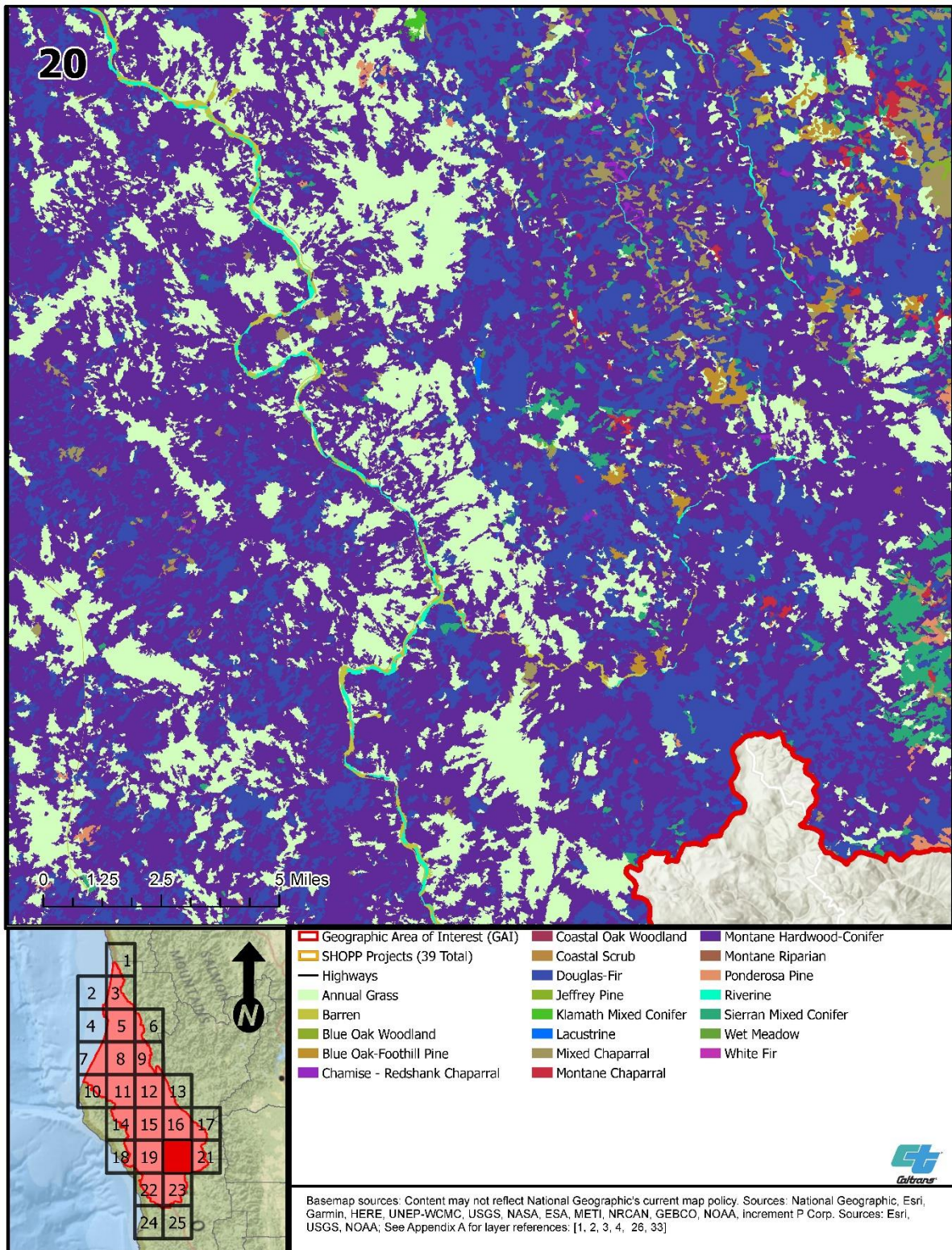


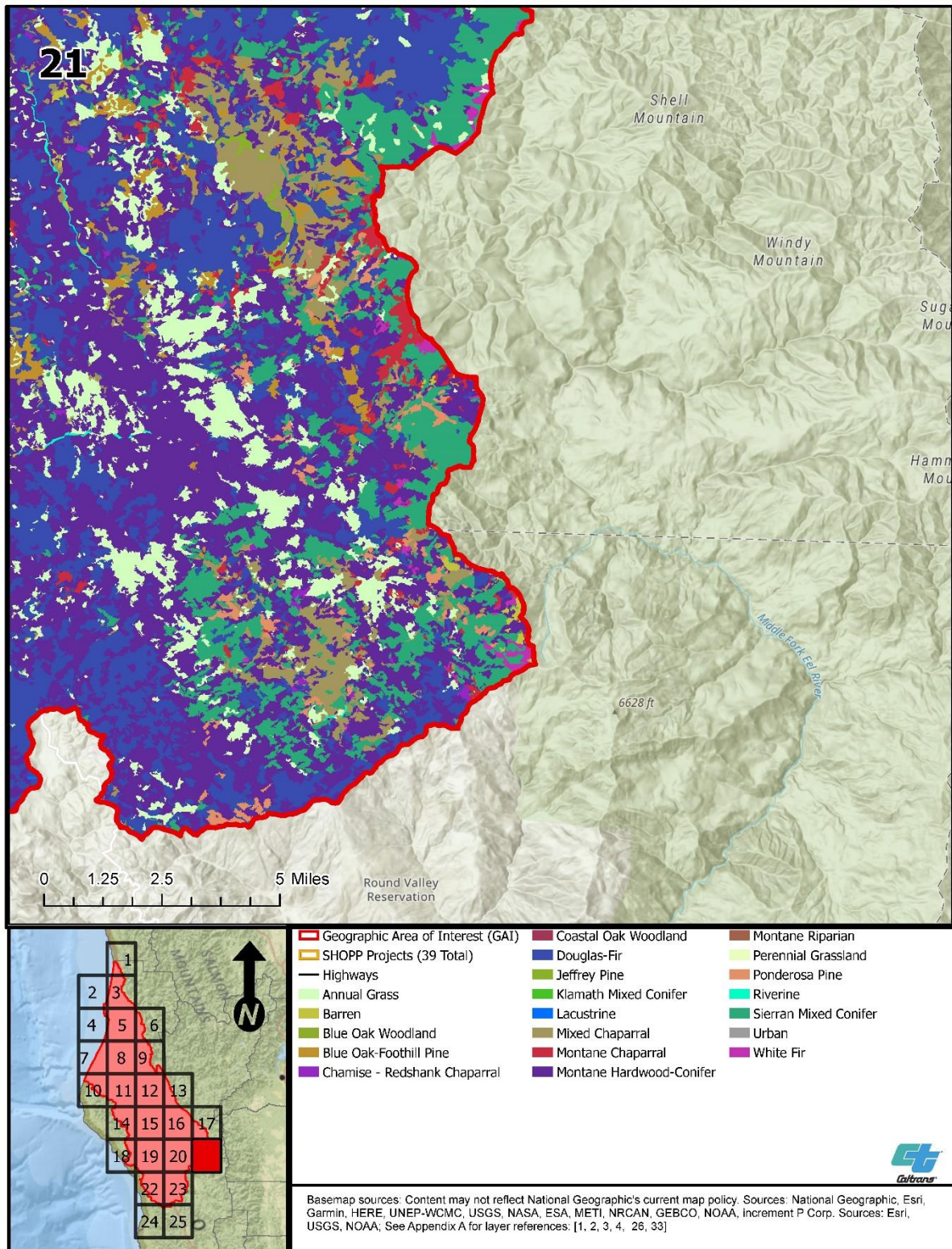


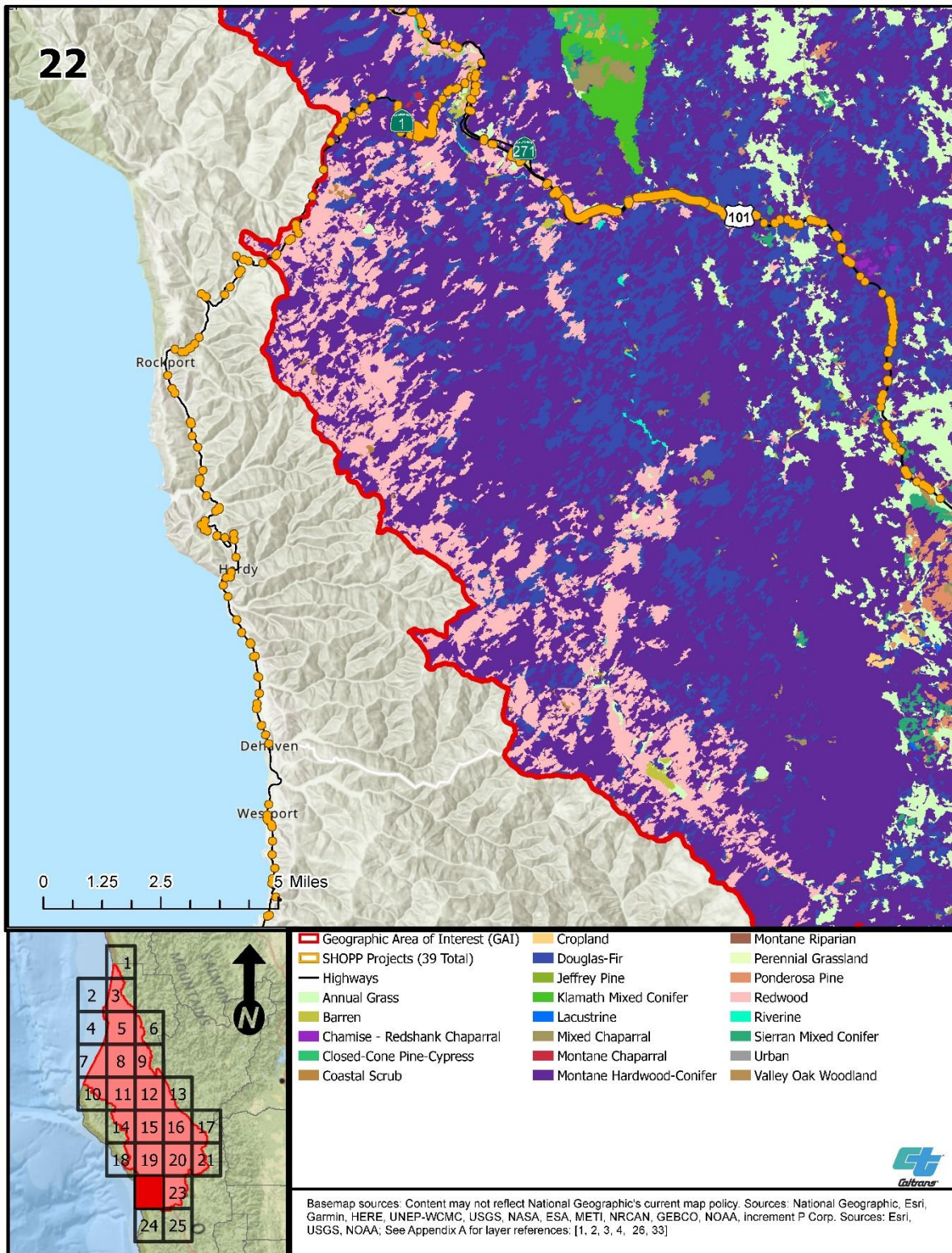


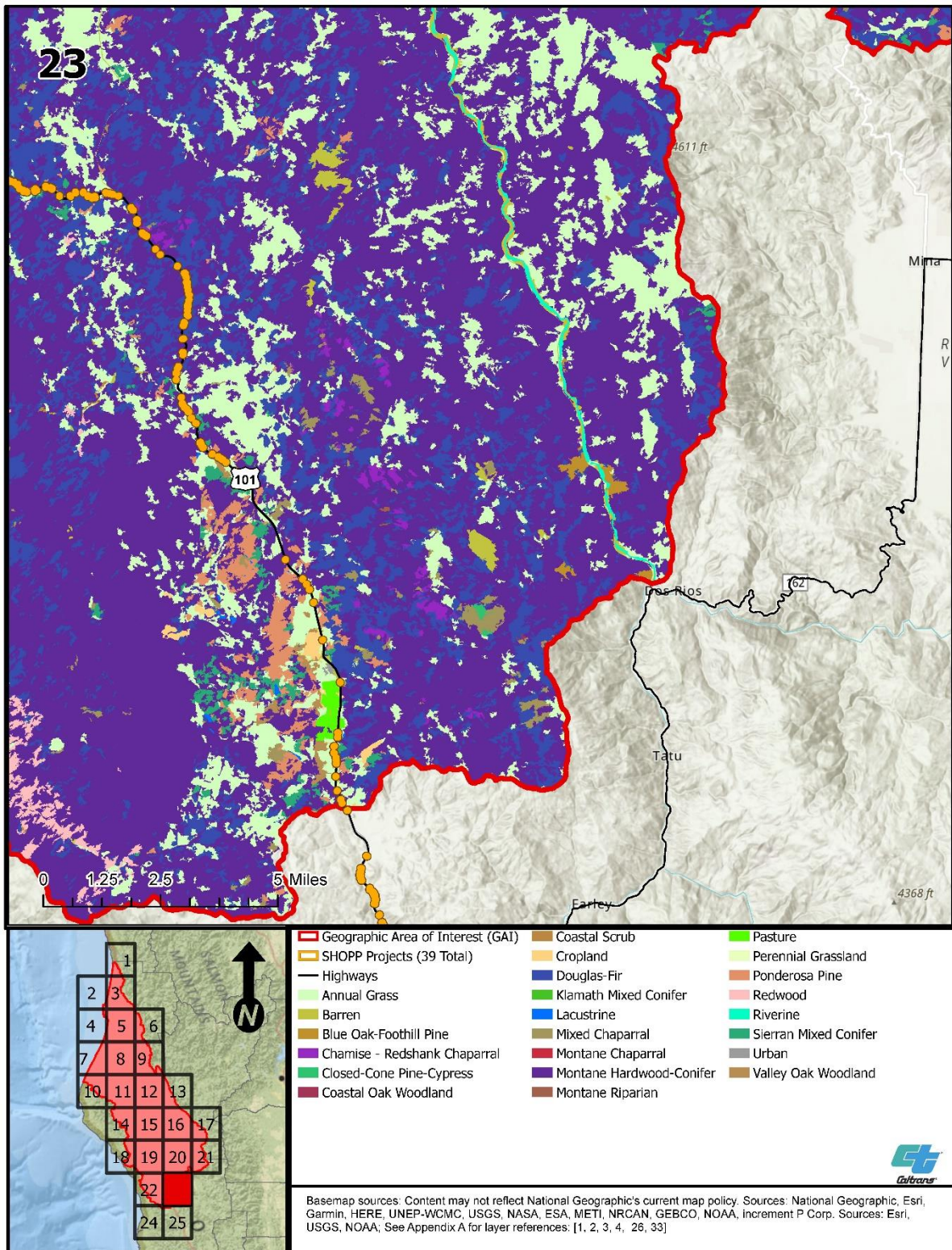


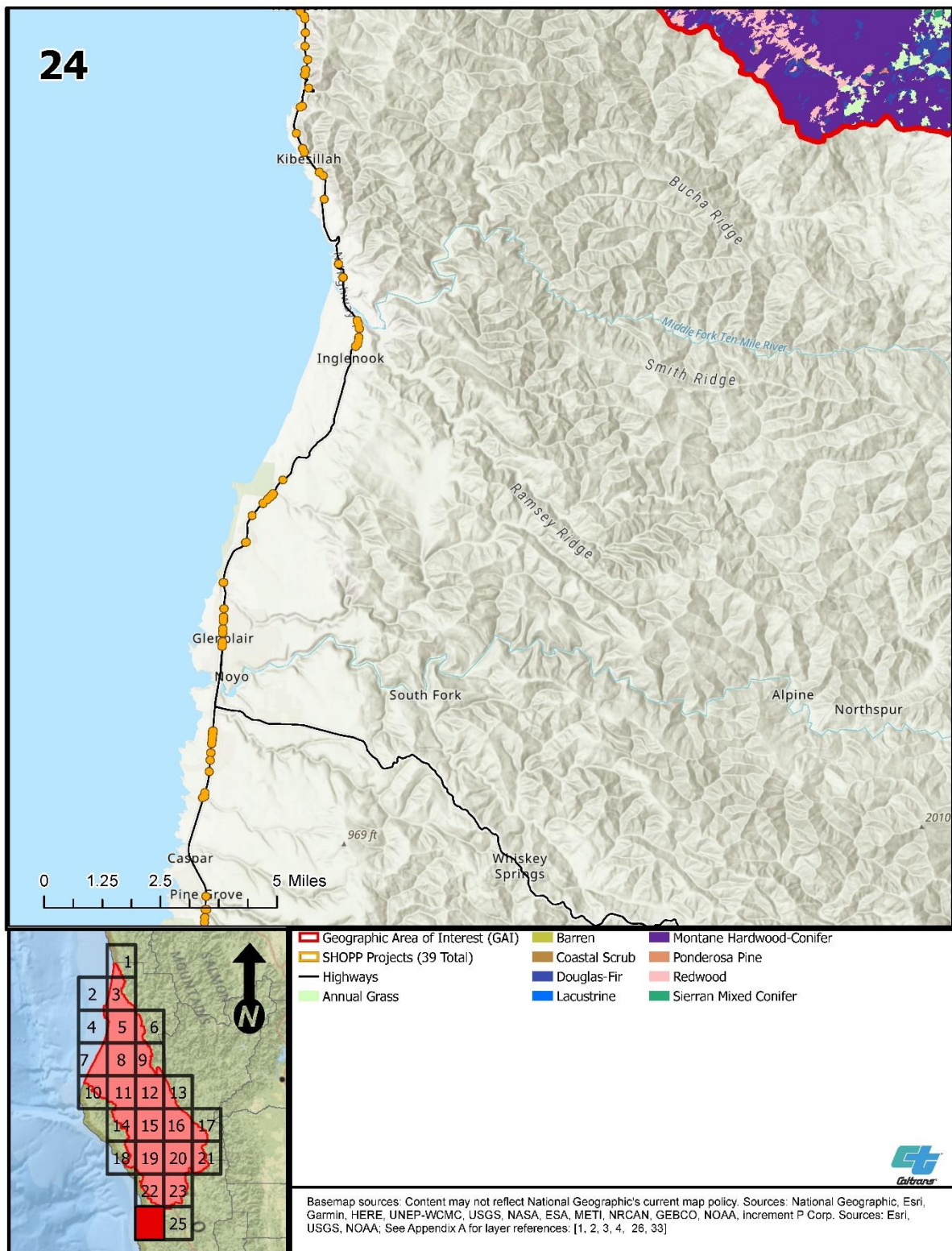


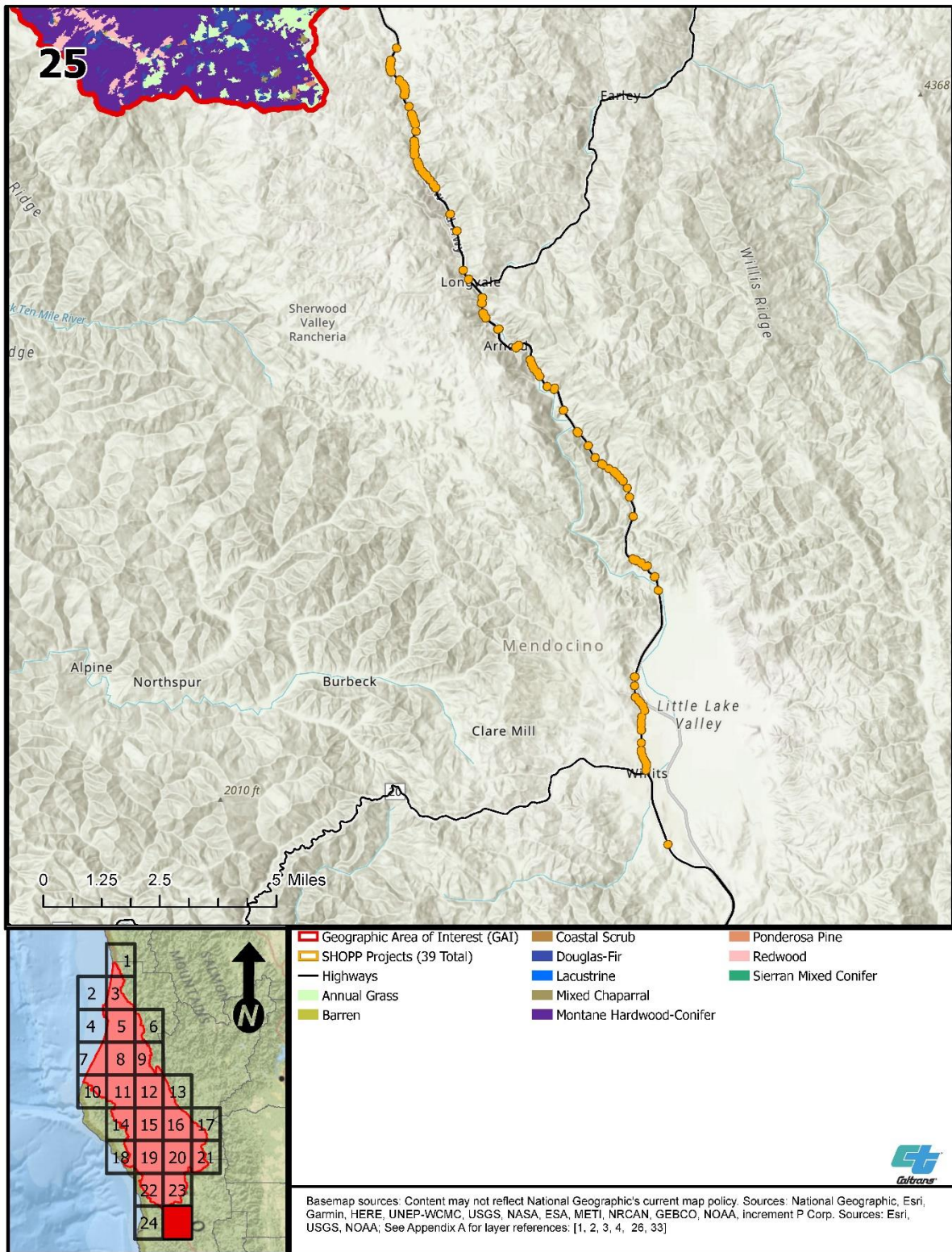












APPENDIX D: LOCAL COASTAL PROGRAMS

LCPs are planning tools used to guide development in the coastal zone through preparation of land use plans and implementation of zoning ordinances. In coastal local jurisdictions where the CCC has reviewed an LCP for consistency with Coastal Act requirements and certified the LCP, the local government assumes CDP authority within its jurisdiction (with certain exceptions such as some coastal wetlands, where the CCC retains original jurisdiction). LCP jurisdictions and associated LCP plans and land use plans in the GAI are listed in Table D-1 by sub-basin. Certified LCPs were excerpted from the CCC's LCP areas maps by county (CCC 2020). Table D-1 also includes the acreage of each LCP in the GAI, segments within LCP areas (for example, the Naval Oceanographic Station within the Humboldt County LCP area) and ADCs.

Caltrans identified the following certified LCPs, indicated in Table D-1, that were excerpted from the CCC's LCP areas maps for each sub-basin in the GAI:

- 2 LCPs in the Lower Eel Sub-basin
- 8 LCPs in the Mad-Redwood Sub-basin

The City of Fortuna LCP and four ADCs listed in Table D-1 have not been certified by the CCC. A key map is provided after Table D-1 that references mapbook pages. These zoomed-in mapbook pages include LCP areas, segments, uncertified areas, and ADCs within the coastal zone in the GAI.

LCPs designate ESHAs and address aquatic resources in the coastal zone. ESHAs and/or criteria for identifying ESHAs are provided in the LCPs or land use plans, accessible from website links provided in Table D-1. Locations of aquatic resources, excerpted from the SAMNA Reporting Tool's water and wetland layers, are shown by HUC-8 sub-basin in Appendix F (Caltrans 2017a, 2017b). Caltrans will review applicable LCPs and consider ESHAs and aquatic resources during advance mitigation project scoping.

References

- Caltrans. 2017a. "Waters_D1 in Caltrans District 1 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2017/2018" (data file). Accessed February 6, 2019. <http://www.dot.ca.gov/env/advancemitigation/>.
- . 2017b. "Wetlands_D1 in Caltrans District 1 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2017/2018" (data file). Accessed February 6, 2019. <http://www.dot.ca.gov/env/advancemitigation/>.
- CCC (California Coastal Commission). 2020. "Maps: Local Coast Program Areas." Accessed December 29, 2020. <https://www.coastal.ca.gov/maps/lcp/>.

Table D-1. Local Coastal Programs in the GAI, by HUC-8

Mapbook Grid Number	HUC-8 Name	LCP Jurisdiction/LCP Segment Area or LCP/Land Use Plan Name	Description	Website	Total Acres of LCP ^a
1, 2, 3, 5	Mad-Redwood	Humboldt County/North Coast – <i>Humboldt County General Plan Volume II: North Coast Area Plan of the Humboldt County Local Coastal Program</i> (2014)	LCP for the unincorporated areas of the northern Humboldt County area. Requires a buffer of 450 feet from wetlands and up to 200 feet from riparian corridors.	https://humboldt.gov/DocumentCenter/View/50846/North-Coast-Area-Local-Coastal-Plan	31,347
1, 2, 3	Mad-Redwood	Humboldt County/Redwood National Park – NPS	Included in the area covered by the Humboldt County LCP North Coast Area Plan.	https://humboldt.gov/DocumentCenter/View/50846/North-Coast-Area-Local-Coastal-Plan	4
2, 3	Mad-Redwood	Humboldt County/Big Lagoon Estates Subdivision ADC ^b	The Big Lagoon Estates Subdivision ADC is located within the Humboldt County LCP jurisdiction in the North Coast segment but is an uncertified area.	https://humboldt.gov/DocumentCenter/View/54997/Draft-Local-Coastal-Plan-Amendment-for-Certification-of-Areas-of-Deferred-Certification-41212	27
2, 3	Mad-Redwood	Humboldt County/Big Lagoon Rancheria	Included in the area covered by the Humboldt County LCP North Coast Area Plan.	https://humboldt.gov/DocumentCenter/View/50846/North-Coast-Area-Local-Coastal-Plan	11
2, 3	Mad-Redwood	Humboldt County/Stagecoach Hill ADC	The Stagecoach Hill ADC is located within the Humboldt County LCP jurisdiction in the North Coast segment but is an uncertified area.	https://documents.coastal.ca.gov/assets/rflg/FY17_18_LCPStatusSummaryChart.pdf	1,326
2, 3, 4, 5	Mad-Redwood	Humboldt County/Trinidad Area – <i>Humboldt County General Plan Volume II: Trinidad Area Plan of the Humboldt County Local Coastal Program</i> (2007)	LCP for the City of Trinidad. Requires a buffer of 450 feet from wetlands and up to 200 feet from riparian corridors.	https://humboldt.gov/DocumentCenter/View/50848/Trinidad-Area-Local-Coastal-Plan	3,651
2, 3, 4, 5	Mad-Redwood	Humboldt County/Trinidad Area Shoreline Lots ADC	The Trinidad Area Shoreline Lots ADC is located within the Humboldt County LCP jurisdiction in the Trinidad Area segment but is an uncertified area.	https://documents.coastal.ca.gov/assets/rflg/FY17_18_LCPStatusSummaryChart.pdf	940
4, 5	Mad-Redwood	Humboldt County/California State University Humboldt – Humboldt State Marine Lab	Included in the area covered by the Humboldt County LCP Trinidad Area Plan.	https://humboldt.gov/DocumentCenter/View/50848/Trinidad-Area-Local-Coastal-Plan	2
4, 5	Mad-Redwood	Humboldt County/Trinidad Rancheria	Included in the area covered by the Humboldt County LCP Trinidad Area Plan.	https://humboldt.gov/DocumentCenter/View/50848/Trinidad-Area-Local-Coastal-Plan	117
4, 5	Mad-Redwood	Humboldt County/U.S. Coast Guard Reservation TH	Included in the area covered by the Humboldt County LCP Humboldt Bay Area Plan.	https://humboldt.gov/DocumentCenter/View/50844/Humboldt-Bay-Area-Local-Coastal-Plan?bidId=	112
4, 5, 6, 7	Mad-Redwood, Lower Eel	Humboldt County/Humboldt Bay – <i>Humboldt County General Plan Volume II: Humboldt Bay Area Plan of the Humboldt County Local Coastal Program</i> (2014)	LCP for much of the unincorporated areas in Humboldt County. Requires a buffer of 450 feet from wetlands and up to 200 feet from riparian corridors.	https://humboldt.gov/DocumentCenter/View/50844/Humboldt-Bay-Area-Local-Coastal-Plan?bidId=	77
4, 5, 6, 7	Mad-Redwood	City of Arcata/ <i>City of Arcata Municipal Code Title IX Chapter 2 Coastal Land Use and Development Guide</i> (1989)	LCP for the City of Arcata, which is currently undergoing a comprehensive update anticipated to be completed by the end of 2021.	https://www.cityofarcata.org/DocumentCenter/View/47/Coastal-Land-Use-and-Development-Guide-PDF	133
4, 5	Mad-Redwood	City of Trinidad/ <i>City of Trinidad General Plan Update</i> (2018)	LCP is included within the City of Trinidad General Plan Update. The City of Trinidad is in the process of completing a comprehensive LCP update.	https://trinidad.ca.gov/document-library/gp-update-draft-elements	400
4, 5	Mad-Redwood	City of Trinidad/Trinidad Harbor and Upland Support Area ADC	The Trinidad Harbor and Upland Support Area ADC is located within the City of Trinidad LCP jurisdiction but is an uncertified area.	https://documents.coastal.ca.gov/assets/rflg/FY17_18_LCPStatusSummaryChart.pdf	17
4, 5	Mad-Redwood	Humboldt County/McKinleyville – <i>Humboldt County General Plan Volume II: McKinleyville Area Plan of the Humboldt County Local Coastal Program</i> (2007)	LCP for the City of McKinleyville. Requires a buffer of 450 feet from wetlands and up to 200 feet from riparian corridors.	https://humboldt.gov/DocumentCenter/View/50845/McKinleyville-Area-Local-Coastal-Plan	4,260
6	Mad-Redwood	Humboldt County/Humboldt County – Humboldt Bay (water area)	Included in the area covered by the Humboldt County LCP Humboldt Bay Area Plan.	https://humboldt.gov/DocumentCenter/View/50844/Humboldt-Bay-Area-Local-Coastal-Plan?bidId=	29,217

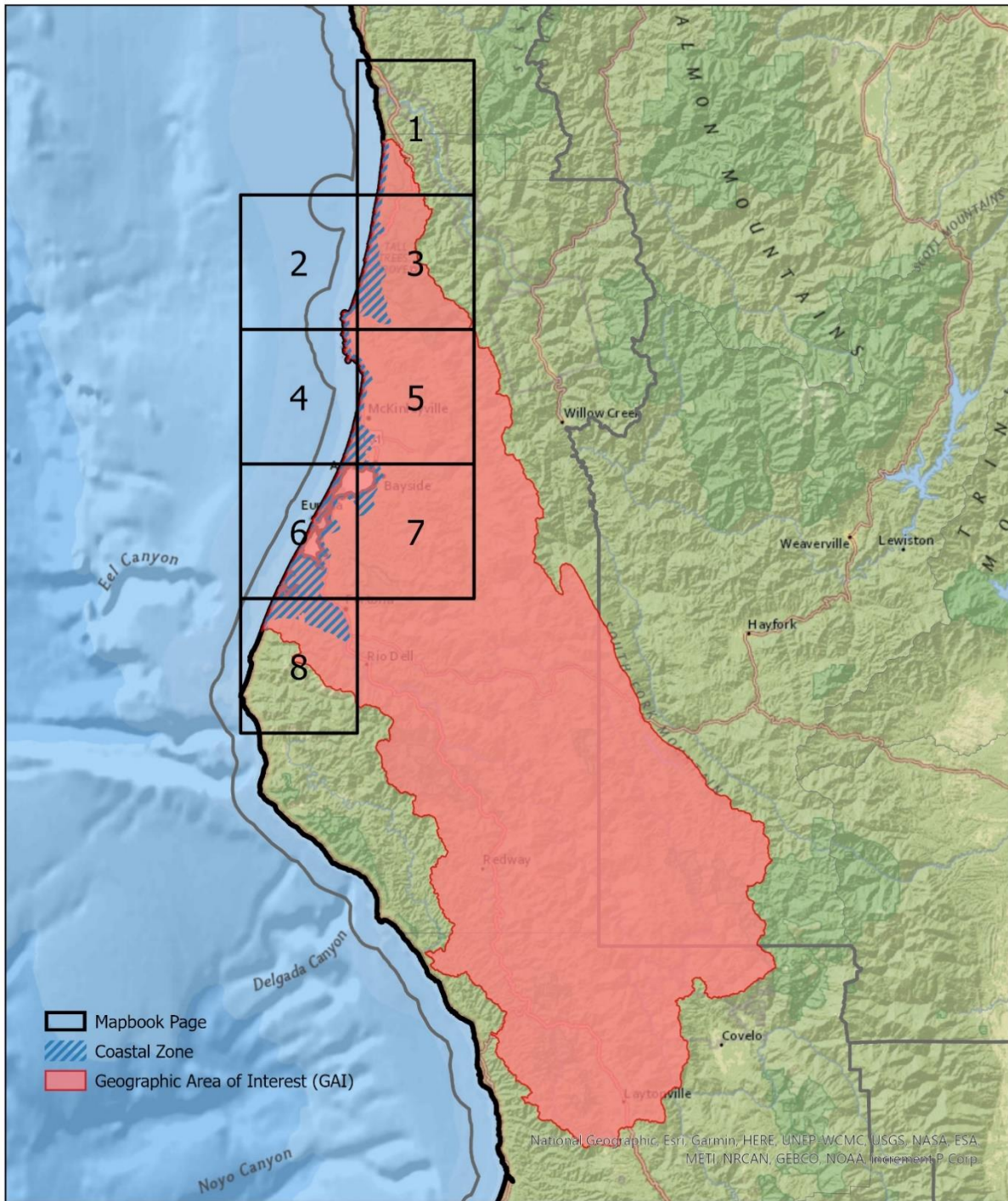
Mapbook Grid Number	HUC-8 Name	LCP Jurisdiction/LCP Segment Area or LCP/Land Use Plan Name	Description	Website	Total Acres of LCP ^a
6	Mad-Redwood	Humboldt County/Samoa Spit Coast Guard Reservation – U.S. Coast Guard	Included in the area covered by the Humboldt County LCP Humboldt Bay Area Plan.	https://humboldt.gov/DocumentCenter/View/50844/Humboldt-Bay-Area-Local-Coastal-Plan?bidId=	633
6	Mad-Redwood, Lower Eel	Humboldt County/Table Bluff Reservation	Included in the area covered by the Humboldt County LCP Eel River and Humboldt Bay Area Plans.	https://humboldt.gov/DocumentCenter/View/50844/Humboldt-Bay-Area-Local-Coastal-Plan https://humboldt.gov/DocumentCenter/View/50843/Eel-River-Area-Local-Coastal-Plan	141
6	Lower Eel	Humboldt County/Table Bluff Coast Guard Reservation – U.S. Coast Guard	Included in the area covered by the Humboldt County LCP Humboldt Bay Area Plan.	https://humboldt.gov/DocumentCenter/View/50844/Humboldt-Bay-Area-Local-Coastal-Plan https://humboldt.gov/DocumentCenter/View/50843/Eel-River-Area-Local-Coastal-Plan	15
6, 7	Mad-Redwood	City of Eureka/ <i>City of Eureka General Plan</i> (1997, amended 2008)	LCP is included within the City of Eureka General Plan, protecting several ESHAs, including rivers, creeks, sloughs, gulches, and associated riparian habitats. The City of Eureka is currently in the process of completing a comprehensive LCP update.	http://www.ci.eureka.ca.gov/depts/development_service/s/development_services_library/default.asp ; https://www.ci.eureka.ca.gov/civicax/filebank/blobdload.aspx?BlobID=6842	35
6, 8	Mad-Redwood, Lower Eel	Humboldt County/Eel River – <i>Humboldt County General Plan Volume II: Eel River Area Plan of the Humboldt County Local Coastal Program</i> (2007)	LCP for the Eel River area. Requires a buffer of 450 feet from wetlands and up to 200 feet from riparian corridors.	https://humboldt.gov/DocumentCenter/View/50843/Eel-River-Area-Local-Coastal-Plan	62,463
8	Lower Eel	Humboldt County/Naval Oceanographic Station – U.S. Navy	Included in the area covered by the Humboldt County LCP Humboldt Bay Area Plan.	https://humboldt.gov/DocumentCenter/View/50844/Humboldt-Bay-Area-Local-Coastal-Plan	44
8	Lower Eel	City of Fortuna/No LCP ^c	The City of Fortuna only has a small portion of its land in the coastal zone and has deferred to the CCC's retained coastal development permit authority at that site.	https://documents.coastal.ca.gov/reports/2017/6/w6a/w6a-6-2017-report.pdf	6

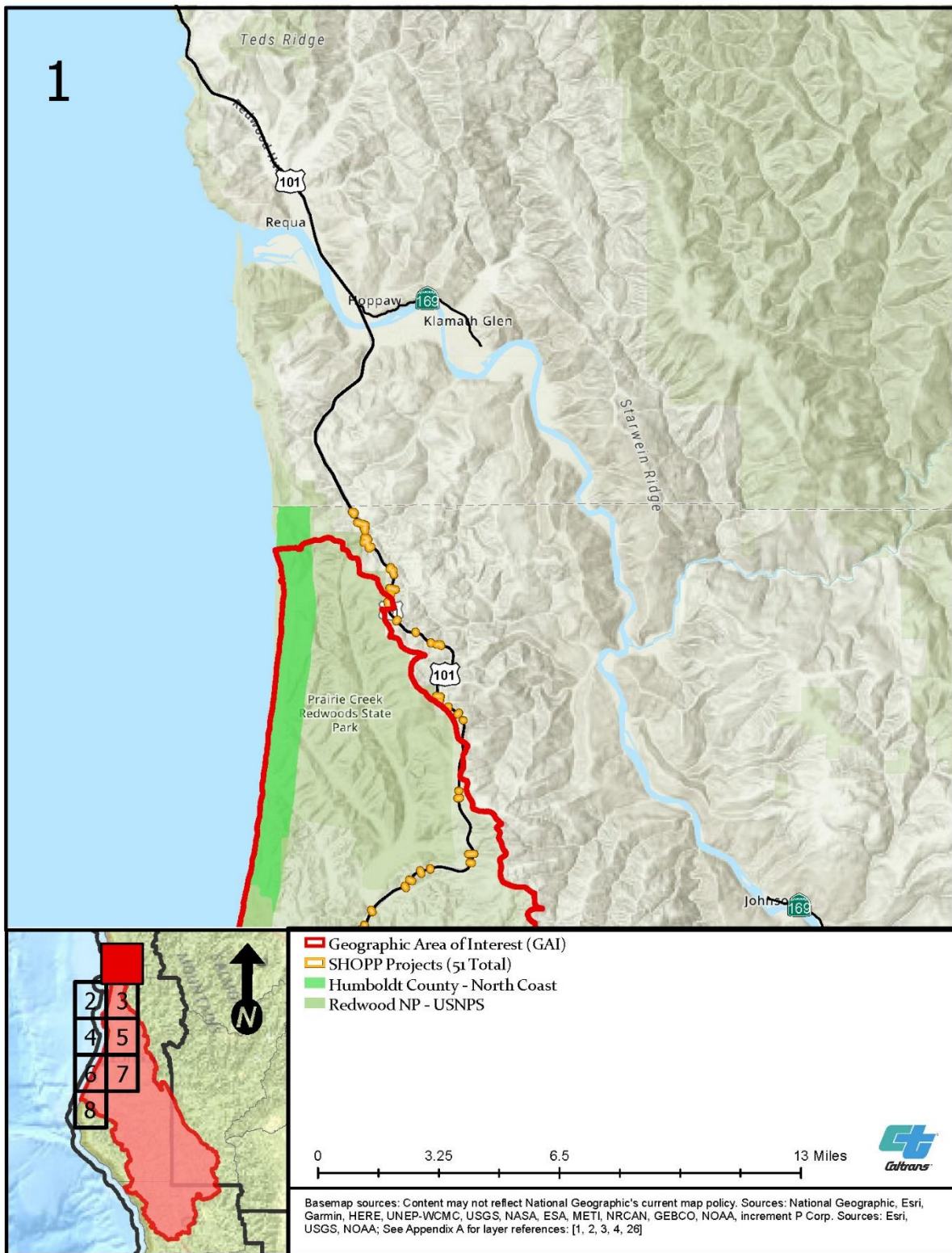
Source: CCC 2020

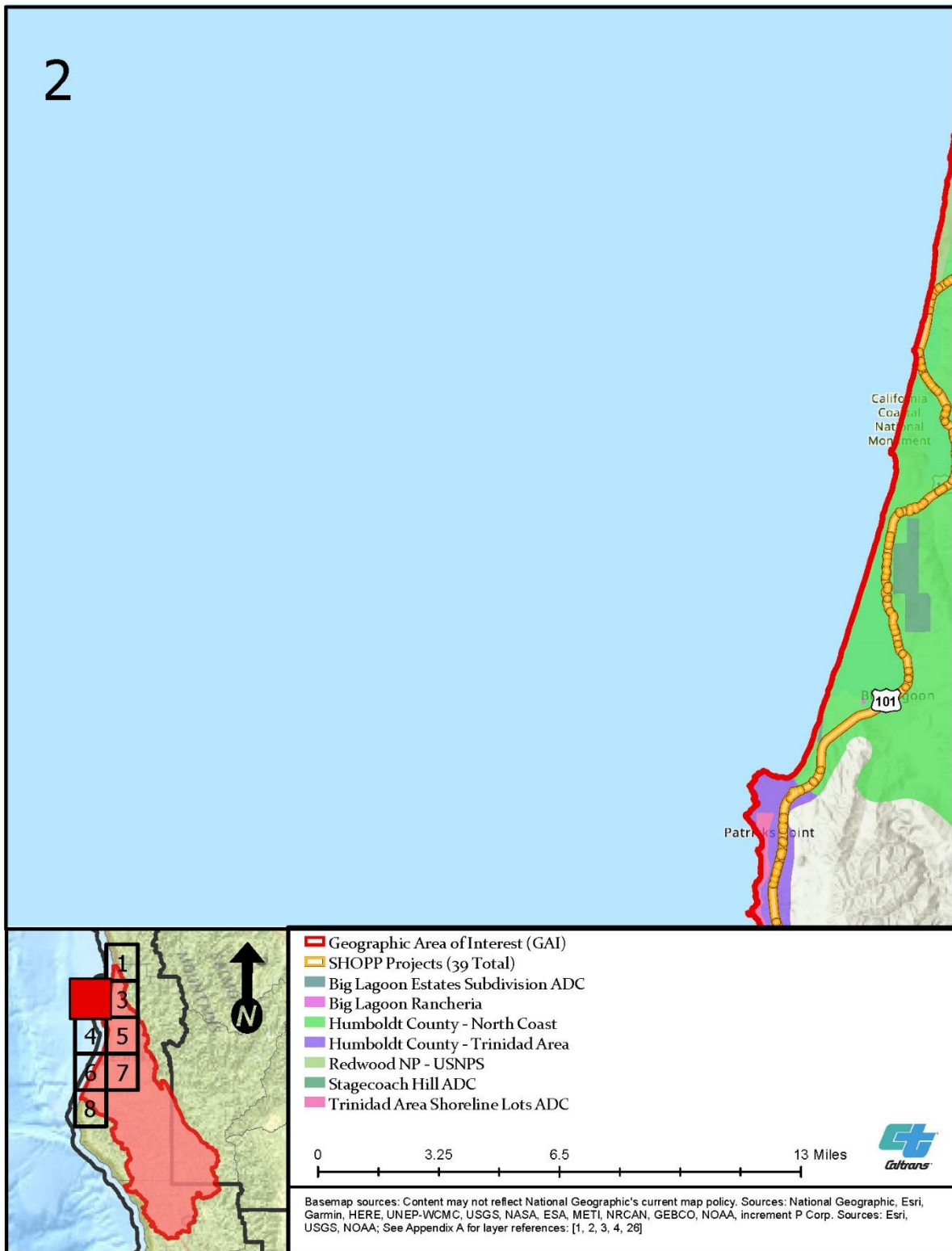
^a Numbers were rounded to the nearest whole number.

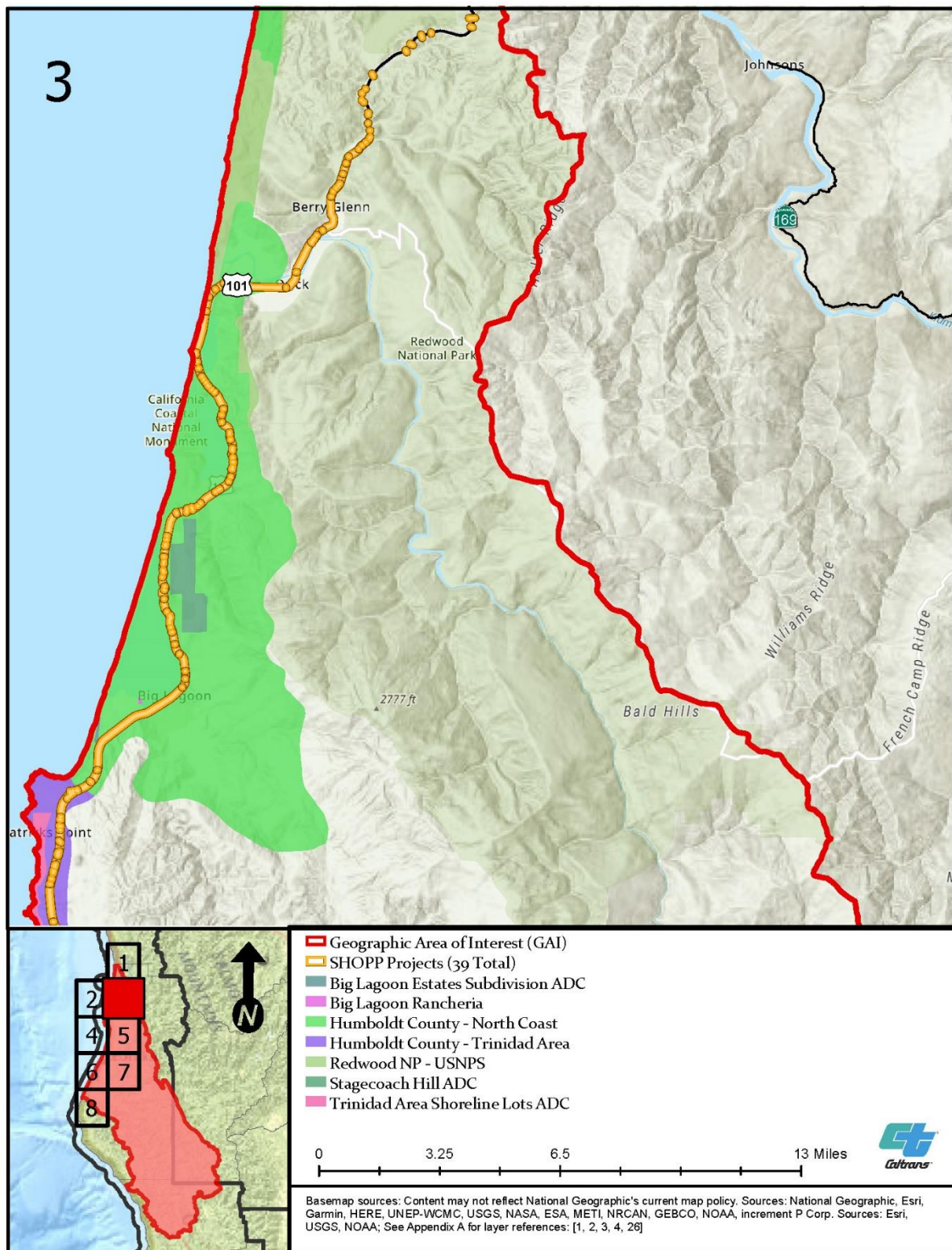
^b ADC: Refers to a geographic area that has not been officially segmented for purposes of LCP preparation and during certification review of the LCP, was not certified. An Uncertified Area may be an area that was created through annexation or was subsequently identified but may not have been included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

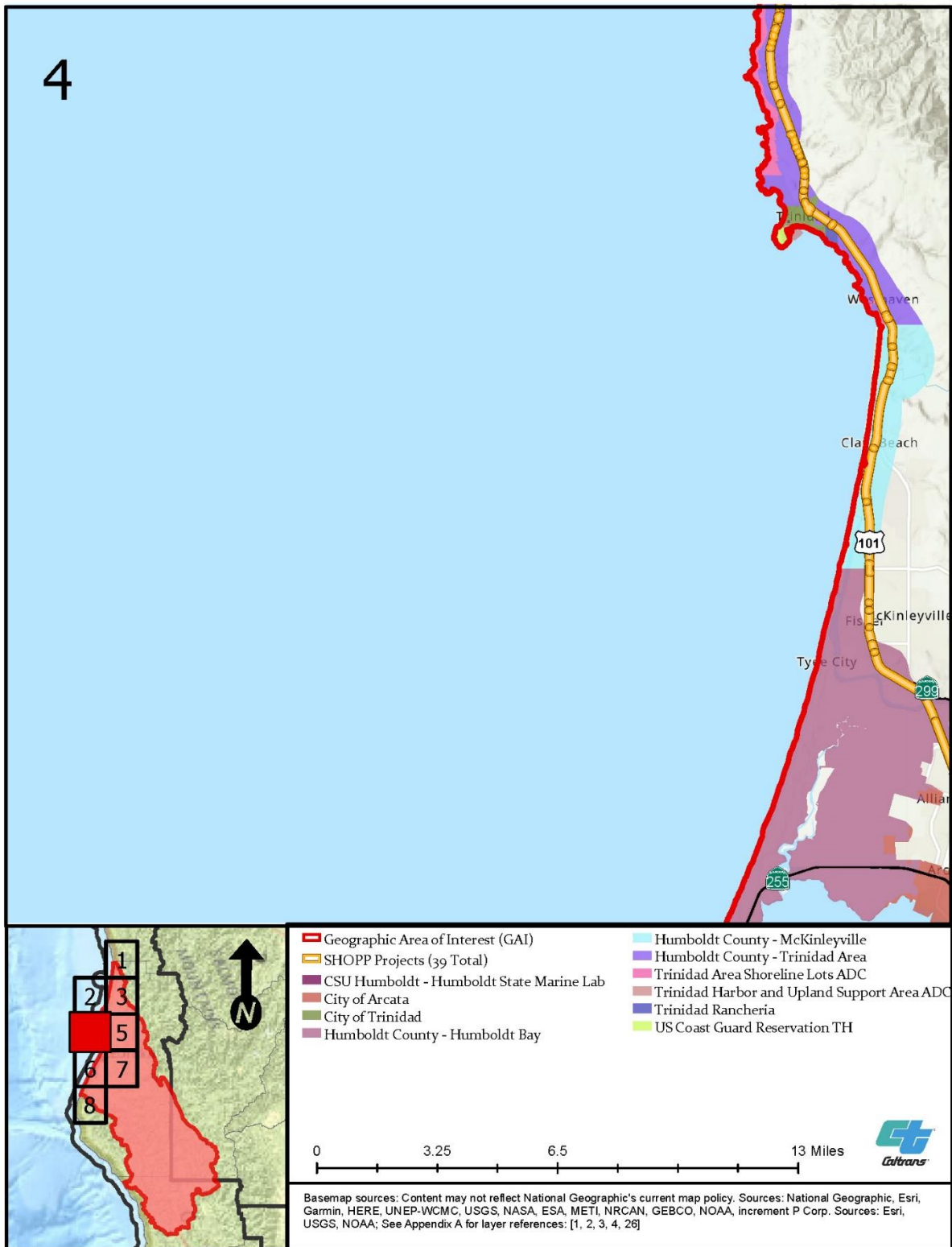
^c LCP has not been certified by the CCC.

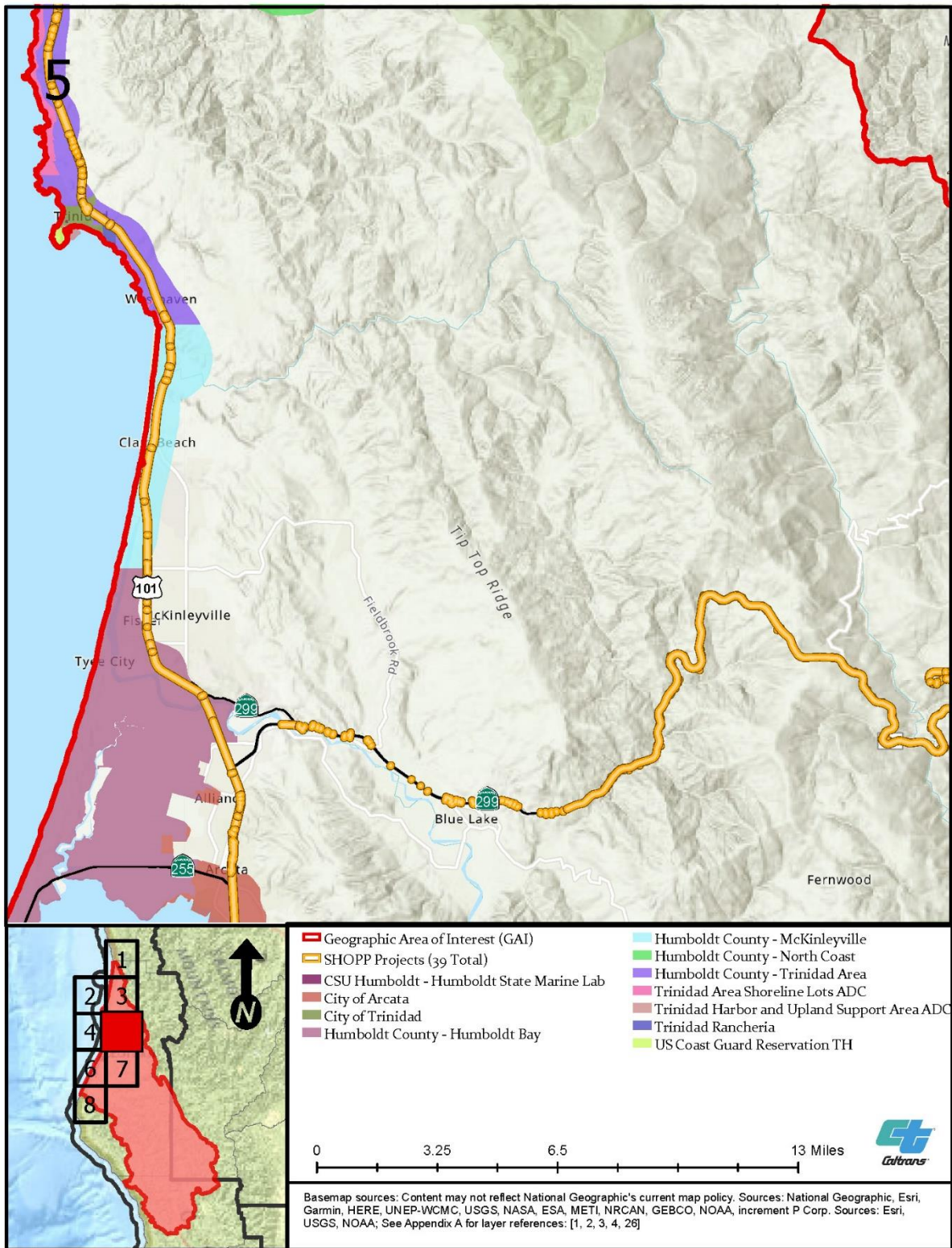


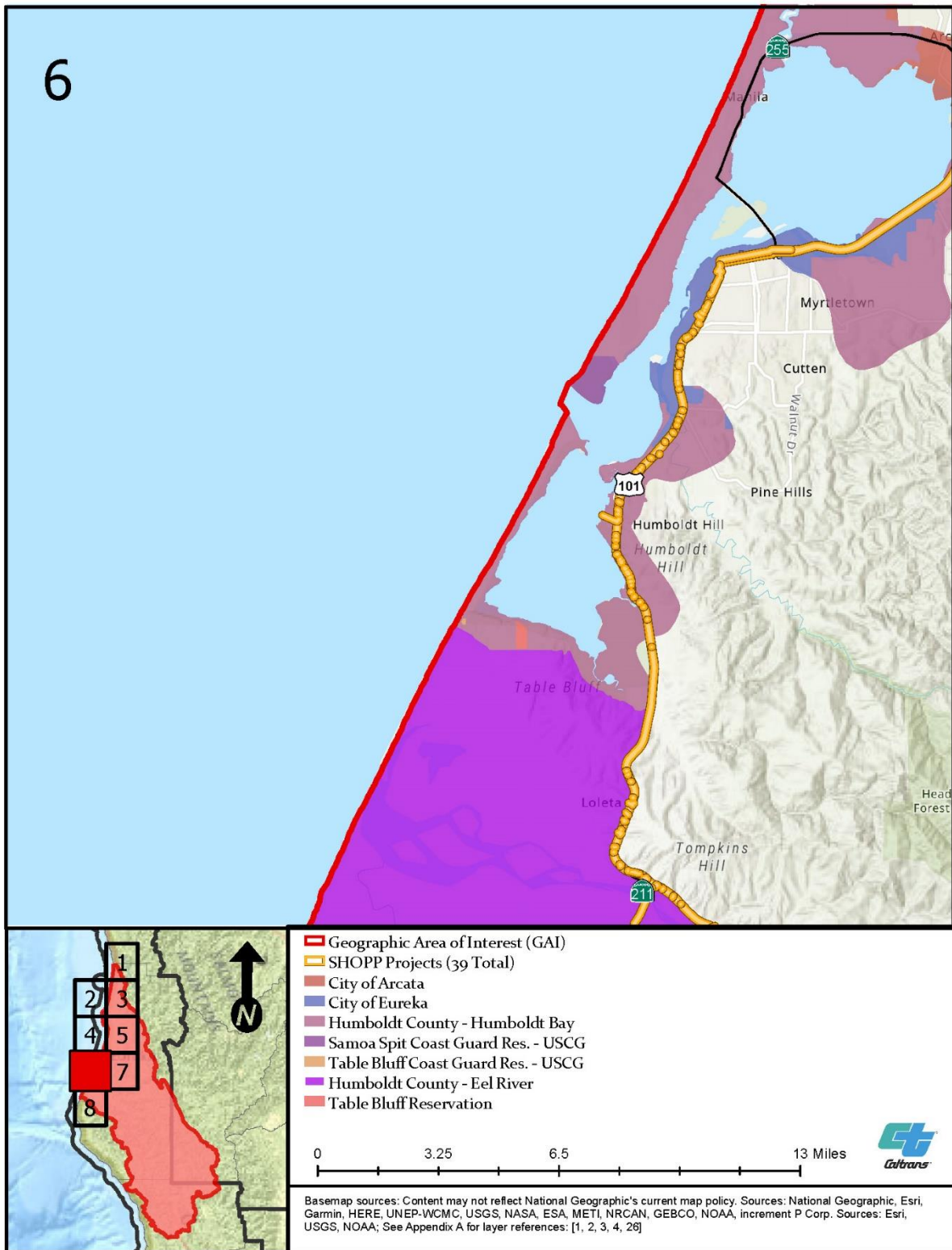


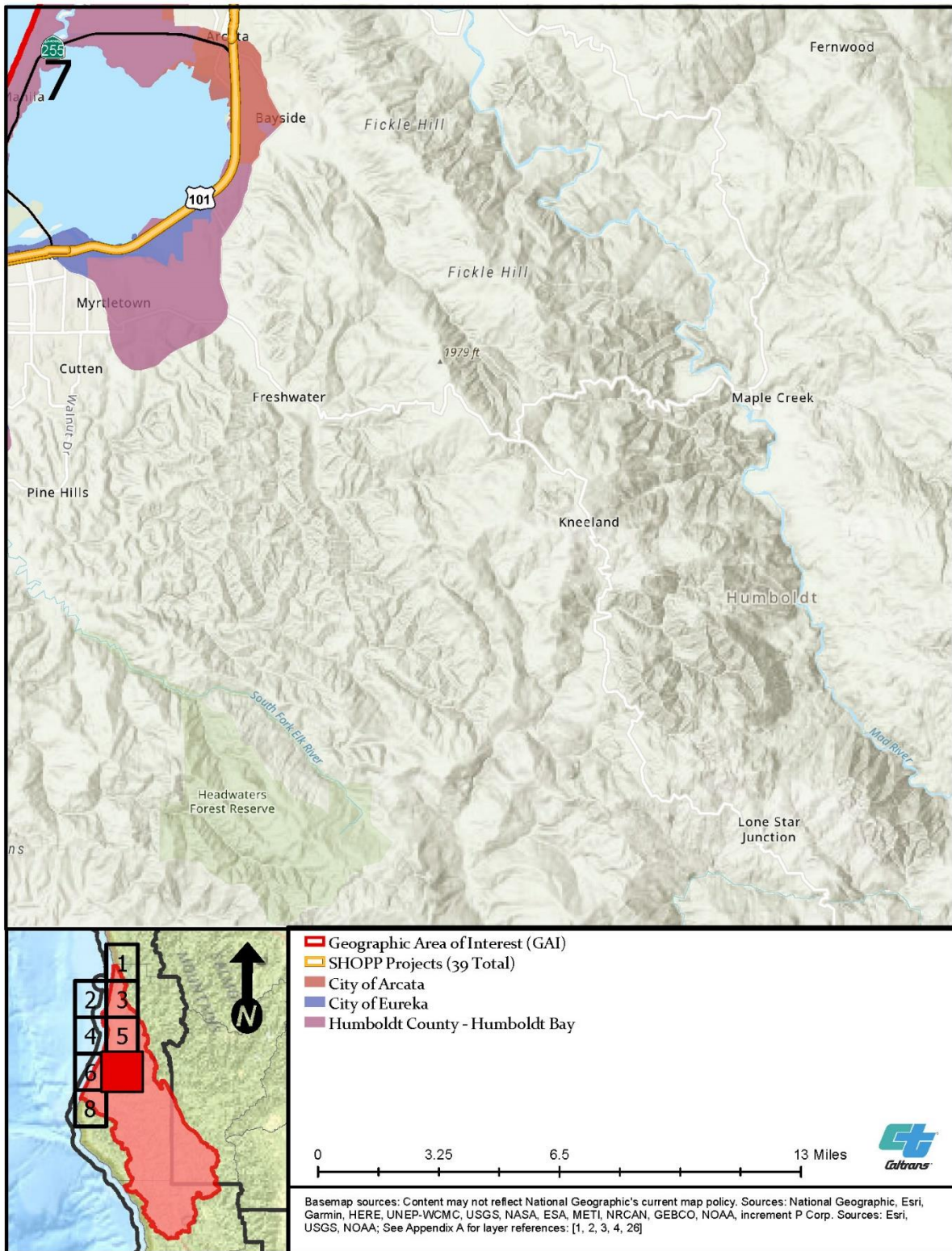


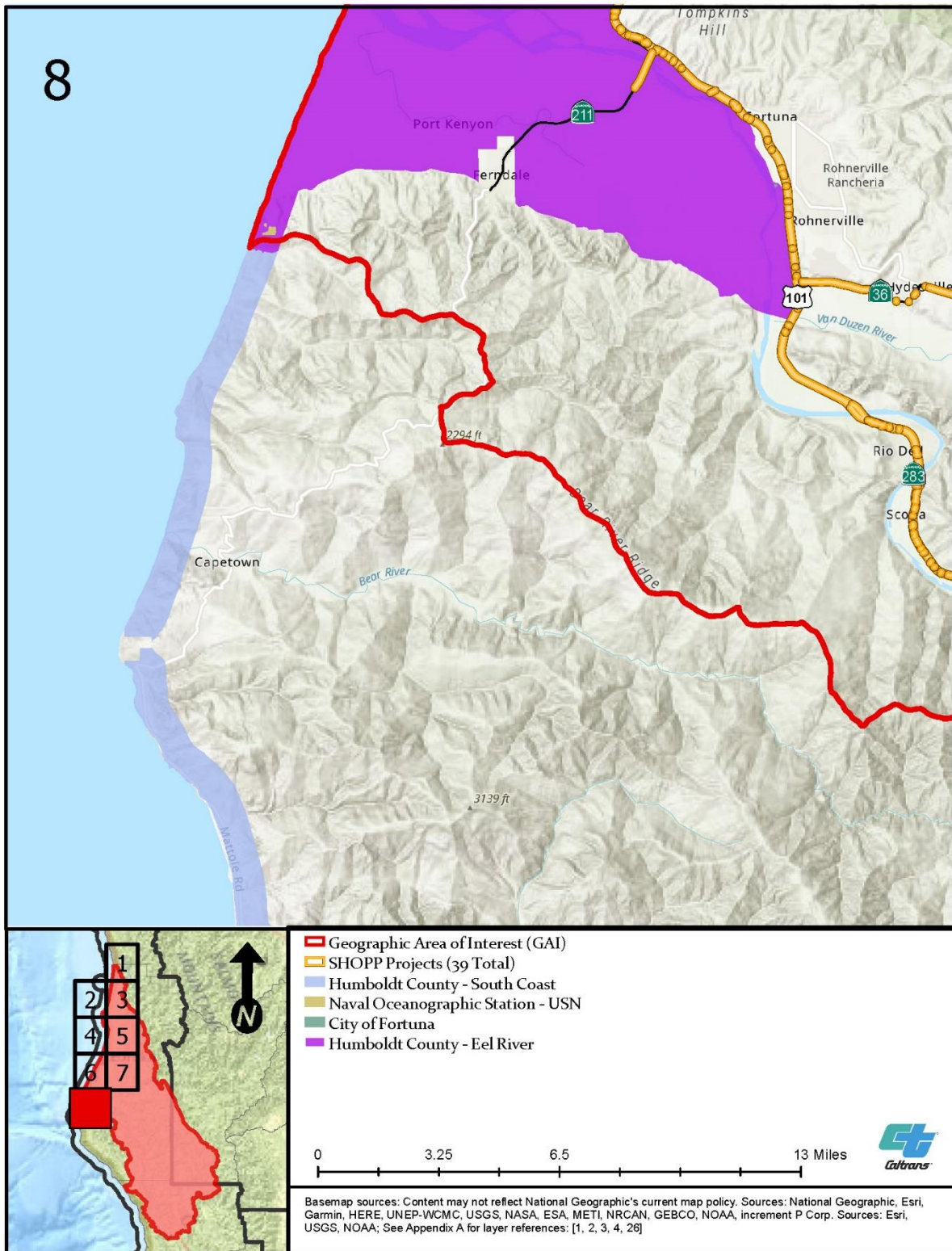












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APPENDIX E: COMPLETE SAMNA SPECIES RESULTS

Complete terrestrial species SAMNA results for the GAI are provided in Table E-1 and Table E-2. Table E-1 consists of SAMNA results for the Northern California Coast Section within the GAI (starts on page 3). Table E-2 consists of the SAMNA results for the Northern California Coast Ranges Section within the GAI (starts on page 11). 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 2019). SAMNA results are only as accurate as their foundational data and have not been ground-truthed.

- Species without CWHR system-supplied home ranges but identified by the California Natural Diversity Data Base 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 document sources of home ranges. When a subspecies did not have home range information suitable for input into the SAMNA model, SAMNA results are provided at the species level which may include both special status and non-special status species and, hence, the number of species that have the potential to be affected may be overestimated.
- If impacts were estimated, additional information sources were consulted to determine whether special-status subspecies are located 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 to species or subspecies that are not present in the GAI.
- When no impacts are estimated for a specific habitat, for any species, the habitat was excluded from this Appendix.
- When no impacts for a species are estimated for any habitat, the species is included. Based on available information, it is potentially present in the GAI, but not in the habitats forecast to be impacted by transportation projects.

Total habitat impacts for each special-status species are indicated in the far-right column of each table. Total habitat impacts in the bottom row of each table indicate the total anticipated impacts for each habitat type and are not additive across all special-status species because each habitat type may provide suitable habitat for more than one special-status subspecies.

Habitats referenced in Tables E-1 and E-2 are mapped in Appendix C. While the advance mitigation planning effort was focused on specific watersheds within which aquatic resources impacts are anticipated, including impacts on the SONCC ESU coho salmon (*Oncorhynchus kisutch*) and Northern California Coast DPS steelhead (*Oncorhynchus mykiss*), several terrestrial special-status species utilize aquatic habitats 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, in order to improve the conservation benefits of compensatory mitigation in the GAI. For example, advance mitigation established for SONCC ESU coho salmon impacts may also provide mitigation to compensate for impacts on terrestrial species that use aquatic habitats. The terrestrial special-status species that use aquatic habitats are provided in Table 5-9 of the main text.

References

Caltrans. 2019. *Statewide Advance Mitigation Needs Assessment Report*. State Highway Operation and Protection Program. Ten-Year Project Book. Second Quarter 2017/2018 Fiscal Year. May. Sacramento, California.

Table E-1. Complete SAMNA Results for the Northern California Coast Ecoregion Section in District 1, by Land Cover (results provided in acres)

Common Name	Scientific Name	Status	Annual Grass	Barren	Coastal Oak Wood-land	Coastal Scrub	Douglas-Fir	Euca-lyptus	Lacu-strine	Montane Hard-wood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Pere-nnial Grass-land	Pon-derosa Pine	Red-wood	Riverine	Saline Emer-gent Wetland	Sierran Mixed Conifer	Urban	Grand Total
Plants	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Pennell's bird's-beak ^a	<i>Cordylanthus tenuis</i> ssp. <i>capillaris</i>	FE, SR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macdonald's rockcress	<i>Arabis macdonaldiana</i>	FE, SE	0	0	0	0	0	0	0	0	9.6	0	0	0	0	0	0	0	0	0	9.6
Baker's manzanita ^b	<i>Arctostaphylos bakeri</i> ssp. <i>bakeri</i>	SR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The Cedars manzanita ^c	<i>Arctostaphylos bakeri</i> ssp. <i>sublaevis</i>	FS, SR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kellogg's buckwheat	<i>Eriogonum kelloggii</i>	FS, SE	0	0	0	0	0	0	0	0	9.6	0	0	0	0	0	0	0	0	0	9.6
Vine Hill manzanita ^d	<i>Arctostaphylos densiflora</i>	SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Loch Lomond button-celery ^e	<i>Eryngium constancei</i>	FE, SE	13.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13.1
Menzies' wallflower	<i>Erysimum menziesii</i>	FE, SE	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4
Contra Costa goldfields ^f	<i>Lasthenia conjugens</i>	FE	21.6	0	0	1.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23.3
Beach layia	<i>Layia carnosa</i>	FE, SE	21.6	0	0	0	0	0	0	5.4	0	0	0	0	0	0	0	0	0	0	26.9
Western lily	<i>Lilium occidentale</i>	FE, SE	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4
Pitkin marsh lily ^g	<i>Lilium pardalinum</i> ssp. <i>pitkinense</i>	FE, SE	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4
Baker's meadowfoam	<i>Limnanthes bakeri</i>	FS, SR	0	0	0	0	0	0	0	5.4	0	0	0	0	0	0	0	0	0	0	5.4
Sebastopol meadowfoam ^h	<i>Limnanthes vinculans</i>	FE, SE	13.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13.1
Milo Baker's lupine ⁱ	<i>Lupinus milo-bakeri</i>	ST	13.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13.1
Tidestrom's lupine ^j	<i>Lupinus tidestromii</i>	FE, SE	13.1	0	0	0	0	0	0	5.4	0	0	0	0	0	0	0	0	0	0	18.5

Common Name	Scientific Name	Status	Annual Grass	Barren	Coastal Oak Wood-land	Coastal Scrub	Douglas-Fir	Euca-lyptus	Lacu-strine	Montane Hard-wood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Pere-nnial Grass-land	Pon-derosa Pine	Red-wood	Riverine	Saline Emer-gent Wetland	Sierran Mixed Conifer	Urban	Grand Total
Many-flowered navarretia ^k	<i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	FE, SE	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4
Kneeland Prairie pennycress	<i>Noccaea fendleri</i> ssp. <i>californica</i>	FE	13.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13.1
Napa blue grass ^l	<i>Poa napensis</i>	FE, SE	0	0	0	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.4
Two-fork clover ^m	<i>Trifolium amoenum</i>	FE	13.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13.1
Clara Hunt's milk-vetch ⁿ	<i>Astragalus claranus</i>	FE, ST	13.1	0	0	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14.6
Bensoniella	<i>Bensoniella oregona</i>	FS, SR	13.1	0	0	0	0	0	0	5.4	0	0	0	0	0	0	0	0	0	0	18.5
Sonoma sunshine ^o	<i>Blennosperma bakeri</i>	FE, SE	0	0	0	0	0	0	0	0	9.6	0	0	0	0	0	0	0	0	0	9.6
Point Reyes blennosperma ^p	<i>Blennosperma nanum</i> var. <i>robustum</i>	SR	13.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13.1
Howell's spineflower ^q	<i>Chorizanthe howellii</i>	FE, ST	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4
Ashland thistle	<i>Cirsium ciliolatum</i>	FS, SE	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4
Vine Hill clarkia ^r	<i>Clarkia imbricata</i>	FE, SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphibians	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Southern torrent salamander	<i>Rhyacotriton variegatus</i>	FS, SSC	0	0	0	0	5.8	0	0	0	10.3	1.8	0	0	0	24.1	1.6	0	0.007	0	43.7
Del Norte salamander	<i>Plethodon elongatus</i>	None	0	0	0	0	1.8	0	0	0	1.3	0.7	0	0	0	2.4	0	0	0	0	6.1
Ensatina ^s	<i>Ensatina eschscholtzii</i>	FS	0	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	0	0	0.1	24.1	0	0	0.007	0	49.4
Coastal tailed frog	<i>Ascaphus truei</i>	SSC	0	0	0	1.8	5.8	0	0	0	10.3	1.8	0	0	0.1	24.1	1.6	0	0	0	45.5
Northern red-legged frog	<i>Rana aurora</i>	FS, SSC	20.6	0	0.1	1.8	5.1	0.00004	0.7	4.8	9.6	1.8	0	0.1	0	24.1	1.6	0	0	0	70.1
Foothill yellow-legged frog	<i>Rana boylei</i>	FS, SSC ^t	21.6	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	0	0	0.1	24.1	1.6	0	0.007	0	72.5

Common Name	Scientific Name	Status	Annual Grass	Barren	Coastal Oak Wood-land	Coastal Scrub	Douglas-Fir	Euca-lyptus	Lacu-strine	Montane Hard-wood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Pere-nnial Grass-land	Pon-derosa Pine	Red-wood	Riverine	Saline Emer-gent Wetland	Sierran Mixed Conifer	Urban	Grand Total
Reptiles	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Common sagebrush lizard ^u	<i>Sceloporus graciosus</i>	FS	0	0	0	0	5.8	0.00004	0	5.4	10.3	0	0	0	0.1	0	0	0	0.007	0	21.6
Western skink ^v	<i>Plestiodon skiltonianus</i>	FS	21.6	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	1.4	0.1	0.1	24.1	0	0	0.007	0	72.4
Northern rubber boa	<i>Charina bottae</i>	None	0	0	0	0	5.8	0.00004	0	5.4	10.3	1.8	0	0	0.1	24.1	0	0	0.007	0	47.5
Ring-necked snake ^w	<i>Diadophis punctatus</i>	FS ^t	21.6	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	1.4	0.1	0.1	0	0	0	0.007	27.9	76.2
Striped racer ^x	<i>Masticophis [Coluber] lateralis^t</i>	FT, ST ^t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gophersnake	<i>Pituophis catenifer</i>	None	21.6	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	1.4	0.1	0.1	24.1	0	0	0.007	27.9	100.3
California mountain kingsnake ^y	<i>Lampropeltis zonata</i>	SSC	0.2	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3
Common gartersnake ^z	<i>Thamnophis sirtalis</i>	FE, SE	21.6	0	0.1	1.8	5.8	0.00004	0.7	5.4	10.3	1.8	1.4	0.1	0.1	24.1	0	0	0.007	0	73.1
Birds	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Common loon	<i>Gavia immer</i>	SSC	0	0	0	0	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0	0.7
Great blue heron	<i>Ardea herodias</i>	SFS ^t	21.6	0	0.1	1.8	5.8	0.00004	0.7	5.4	10.3	1.8	0	0.1	0.1	24.1	1.6	3.0	0.007	27.9	104.2
Great egret	<i>Ardea alba</i>	SFS	9.4	0	0	0	0	0.00004	0.7	0	0.7	1.2	0	0	0	1.6	1.0	3.0	0	26.0	43.6
Brant	<i>Branta bernicla</i>	SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0	0	0.4
Redhead	<i>Aythya americana</i>	SSC	0	0	0	0	0	0	0.7	0	0	0	0	0	0	0	0.1	0.4	0	0	1.1
Harlequin duck	<i>Histrionicus histrionicus</i>	SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0.1
Barrow's goldeneye ^{aa}	<i>Bucephala islandica</i>	SSC	0	0	0	0	0	0	0.7	0	0	0	0	0	0	0	1.0	0	0	0	1.7
Osprey	<i>Pandion haliaetus</i>	SFS	21.6	103.0	0.1	0	5.8	0.00004	0.7	5.4	10.3	1.8	0	0.1	0.1	24.1	1.6	3.0	0.007	0	177.6

Common Name	Scientific Name	Status	Annual Grass	Barren	Coastal Oak Wood-land	Coastal Scrub	Douglas-Fir	Euca-lyptus	Lacu-strine	Montane Hard-wood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Pere-nnial Grass-land	Pon-derosa Pine	Red-wood	Riverine	Saline Emer-gent Wetland	Sierran Mixed Conifer	Urban	Grand Total
White-tailed kite	<i>Elanus leucurus</i>	FS, SFP	21.6	103.0	0.1	1.8	0	0.00004	0	0	0	0	0	0.1	0	24.1	0	3.0	0	27.9	181.5
Bald eagle	<i>Haliaeetus leucocephalus</i>	FS, SE, SFP, SFS	21.6	103.0	0.1	1.8	5.8	0.00004	0.7	5.4	10.3	1.8	0	0.1	0.1	24.1	1.6	3.0	0.007	0	179.4
Northern harrier	<i>Circus hudsonius</i>	SSC	21.2	100.6	0	1.8	5.1	0.00004	0.7	4.8	9.6	1.8	0	0.1	0.1	23.7	1.4	3.0	0	27.1	201.0
Northern goshawk	<i>Accipiter gentilis</i>	FS, SSC, SFS	0	0	0.1	0	5.8	0	0	5.4	9.0	0.1	0	0	0.1	9.5	0	0	0.007	0	29.9
Golden eagle	<i>Aquila chrysaetos</i>	FS, SFP, SFS ^t	12.1	90.0	0.1	1.4	5.8	0	0	5.4	9.6	0.7	0.2	0.1	0.1	22.5	0	0	0.007	1.9	149.8
Peregrine falcon	<i>Falco peregrinus</i>	FS, SFP	21.6	103.0	0.1	1.8	5.8	0.00004	0.7	5.4	10.3	1.8	0	0.1	0.1	24.1	1.6	3.0	0.007	27.9	207.2
Sooty grouse ^{bb}	<i>Dendragapus fuliginosus</i>	SSC	12.1	0	0	0	5.8	0	0	5.4	9.6	0.7	0	0.1	0.1	22.5	0	0	0.007	0	56.3
California quail ^{cc}	<i>Callipepla californica</i>	SSC	21.6	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	0	0.1	0.1	24.1	0	0	0.007	27.9	98.9
western snowy plover	<i>Charadrius alexandrinus nivosus</i>	FT, SSC	0	72.6	0	0	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0	73.3
Mountain plover ^{dd}	<i>Charadrius montanus</i>	FS, SSC	0	17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17.5
Burrowing owl	<i>Athene cunicularia</i>	FS, SSC	5.6	61.1	0	0.2	0	0	0	0	0	0	0.6	0	0	0	0	0	0	3.0	70.6
Spotted owl	<i>Strix occidentalis</i>	None	0	0	0.1	0	5.8	0	0	5.4	9.8	1.3	0	0	0.1	23.6	0	0	0.007	0	46.0
Northern spotted owl	<i>Strix occidentalis caurina</i>	FT, ST, SFS	0	0	0.1	0	5.8	0	0	5.4	9.8	1.3	0	0	0.1	23.6	0	0	0.007	0	46.0
Long-eared owl	<i>Asio otus</i>	SSC	21.6	0	0.1	0	0	0.00004	0	5.4	10.3	1.8	1.4	0.1	0.1	0	0	0	0.007	0	40.7
Short-eared owl	<i>Asio flammeus</i>	SSC	9.4	0	0	0.4	0	0.00004	0	0	0.8	1.5	0	0	0	1.9	0	3.0	0	26.0	43.0
Vaux's swift	<i>Chaetura vauxi</i>	SSC	0	0	0.1	0	5.8	0.00004	0.7	5.4	10.3	1.8	0	0.1	0.1	24.1	1.6	0	0.007	27.9	77.8
Olive-sided flycatcher	<i>Contopus cooperi</i>	SSC	0	0	0	0	5.8	0.00004	0	5.4	10.3	1.8	0	0	0.1	24.1	0	0	0.007	0	47.5
Purple martin	<i>Progne subis</i>	SSC	21.6	0	0.1	0	5.8	0.00004	0.7	5.4	10.3	1.8	0	0.1	0.1	24.1	1.6	0	0.007	27.9	99.4
Bewick's wren ^{ee}	<i>Thryomanes bewickii</i>	SSC	0	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	0	0	0.1	24.1	0	0	0	27.9	77.2
Marsh wren ^{ff}	<i>Cistothorus palustris</i>	SSC	0	0	0	0	0	0	0	0	0	1.8	0	0	0	0	0	3.0	0	0	4.8

Common Name	Scientific Name	Status	Annual Grass	Barren	Coastal Oak Wood-land	Coastal Scrub	Douglas-Fir	Euca-lyptus	Lacu-strine	Montane Hard-wood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Pere-nnial Grass-land	Pon-derosa Pine	Red-wood	Riverine	Saline Emer-gent Wetland	Sierran Mixed Conifer	Urban	Grand Total
Loggerhead shrike ^{gg}	<i>Lanius ludovicianus</i>	SSC	10.4	70.8	0	0.4	0	0.00004	0	0.2	1.4	1.3	0	0	0	0	0	0	0	26.0	110.5
Hutton's vireo ^{hh}	<i>Vireo huttoni</i>	SSC	0	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	0	0	0.1	24.1	0	0	0.007	27.9	77.2
Yellow warbler	<i>Setophaga petechia</i>	SSC	0	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	0	0	0.1	24.1	0	0	0.007	27.9	77.2
Common yellowthroat ⁱⁱ	<i>Geothlypis trichas</i>	SSC	21.6	0	0	0	0	0.00004	0	0	0	1.8	0	0.1	0.1	0	0	3.0	0	0	26.6
Yellow-breasted chat	<i>Icteria virens</i>	SSC	0	0	0	1.8	0	0	0	0	0	1.8	0	0	0	0	0	0	0	0	3.6
Spotted towhee ^{jj}	<i>Pipilo maculatus</i>	SSC ^t	0	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	0	0	0.1	24.1	0	0	0.007	27.9	77.2
California towhee ^{kk}	<i>Melozone crissalis</i>	FT, SE ^t	0	0	0.1	1.6	0	0	0	5.4	9.1	0.8	0	0	0.1	0	0	0	0	4.1	21.0
Rufous-crowned sparrow ^{ll}	<i>Aimophila ruficeps</i>	SSC ^t	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
Savannah sparrow ^{mm}	<i>Passerculus sandwichensis</i>	SSC	21.6	0	0.1	1.8	0	0.00004	0	0	0	0	1.4	0.1	0	0	0	3.0	0	0	27.9
Bryant's savannah sparrow	<i>Passerculus sandwichensis alaudinus</i>	SSC	19.7	0	0	1.8	0	0.00004	0	0	0	0	1.4	0.1	0	0	0	3.0	0	0	26.0
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC	21.6	0	0	0	0	0.00004	0	0	0	0	0	0.1	0	0	0	0	0	0	21.6
Song sparrow ⁿⁿ	<i>Melospiza melodia</i>	SSC	21.6	0	0.1	1.8	5.8	0.00004	0.7	5.4	10.3	1.8	0	0.1	0.1	24.1	1.6	3.0	0.007	27.9	104.2
Red-winged blackbird ^{oo}	<i>Agelaius phoeniceus</i>	SSC ^t	21.6	0	0	1.8	0	0.00004	0	0	0	1.8	0	0.1	0	0	0	3.0	0	27.9	56.1
Tricolored blackbird	<i>Agelaius tricolor</i>	FS, ST, SSC ^t	3.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.6	5.6
Fork-tailed storm-petrel	<i>Oceanodroma furcata</i>	FS, SSC	0	42.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42.2
Mammals	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Vagrant shrew ^{pp}	<i>Sorex vagrans</i>	SSC	21.0	0	0.1	1.7	5.7	0.00004	0	3.9	10.2	1.8	0	0.1	0.1	24.0	0	3.0	0.007	0	71.5
Broad-footed mole ^{qq}	<i>Scapanus latimanus</i>	SSC	11.2	0	0.1	1.4	4.1	0	0	5.4	8.7	0.3	0	0.1	0.1	21.6	0	0	0.007	0	53.0

Common Name	Scientific Name	Status	Annual Grass	Barren	Coastal Oak Wood-land	Coastal Scrub	Douglas-Fir	Euca-lyptus	Lacu-strine	Montane Hard-wood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Pere-nnial Grass-land	Pon-derosa Pine	Red-wood	Riverine	Saline Emer-gent Wetland	Sierran Mixed Conifer	Urban	Grand Total
Yuma myotis	<i>Myotis yumanensis</i>	FS	21.6	0	0.1	1.8	5.8	0.00004	0.7	5.4	10.3	1.8	1.4	0.1	0.1	24.1	1.6	0	0.007	27.9	102.6
Long-eared myotis	<i>Myotis evotis</i>	FS	0	103.0	0.1	1.8	5.8	0.00004	0.7	5.4	10.3	1.8	1.4	0.1	0.1	24.1	1.6	0	0.007	0	156.2
Fringed myotis	<i>Myotis thysanodes</i>	FS ^t	21.6	103.0	0.1	1.8	5.8	0.00004	0.7	5.4	10.3	1.8	1.4	0.1	0.1	24.1	1.6	0	0.007	27.9	205.6
Western red bat	<i>Lasiurus blossevillii</i>	SSC	0	0	0	0	0.1	0	0	0	0.4	0	0	0	0	0.2	0	0	0	0	0.8
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	FS, SSC	21.6	103.0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	1.4	0.1	0.1	24.1	1.6	0	0.007	27.9	204.9
Pallid bat	<i>Antrozous pallidus</i>	FS, SSC	21.6	103.0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	1.4	0.1	0.1	24.1	1.6	0	0.007	27.9	204.9
Brush rabbit ^{tr}	<i>Sylvilagus bachmani</i>	FE, SE	21.6	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	1.4	0.1	0.1	24.1	0	0	0.007	27.9	100.3
Black-tailed jackrabbit ^{ss}	<i>Lepus californicus</i>	SSC	21.6	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	1.4	0.1	0.1	24.1	0	0	0.007	27.9	100.3
Mountain beaver ^{tt}	<i>Aplodontia rufa</i>	FE, SSC	0	0	0	0.4	4.5	0	0	0.3	2.7	1.8	0	0.1	0	13.9	0	0	0	0	23.7
Northern flying squirrel	<i>Glaucomys sabrinus</i>	None	0	0	0.1	0	5.8	0	0	5.4	10.3	1.8	0	0	0.1	24.1	0	0	0.007	0	47.6
California kangaroo rat ^{uu}	<i>Dipodomys californicus</i>	SSC	1.3	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	1.8
Deer mouse ^{vv}	<i>Peromyscus maniculatus</i>	SSC	21.6	103.0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	1.4	0.1	0.1	24.1	0	3.0	0.007	27.9	206.3
Dusky-footed woodrat ^{ww}	<i>Neotoma fuscipes</i>	FE, SSC	0	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	0	0.1	0.1	24.1	0	0	0.007	0	49.4
White-footed vole	<i>Arborimus albipes</i>	SSC	0	0	0	0	2.0	0	0	0	0	1.6	0	0	0	5.7	0	0	0	0	9.3
Sonoma red tree vole	<i>Arborimus pomo</i>	SSC	0	0	0	0	5.8	0	0	0	10.3	0	0	0	0	24.1	0	0	0	0	40.2
California vole ^{xx}	<i>Microtus californicus</i>	FE, SE	6.4	0	0	0.2	2.1	0.00004	0	0.1	1.2	1.1	0.8	0	0	11.3	0	3.0	0	23.3	49.5
Pacific jumping mouse ^{yy}	<i>Zapus trinotatus</i>	SSC	0	0	0	0	2.1	0	0	0	9.0	0	1.4	0.1	0	24.1	0	0	0	0	36.7
Ringtail	<i>Bassariscus astutus</i>	SFP ¹	21.6	103.0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	1.4	0.1	0.1	24.1	0	0	0.007	0	175.5
Fisher	<i>Pekania pennanti</i>	FPT, FS, ST	0	0	0	0	5.8	0	0	0	10.3	1.8	0	0	0.1	24.1	0	0	0.007	0	42.2

Common Name	Scientific Name	Status	Annual Grass	Barren	Coastal Oak Wood-land	Coastal Scrub	Douglas-Fir	Euca-lyptus	Lacu-strine	Montane Hard-wood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Pere-nnial Grass-land	Pon-derosa Pine	Red-wood	Riverine	Saline Emer-gent Wetland	Sierran Mixed Conifer	Urban	Grand Total
American badger	<i>Taxidea taxus</i>	SSC ¹	20.6	100.7	0.1	1.6	5.8	0.00004	0	5.4	10.0	1.3	1.2	0.1	0.1	22.7	0	0	0.007	0	169.6
Western spotted skunk ^{zz}	<i>Spilogale gracilis</i>	SSC	21.6	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	1.4	0.1	0.1	24.1	0	0	0.007	27.9	100.3
Northern river otter ^{aaa}	<i>Lontra canadensis</i>	SSC	0	0	0	0	0	0	0.7	0	0	1.8	0	0	0	0	1.6	3.0	0	0	7.1
Mountain lion	<i>Puma concolor</i>	CE	21.6	0	0.1	1.8	5.8	0.00004	0	5.4	10.3	1.8	1.4	0.1	0.1	24.1	0	0	0.007	0	72.4
Northern fur-seal	<i>Callorhinus ursinus</i>	None	0	42.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42.2
Northern (steller) sea-lion	<i>Eumetopias jubatus</i>	MMC	0	42.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42.2
California sea-lion	<i>Zalophus californianus</i>	None	0	42.2	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	42.3
Harbor seal	<i>Phoca vitulina</i>	None	0	42.2	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4	0	0	42.7
Northern elephant seal	<i>Mirounga angustirostris</i>	SFP	0	42.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42.2
Not applicable	Not applicable	Total	21.6	103.0	0.1	1.8	5.8	0	0.7	5.4	10.3	1.8	1.4	0.1	0.1	24.1	1.6	3.0	0	27.9	209.6

Notes: FE = federally endangered, FPT = federal proposed threatened, FS = federal sensitive (USFS and/or BLM sensitive), FT = federally threatened, MMC = marine mammal of concern (Marine Mammal Protection Act), SCE = state candidate endangered, SE = state endangered, SFP = state fully protected, SFS = state fire sensitive, SR = state rare, SSC = species of special concern (CDFW), ST= state threatened

^a Pennell's bird's-beak. This species is only known from Sonoma and Marin Counties, and does not occur in the GAI.

^b Baker's manzanita. This species is only known from Sonoma County, and does not occur in the GAI.

^c The Cedars manzanita. This species is only known from Sonoma County, and does not occur in the GAI.

^d Vine Hill manzanita. This species is only known from Sonoma County, and does not occur in the GAI.

^e Loch Lomond button-celery. This species is only known from the vicinity of Santa Rosa and Clear Lake and does not occur in the GAI.

^f Contra Costa goldfields. This species is only known from the San Francisco Bay area and Monterey and does not occur in the GAI.

^g Pitkin marsh lily. This species is only known from Sonoma County, and does not occur in the GAI.

^h Sebastopol meadowfoam. This species is only known from the vicinity of Santa Rosa and does not occur in the GAI.

ⁱ Milo Baker's lupine. This species is only known from the grasslands around Covelo and Longvale and does not occur in the GAI.

^j Tidestrom's lupine. This species is only known from the central coast and does not occur in the GAI.

^k Many-flowered navarretia. This species is only known from the vicinity of Santa Rosa and Clear Lake and does not occur in the GAI.

^l Napa bluegrass. This species is only known from Napa County, and does not occur in the GAI.

^m Two-fork clover. This species is only known from the San Francisco Bay area and does not occur in the GAI.

ⁿ Clara Hunt's milk-vetch. This species is only known from the vicinity of Santa Rosa and does not occur in the GAI.

^o Sonoma sunshine. This species is primarily known from the vicinity of Santa Rosa and does not occur in the GAI.

^p Point Reyes blennosperma. This species is primarily known from the vicinity of Santa Rosa and does not occur in the GAI.

^q Howell's spineflower. This species is primarily known from the vicinity of Fort Bragg and does not occur in the GAI.

^r Vine Hill clarkia. This species is primarily known from the vicinity of Santa Rosa and does not occur in the GAI.

^s Ensatina. Only the yellow-blotched and large-blotched subspecies are special status, and they do not occur in the GAI.

^t Latin name or regulatory status has changed since August 20, 2019, when the SAMNA model was run (Caltrans 2019b).

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

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

^w Ring-necked snake. There are three special-status subspecies of ring-necked snake, none of which occur in the GAI.

^x Striped racer. Only the Alameda subspecies is special status, and it does not occur in the GAI (East Bay).

- ^y California mountain kingsnake. Only the San Diego subspecies is special status, and it does not occur in the GAI.
- ^z Common gartersnake. There are two special-status subspecies of common gartersnake, neither of which occur in the GAI.
- ^{aa} Barrow's goldeneye. Only considered special status while nesting and it does not nest in the GAI.
- ^{bb} Sooty grouse. Only the Mount Pinos subspecies is special status, and it does not occur in the GAI.
- ^{cc} California quail. Only the Catalina subspecies is special status, and it does not occur in the GAI.
- ^{dd} Mountain plover. Wintering populations of this species are considered special status, but this species does not winter in the GAI.
- ^{ee} Bewick's wren. Only the San Clemente Island subspecies is special status and is extinct.
- ^{ff} Marsh wren. Only the Clark's subspecies is special status, and it does not occur in the GAI.
- ^{gg} Loggerhead shrike. This species is considered special status while nesting, and it does not breed in the GAI.
- ^{hh} Hutton's vireo. Only the Catalina subspecies is special status, and it does not occur in the GAI.
- ⁱⁱ Common yellowthroat. Only the saltmarsh subspecies is special status, and it does not occur in the GAI.
- ^{jj} Spotted towhee. Only the San Clemente subspecies is special status, and it does not occur in the GAI.
- ^{kk} California towhee. Only the Inyo subspecies is special status, and it does not occur in the GAI.
- ^{ll} Rufous-crowned sparrow. Only the SoCal and Santa Cruz Island subspecies are special status, and they do not occur in the GAI.
- ^{mmm} Savannah sparrow. One special-status subspecies of savannah sparrow occurs in the GAI, Bryant's (addressed in separate row). The large-billed and Belding's subspecies do not occur in the GAI.
- ⁿⁿ Song sparrow. There are five special-status subspecies of song sparrow, none of which occur in the GAI.
- ^{oo} Red-winged blackbird. Only the Kern subspecies is special status, and it does not occur in the GAI.
- ^{pp} Vagrant shrew. Only the salt-marsh wandering subspecies is special status, and it does not occur in the GAI.
- ^{qq} Broad-footed mole. Only two island subspecies are special status, and they do not occur in the GAI.
- ^{rr} Brush rabbit. Only the riparian subspecies is special status, and it does not occur in the GAI.
- ^{ss} Black-tailed jackrabbit. Only the San Diego subspecies is special status, and it does not occur in the GAI.
- ^{tt} Mountain beaver. Only the Humboldt subspecies occurs in the GAI, and it is not special status. The three special-status subspecies do not occur in the GAI.
- ^{uu} California kangaroo rat. Only the Marysville subspecies is special status, and it does not occur in the GAI.
- ^{vv} Deer mouse. Only the Channel Islands subspecies are special status, and they do not occur in the GAI.
- ^{ww} Dusky-footed woodrat. Only the San Francisco and riparian subspecies are special status, and they do not occur in the GAI.
- ^{xx} California vole. There are five special-status subspecies of California vole, none of which occur in the GAI (Bay Area, Los Angeles, Mohave River, and two in the Death Valley region). A sixth subspecies that occurs in Monterey is not special status.
- ^{yy} Pacific jumping mouse. Only the Point Reyes subspecies is special status, and it does not occur in the GAI.
- ^{zz} Western spotted skunk. Only the Channel Islands subspecies is special status, and it does not occur in the GAI (only along Stanislaus River).
- ^{aaa} Northern river otter. Only the southwestern subspecies is special status, and it does not occur in the GAI.

Table E-2. Complete SAMNA Results for the Northern California Coast Ranges Ecoregion Section in District 1, by Land Cover (acres)

Common Name	Scientific Name	Status	Annual Grass	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Cropland	Douglas-Fir	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood-Conifer	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Oak Woodland	Grand Total
Plants	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Pennell's bird's-beak ^a	<i>Cordylanthus tenuis</i> ssp. <i>capillaris</i>	FE, SR	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0.1
Macdonald's rockcress	<i>Arabis macdonaldiana</i>	FE, SE	0	0	0	0	0	0	0	0	0	0.7	0	0	0	0	0	0.7
Baker's manzanita ^b	<i>Arctostaphylos bakeri</i> ssp. <i>bakeri</i>	SR	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0.1
The Cedars manzanita ^c	<i>Arctostaphylos bakeri</i> ssp. <i>sublaevis</i>	FS, SR	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0.1
Kellogg's buckwheat	<i>Eriogonum kelloggii</i>	FS, SE	0	0	0	0	0	0	0	0	0	0.7	0	0	0	0	0	0.7
Vine Hill manzanita ^d	<i>Arctostaphylos densiflora</i>	SE	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0.1
Loch Lomond button-celery ^e	<i>Eryngium constancei</i>	FE, SE	3.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.4
Menzies' wallflower	<i>Erysimum menziesii</i>	FE, SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Roderick's fritillary ^f	<i>Fritillaria roderickii</i>	SE	3.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.4
Contra Costa goldfields ^g	<i>Lasthenia conjugens</i>	FE	3.4	0	0	0	0	0	0	0	1.2	0	0	0	0	0	0	4.6
Beach layia ^h	<i>Layia carnosa</i>	FE, SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Western lily	<i>Lilium occidentale</i>	FE, SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pitkin marsh lily ⁱ	<i>Lilium pardalinum</i> ssp. <i>pitkinense</i>	FE, SE	0	0	0	0	0	0	0	0	1.2	0	0	0	0	0	0	1.2
Baker's meadowfoam ^j	<i>Limnanthes bakeri</i>	FS, SR	3.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.4
Sebastopol meadowfoam ^k	<i>Limnanthes vinculans</i>	FE, SE	3.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.4
Milo Baker's lupine	<i>Lupinus milo-bakeri</i>	ST	3.4	0	0	0	0	0	0	0	1.2	0	0	0	0	0	0	4.6

Common Name	Scientific Name	Status	Annual Grass	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Cropland	Douglas-Fir	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood-Conifer	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Oak Woodland	Grand Total
Tidestrom's lupine ^l	<i>Lupinus tidestromii</i>	FE, SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Many-flowered navarretia ^m	<i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	FE, SE	3.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.4
Kneeland Prairie pennycress	<i>Noccaea fendleri</i> ssp. <i>californica</i>	FE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Napa blue grass	<i>Poa napensis</i>	FE, SE	3.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.4
Two-fork clover ⁿ	<i>Trifolium amoenum</i>	FE	3.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.4
Clara Hunt's milk-vetch ^o	<i>Astragalus claranus</i>	FE, ST	3.4	0	0	0	0	0	0.1	0	1.2	0	0	0	0	0	0	4.7
Bensoniella	<i>Bensoniella oregona</i>	FS, SR	0	0	0	0	0	0	0	0	0	0.7	0	0	0	0	0	0.7
Sonoma sunshine ^p	<i>Blennosperma bakeri</i>	FE, SE	3.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.4
Point Reyes blennosperma	<i>Blennosperma nanum</i> var. <i>robustum</i>	SR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Howell's spineflower ^q	<i>Chorizanthe howellii</i>	FE, ST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ashland thistle	<i>Cirsium ciliolatum</i>	FS, SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vine Hill clarkia ^r	<i>Clarkia imbricata</i>	FE, SE	3.4	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	3.5
Amphibians	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Southern torrent salamander	<i>Rhyacotriton variegatus</i>	FS, SSC	0	0	0	0	0	2.9	0	0	0	0.7	0	0.1	0.007	0	0	3.7
Del Norte salamander	<i>Plethodon elongatus</i>	None	0	0	0	0	0	1.1	0	0	0	0	0	0	0	0	0	1.1
Ensatina ^s	<i>Ensatina eschscholtzii</i>	FS	0	0	0	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	0	0.02	5.3
Coastal tailed frog	<i>Ascaphus truei</i>	SSC	0	0	0	0	0	2.9	0	0	0	0.7	0.003	0.1	0	0	0	3.7
Northern red-legged frog	<i>Rana aurora</i>	FS, SSC	3.4	0	0	0.2	0	2.9	0.1	0	1.1	0.7	0.003	0	0	0	0.02	8.5

Common Name	Scientific Name	Status	Annual Grass	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Cropland	Douglas-Fir	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood-Conifer	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Oak Woodland	Grand Total
Foothill yellow-legged frog	<i>Rana boylei</i>	FS, SSC ^t	3.4	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0.1	0.007	0	0.02	8.9
Reptiles	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Common sagebrush lizard ^u	<i>Sceloporus graciosus</i>	FS	0	0	0	0	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	0	0	5.1
Western skink ^v	<i>Plestiodon skiltonianus</i>	FS	3.4	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	0	0.02	8.8
Northern rubber boa	<i>Charina bottae</i>	None	0	0	0	0	0	2.9	0	0.2	1.2	0.7	0.003	0	0.007	0	0	5.0
Ring-necked snake ^w	<i>Diadophis punctatus</i>	FS ^t	3.4	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	18.4	0.02	27.2
Striped racer ^x	<i>Masticophis [Coluber] lateralis</i>	FT, ST ^t	0	0	0.03	0	0	1.8	0.1	0	1.0	0.7	0.003	0	0.007	0	0.02	3.6
Gophersnake	<i>Pituophis catenifer</i>	None	3.4	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	18.4	0.02	27.2
California mountain kingsnake ^y	<i>Lampropeltis zonata</i>	SSC	3.4	0	0	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	0	0.02	8.7
Common gartersnake ^z	<i>Thamnophis sirtalis</i>	FE, SE	3.4	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	0	0.02	8.8
Birds	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Common loon ^{aa}	<i>Gavia immer</i>	SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Great blue heron	<i>Ardea herodias</i>	SFS ^t	3.4	0	0	0.2	0	2.9	0	0	1.2	0.7	0.003	0.1	0.007	18.4	0.02	27.0
Great egret	<i>Ardea alba</i>	SFS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brant	<i>Branta bernicla</i>	SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Redhead	<i>Aythya americana</i>	SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harlequin duck ^{bb}	<i>Histrionicus histrionicus</i>	SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barrow's goldeneye ^{cc}	<i>Bucephala islandica</i>	SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Osprey	<i>Pandion haliaetus</i>	SFS	3.4	5.7	0	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0.1	0.007	0	0.02	14.5

Common Name	Scientific Name	Status	Annual Grass	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Cropland	Douglas-Fir	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood-Conifer	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Oak Woodland	Grand Total
White-tailed kite	<i>Elanus leucurus</i>	FS, SFP	3.4	5.7	0.03	0.2	0	0	0.1	0	0	0	0	0	0	18.4	0.02	27.8
Bald eagle	<i>Haliaeetus leucocephalus</i>	FS, SE, SFP, SFS	3.4	5.7	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0.1	0.007	0	0.02	14.6
Northern harrier	<i>Circus hudsonius</i>	SSC	3.4	5.7	0.03	0.2	0	2.9	0.1	0.2	1.1	0.7	0.003	0	0.007	18.2	0.02	32.6
Northern goshawk	<i>Accipiter gentilis</i>	FS, SSC, SFS	0	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	0	0.02	5.4
Golden eagle	<i>Aquila chrysaetos</i>	FS, SFP, SFS ⁱ	3.4	5.7	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	18.4	0.02	32.8
Peregrine falcon	<i>Falco peregrinus</i>	FS, SFP	3.4	5.7	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0.1	0.007	18.4	0.02	33.0
Sooty grouse ^{dd}	<i>Dendragapus fuliginosus</i>	SSC	3.3	0	0	0	0	2.9	0	0	1.1	0.7	0	0	0	0	0	8.0
California quail ^{ee}	<i>Callipepla californica</i>	SSC	3.4	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	18.4	0.02	27.2
Western snowy plover ^{ff}	<i>Charadrius alexandrinus nivosus</i>	FT, SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0
Mountain plover	<i>Charadrius montanus</i>	FS, SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Burrowing owl	<i>Athene cunicularia</i>	FS, SSC	3.4	5.7	0.03	0.2	0	0	0.1	0.2	0	0	0.003	0	0	18.4	0.02	28.0
Spotted owl	<i>Strix occidentalis</i>	None	0	0	0	0.2	0	2.9	0	0	1.2	0.7	0.003	0	0.007	0	0	5.1
Northern spotted owl	<i>Strix occidentalis caurina</i>	FT, ST, SFS	0	0	0	0.2	0	2.9	0	0	1.2	0.7	0.003	0	0.007	0	0	5.1
Long-eared owl ^{gg}	<i>Asio otus</i>	SSC	3.4	0	0.03	0.2	0	0	0.1	0.2	1.2	0.7	0.003	0	0.007	0	0.02	5.9
Short-eared owl	<i>Asio flammeus</i>	SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vaux's swift	<i>Chaetura vauxi</i>	SSC	0	0	0	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0.1	0.007	18.4	0	23.9
Olive-sided flycatcher	<i>Contopus cooperi</i>	SSC	0	0	0.03	0	0	2.9	0.1	0	1.2	0.7	0.003	0	0.007	0	0	5.0
Purple martin	<i>Progne subis</i>	SSC	3.4	0	0	0.2	0	2.9	0	0	1.2	0.7	0.003	0.1	0.007	18.4	0.02	27.0
Bewick's wren ^{hh}	<i>Thryomanes bewickii</i>	SSC	0	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0	18.4	0.02	23.8

Common Name	Scientific Name	Status	Annual Grass	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Cropland	Douglas-Fir	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood-Conifer	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Oak Woodland	Grand Total
Marsh wren ⁱⁱ	<i>Cistothorus palustris</i>	SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Loggerhead shrike ^{jj}	<i>Lanius ludovicianus</i>	SSC	0.3	4.7	0.02	0	0	0	0	0	0.1	0	0.003	0	0	0	0.02	5.2
Hutton's vireo ^{kk}	<i>Vireo huttoni</i>	SSC	0	0	0.03	0.2	0	2.9	0.1	0	1.2	0.7	0.003	0	0.007	18.4	0.02	23.6
Yellow warbler	<i>Setophaga petechia</i>	SSC	0	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	18.4	0.02	23.8
Common yellowthroat ^{ll}	<i>Geothlypis trichas</i>	SSC	3.4	0	0	0	0	0	0	0	0	0	0.003	0	0	0	0	3.4
Yellow-breasted chat	<i>Icteria virens</i>	SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spotted towhee ^{mm}	<i>Pipilo maculatus</i>	SSC ^t	0	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	18.4	0.02	23.8
California towhee ⁿⁿ	<i>Melozona crissalis</i>	FT, SE ^t	0	0	0.03	0.2	0	0	0.1	0.2	1.2	0.7	0.003	0	0	18.4	0.02	20.9
Rufous-crowned sparrow ^{oo}	<i>Aimophila ruficeps</i>	SSC ^t	1.6	0	0.03	0	0	0	0.1	0	0	0	0	0	0	0	0	1.8
Savannah sparrow ^{pp}	<i>Passerculus sandwichensis</i>	SSC	1.7	0	0.03	0	0	0	0.1	0	0	0	0	0	0	0	0.02	1.8
Bryant's savannah sparrow	<i>Passerculus sandwichensis alaudinus</i>	SSC	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
Grasshopper sparrow	<i>Ammodramus savannarum</i>	SSC	3.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.4
Song sparrow ^{qq}	<i>Melospiza melodia</i>	SSC	3.4	0	0.03	0.2	0	2.9	0.1	0	1.2	0.7	0.003	0.1	0.007	18.4	0.02	27.1
Red-winged blackbird ^{rr}	<i>Agelaius phoeniceus</i>	SSC	3.4	0	0	0	0	0	0	0	0	0	0	0	0	18.4	0	21.8
Tricolored blackbird	<i>Agelaius tricolor</i>	FS, ST, SSC ^t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fork-tailed storm-petrel ^{ss}	<i>Oceanodroma furcata</i>	FS, SSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mammals	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below	See below
Vagrant shrew ^{tt}	<i>Sorex vagrans</i>	SSC	1.7	0	0	0.2	0	1.1	0	0.2	0.3	0	0	0	0	0	0	3.5

Common Name	Scientific Name	Status	Annual Grass	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Cropland	Douglas-Fir	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood-Conifer	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Oak Woodland	Grand Total
Broad-footed mole ^{uu}	<i>Scapanus latimanus</i>	SSC	3.4	0	0	0.2	0	2.9	0	0	1.2	0.7	0.003	0	0.007	0	0.02	8.5
Yuma myotis	<i>Myotis yumanensis</i>	FS	3.4	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0.1	0.007	18.4	0.02	27.3
Long-eared myotis	<i>Myotis evotis</i>	FS	0	5.7	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0.1	0.007	0	0.02	11.2
Fringed myotis	<i>Myotis thysanodes</i>	FS ⁱ	3.4	5.7	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0.1	0.007	18.4	0.02	33.0
Western red bat	<i>Lasiurus blossevillii</i>	SSC	0.3	0	0.02	0	0	0.7	0	0	0.4	0.2	0.003	0	0.007	0	0.02	1.6
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	FS, SSC	3.4	5.7	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0.1	0.007	18.4	0.02	33.0
Pallid bat	<i>Antrozous pallidus</i>	FS, SSC	3.4	5.7	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0.1	0.007	18.4	0.02	33.0
Brush rabbit ^{vv}	<i>Sylvilagus bachmani</i>	FE, SE	3.4	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	18.4	0.02	27.2
Black-tailed jackrabbit ^{ww}	<i>Lepus californicus</i>	SSC	3.4	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	18.4	0.02	27.2
Mountain beaver ^{xx}	<i>Aplodontia rufa</i>	FE, SSC	0	0	0	0	0	1.1	0	0	0.3	0	0	0	0	0	0	1.4
Northern flying squirrel	<i>Glaucomys sabrinus</i>	None	0	0	0	0.2	0	2.9	0	0	1.2	0.7	0.003	0	0.007	0	0.02	5.1
California kangaroo rat ^{yy}	<i>Dipodomys californicus</i>	SSC	1.7	0	0	0	0	0	0.1	0	1.0	0	0	0	0	0	0.02	2.8
Deer mouse ^{zz}	<i>Peromyscus maniculatus</i>	SSC	3.4	5.7	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	18.4	0.02	32.8
Dusky-footed woodrat ^{aaa}	<i>Neotoma fuscipes</i>	FE, SSC	0	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	0	0.02	5.4
White-footed vole	<i>Arborimus albipes</i>	SSC	0	0	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0.3
Sonoma red tree vole	<i>Arborimus pomo</i>	SSC	0	0	0	0	0	2.9	0	0	0	0.7	0	0	0	0	0	3.6
California vole ^{bbb}	<i>Microtus californicus</i>	FE, SE	0.3	0	0	0	0	0.7	0	0	0.4	0.2	0.003	0	0.007	0	0.02	1.6
Pacific jumping mouse ^{ccc}	<i>Zapus trinotatus</i>	SSC	0	0	0	0	0	0.6	0	0	0	0.5	0	0	0	0	0	1.1

Common Name	Scientific Name	Status	Annual Grass	Barren	Chamise-Redshank Chaparral	Coastal Oak Woodland	Cropland	Douglas-Fir	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hardwood-Conifer	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Oak Woodland	Grand Total
Ringtail	<i>Bassariscus astutus</i>	SFP ⁱ	3.4	5.7	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	0	0.02	14.4
Fisher	<i>Pekania pennanti</i>	FPT, FS, ST	0	0	0	0	0	2.9	0	0	0	0.7	0.003	0	0.007	0	0	3.6
American badger	<i>Taxidea taxus</i>	SSC ⁱ	3.4	5.7	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	0	0.02	14.4
Western spotted skunk ^{ddd}	<i>Spilogale gracilis</i>	SSC	3.4	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	18.4	0.02	27.2
Northern river otter ^{eee}	<i>Lontra canadensis</i>	None	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0.1
Mountain lion ^{fff}	<i>Puma concolor</i>	SSC	3.4	0	0.03	0.2	0	2.9	0.1	0.2	1.2	0.7	0.003	0	0.007	0	0.02	8.8
Northern fur-seal	<i>Callorhinus ursinus</i>	None	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern (steller) sea-lion	<i>Eumetopias jubatus</i>	MMC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
California sea-lion	<i>Zalophus californianus</i>	None	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbor seal	<i>Phoca vitulina</i>	None	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern elephant seal ^{ggg}	<i>Mirounga angustirostris</i>	SFP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not Applicable	Not Applicable	Total	3.4	5.7	0.03	0.2	0.006	2.9	0.1	0.2	1.2	0.7	0.003	0.1	0.007	18.4	0.02	33.0

Notes: FE = federally endangered, FPT = federal proposed threatened, FS = federal sensitive (USFS and/or BLM sensitive), FT = federally threatened, MMC = marine mammal of concern (Marine Mammal Protection Act), SCE = state candidate endangered, SE = state endangered, SFP = state fully protected, SFS = state fire sensitive, SR = state rare, SSC = species of special concern (CDFW), ST= state threatened

^a Pennell's bird's-beak. This species is only known from Sonoma and Marin Counties, and does not occur in the GAI.

^b Baker's manzanita. This species is only known from Sonoma County, and does not occur in the GAI.

^c The Cedars manzanita. This species is only known from Sonoma County, and does not occur in the GAI.

^d Vine Hill manzanita. This species is only known from Sonoma County, and does not occur in the GAI.

^e Loch Lomond button-celery. This species is only known from the vicinity of Santa Rosa and Clear Lake and does not occur in the GAI.

^f Roderick's fritillary. This species is only known from Sonoma and south Mendocino Counties, and does not occur in the GAI.

^g Contra Costa goldfields. This species is only known from the San Francisco Bay area and Monterey and does not occur in the GAI.

^h Beach layia. This species is only known from the San Francisco Bay area and Monterey and does not occur in the Northern California Coast Ranges Ecoregion Section within the GAI.

ⁱ Pitkin marsh lily. This species is only known from Sonoma County, and does not occur in the GAI.

^j Baker's meadowfoam. This species is only known from the valleys of Covelo, Laytonville, Willits, and Ukiah, and does not occur in the Northern California Coast Ranges Ecoregion Section within the GAI.

^k Sebastopol meadowfoam. This species is only known from the vicinity of Santa Rosa and does not occur in the GAI.

^l Tidestrom's lupine. This species is only known from the central coast and does not occur in the GAI.

^m Many-flowered navarretia. This species is only known from the vicinity of Santa Rosa and Clear Lake and does not occur in the GAI.

ⁿ Two-fork clover. This species is only known from the San Francisco Bay area and does not occur in the GAI.

^o Clara Hunt's milk-vetch. This species is only known from the vicinity of Santa Rosa and does not occur in the GAI.

^p Sonoma sunshine. This species is primarily known from the vicinity of Santa Rosa and does not occur in the GAI.

^q Howell's spineflower. This species is primarily known from the vicinity of Fort Bragg and does not occur in the GAI.

^r Vine Hill clarkia. This species is primarily known from the vicinity of Santa Rosa and does not occur in the GAI.

^s Ensatina. Only the yellow-blotched and large-blotched subspecies are special status, and they do not occur in the GAI.

^t Latin name or regulatory status has changed since August 20, 2019, when the SAMNA model was run (Caltrans 2019b).

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

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

^w Ring-necked snake. There are three special-status subspecies of ring-necked snake, none of which occur in the GAI.

^x Striped racer. Only the Alameda subspecies is special status, and it does not occur in the GAI (East Bay).

^y California mountain kingsnake. Only the San Diego subspecies is special status, and it does not occur in the GAI.

^z Common gartersnake. There are two special-status subspecies of common gartersnake, neither of which occur in the GAI.

^{aa} Common loon. Only considered special status while nesting, and it does not nest in the GAI.

^{bb} Harlequin duck. Only considered special status while nesting, and it does not nest in the GAI.

^{cc} Barrow's goldeneye. Only considered special status while nesting, and it does not nest in the GAI.

^{dd} Sooty grouse. Only the Mount Pinos subspecies is special status, and it does not occur in the GAI.

^{ee} California quail. Only the Catalina subspecies is special status, and it does not occur in the GAI.

^{ff} Snowy plover. Only the western subspecies is special status, and it does not occur in the GAI.

^{gg} Long-eared owl. Only considered special status while nesting, and it does not nest in the GAI.

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

ⁱⁱ Marsh wren. Only the Clark's subspecies is special status, and it does not occur in the GAI.

^{jj} Loggerhead shrike. This species is considered special status while nesting, and it does not breed in the GAI.

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

^{ll} Common yellowthroat. Only the saltmarsh subspecies is special status, and it does not occur in the GAI.

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

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

^{oo} Rufous-crowned sparrow. Only the SoCal and Santa Cruz Island subspecies are special status, and they do not occur in the GAI.

^{pp} Savannah sparrow. One special-status subspecies of savannah sparrow occurs in the GAI, Bryant's (addressed in separate row). The large-billed and Belding's subspecies do not occur in the GAI.

^{qq} Song sparrow. Five subspecies are special status, none of which occur in the GAI.

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

^{ss} Fork-tailed storm-petrel. Nesting colonies of this species are considered special status, and this species does not nest in the GAI.

^{tt} Vagrant shrew. Only the salt-marsh wandering subspecies is special status, and it does not occur in the GAI.

^{uu} Broad-footed mole. Only two island subspecies are special status, and they do not occur in the GAI.

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

^{ww} Black-tailed jackrabbit. Only the San Diego subspecies is special status, and it does not occur in the GAI.

^{xx} Mountain beaver. Only the Humboldt subspecies occurs in the GAI, and it is not special status. The three special-status subspecies do not occur in the GAI.

^{yy} California kangaroo rat. Only the Marysville subspecies is special status, and it does not occur in the GAI.

^{zz} Deer mouse. Only the Channel Islands subspecies are special status, and they do not occur in the GAI.

^{aaa} Dusky-footed woodrat. Only the San Francisco and riparian subspecies are special status, and they do not occur in the GAI.

^{bbb} California vole. There are five special-status subspecies of California vole, none of which occur in the GAI (Bay Area, Los Angeles, Mohave River, and two in the Death Valley region). A sixth subspecies that occurs in Monterey is not special status.

^{ccc} Pacific jumping mouse. Only the Point Reyes subspecies is special status, and it does not occur in the GAI.

^{ddd} Western spotted skunk. Only the Channel Islands subspecies is special status, and it does not occur in the GAI (only along Stanislaus River).

^{eee} Northern river otter. Only the southwestern subspecies is special status, and it does not occur in the GAI.

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

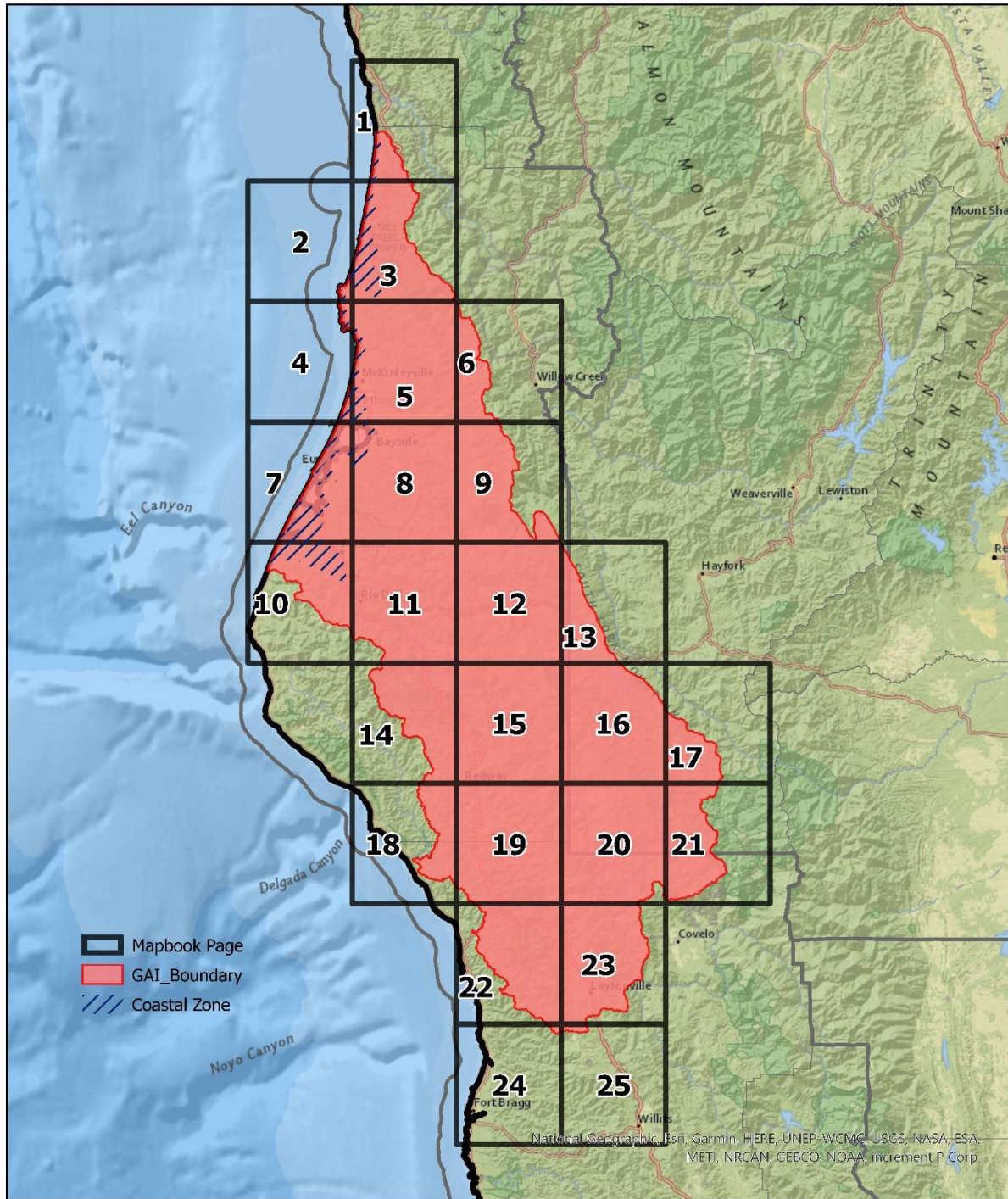
^{ggg} Northern elephant seal. Does not occur in the Northern California Coast Ranges Ecoregion Section within the GAI.

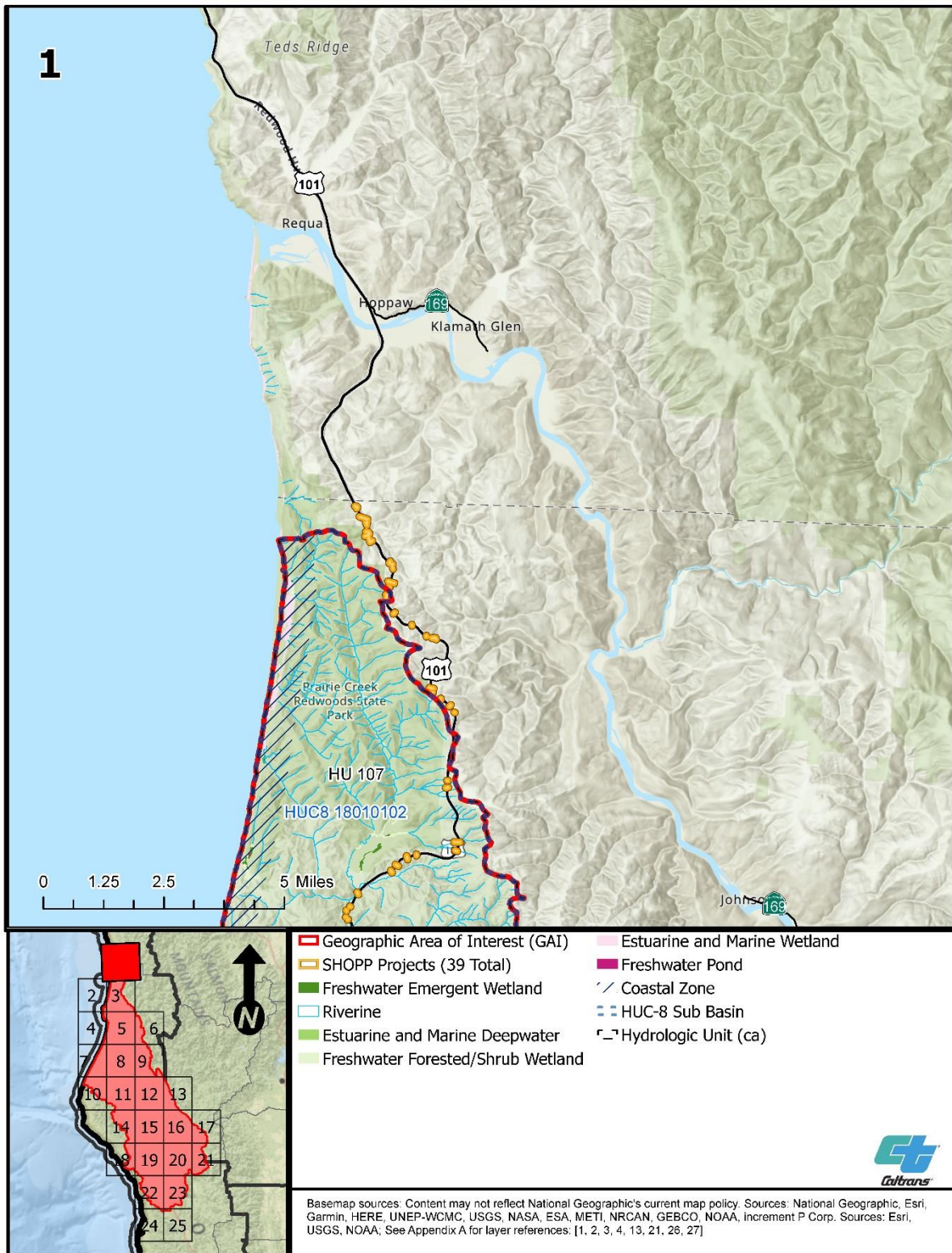
APPENDIX F: AQUATIC RESOURCE LOCATIONS

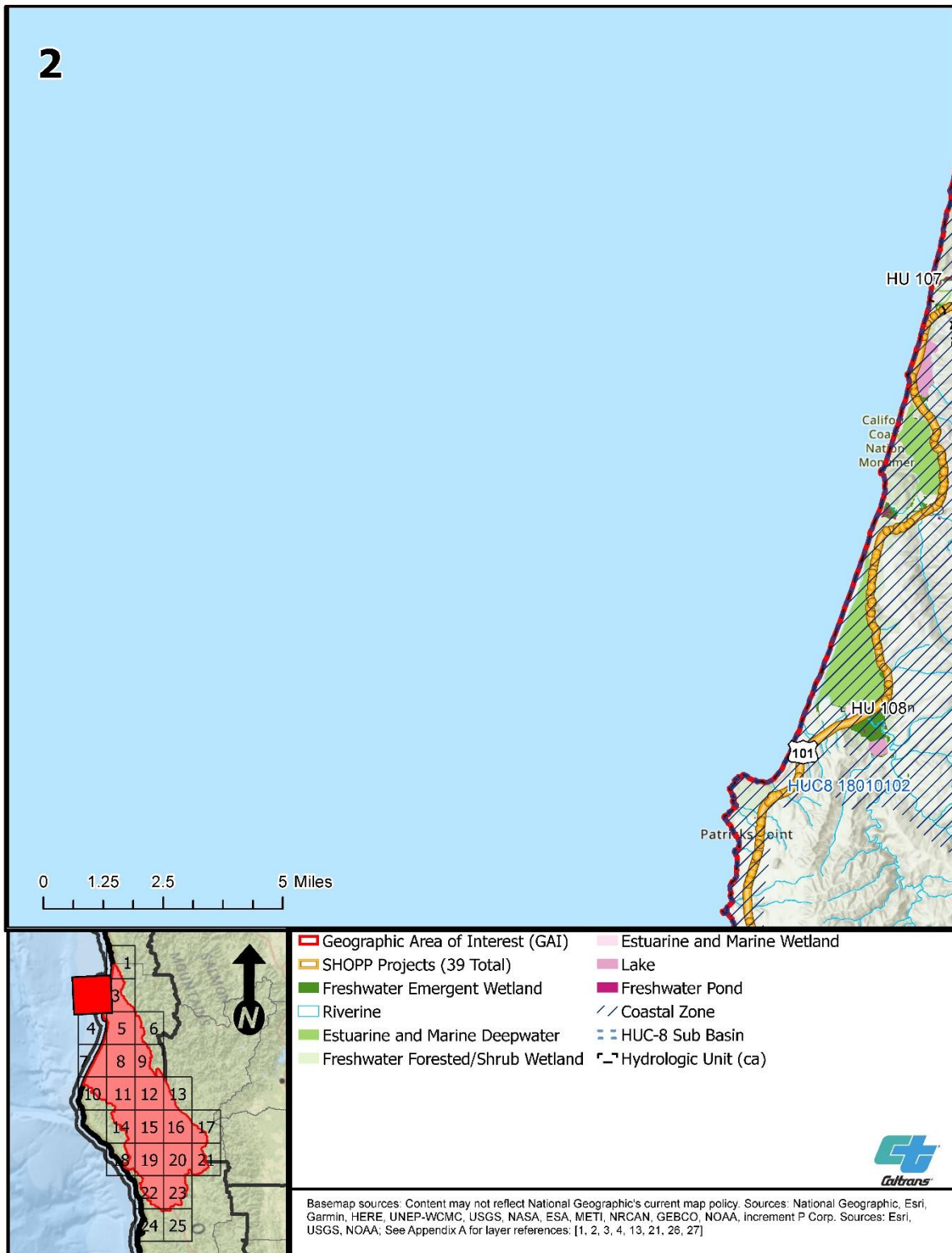
Aquatic resource locations are shown by HUC-8 sub-basin and HU in the following maps, which also include the coastal zone and major landmarks for perspective. These locations were excerpted from the SAMNA Reporting Tool's water and wetland layers (Caltrans 2017a, 2017b). Few sources of information are known to be available that can be used to describe existing and relevant wetland, riparian, and littoral resources. The FWS National Wetlands Inventory (2017) 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 upon them (Caltrans 2017a, 2017b).

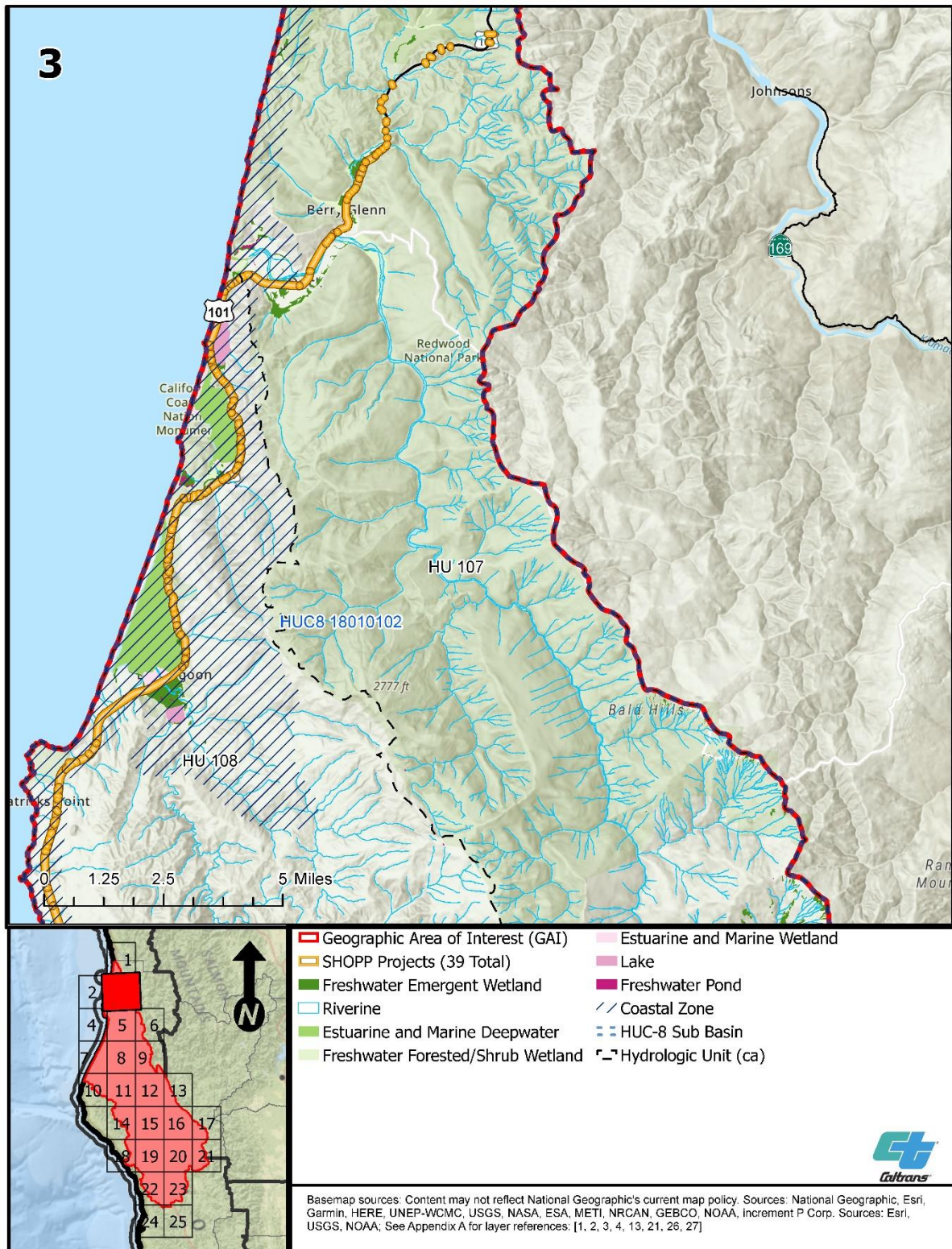
References

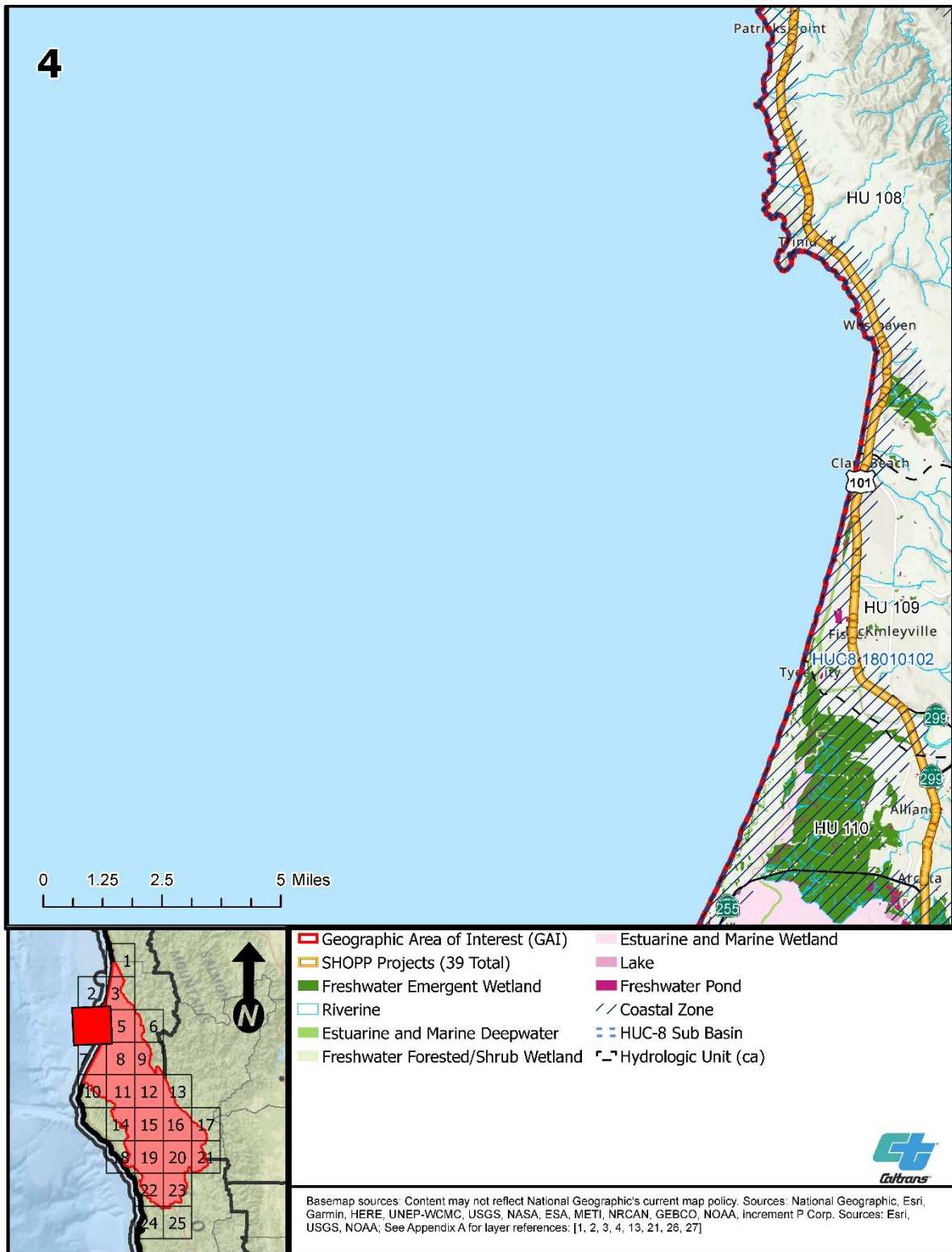
- Caltrans. 2017a. "Waters_D1 in Caltrans District 1 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2017/2018" (data file). Accessed February 6, 2019. <http://www.dot.ca.gov/env/advancemitigation/>.
- . 2017b. "Wetlands_D1 in Caltrans District 1 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2017/2018" (data file). Accessed February 6, 2019. <http://www.dot.ca.gov/env/advancemitigation/>.
- FWS. 2017. "National Wetlands Inventory. Wetlands Mapper." Accessed February 19, 2019. <https://www.fws.gov/wetlands/data/mapper.html>.
- San Francisco Estuary Institute. 2018. "California Aquatic Resource Inventory (CARI)." Accessed February 28, 2019. <https://www.sfei.org/cari#sthash.SnPvzyAU.dpbs>.

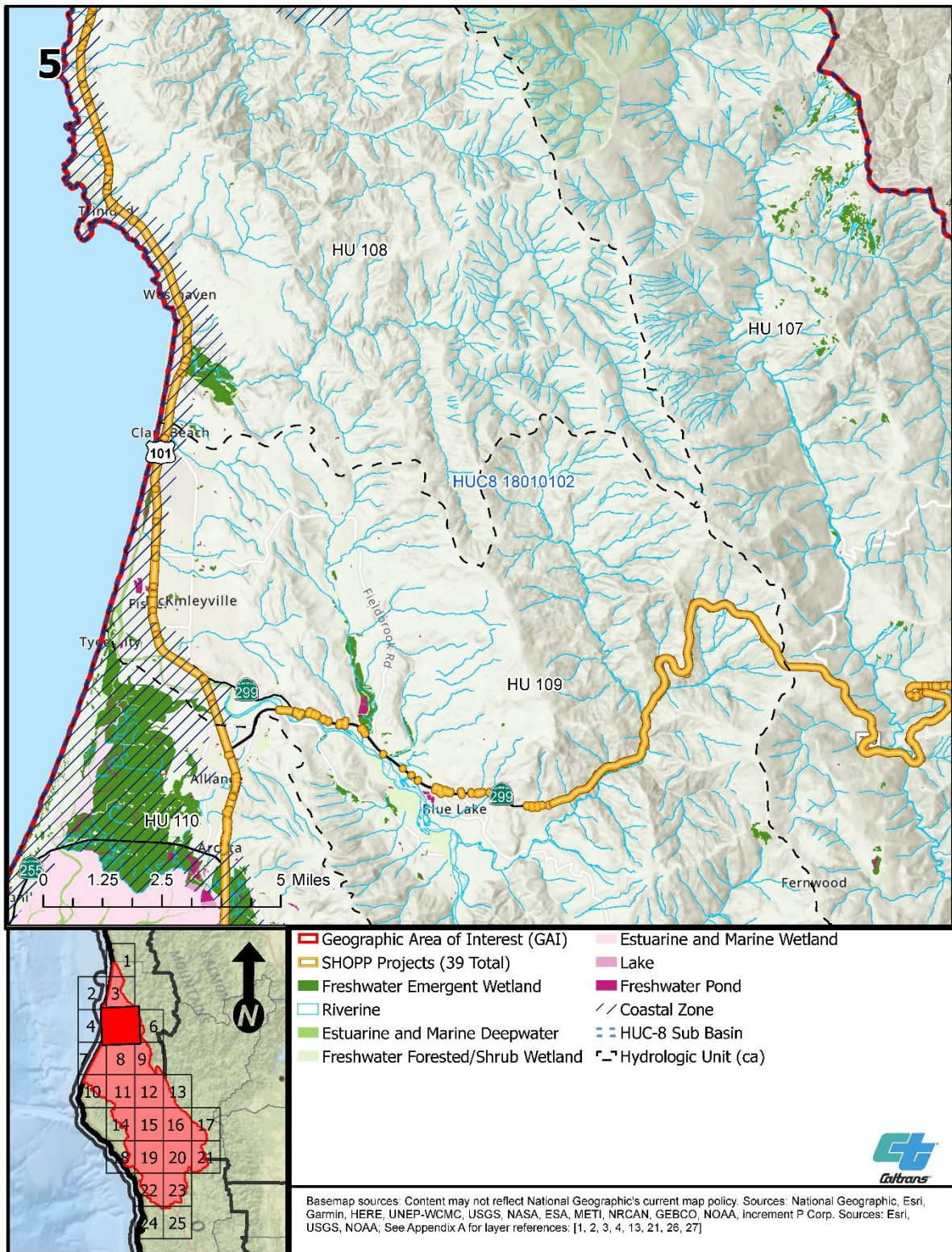


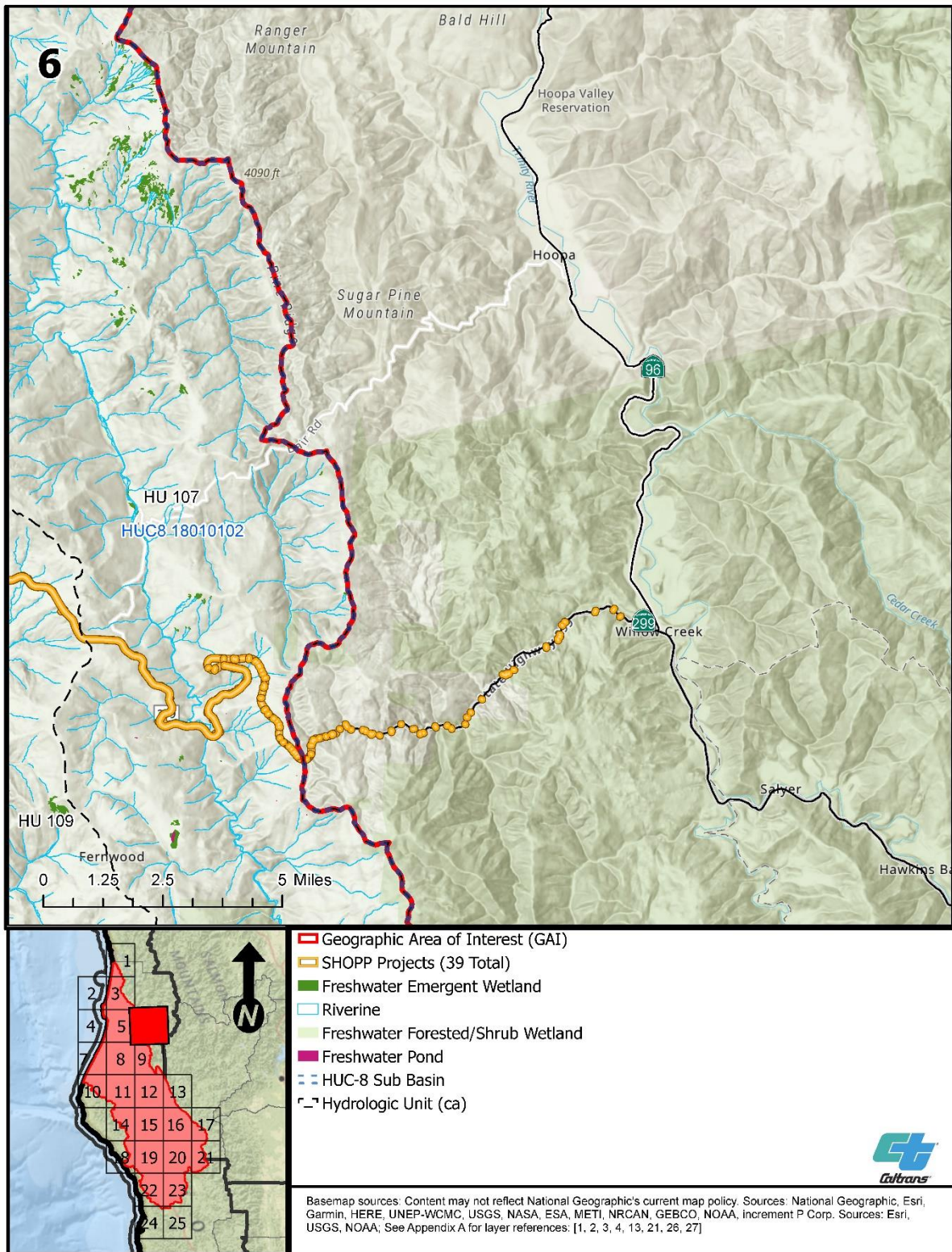


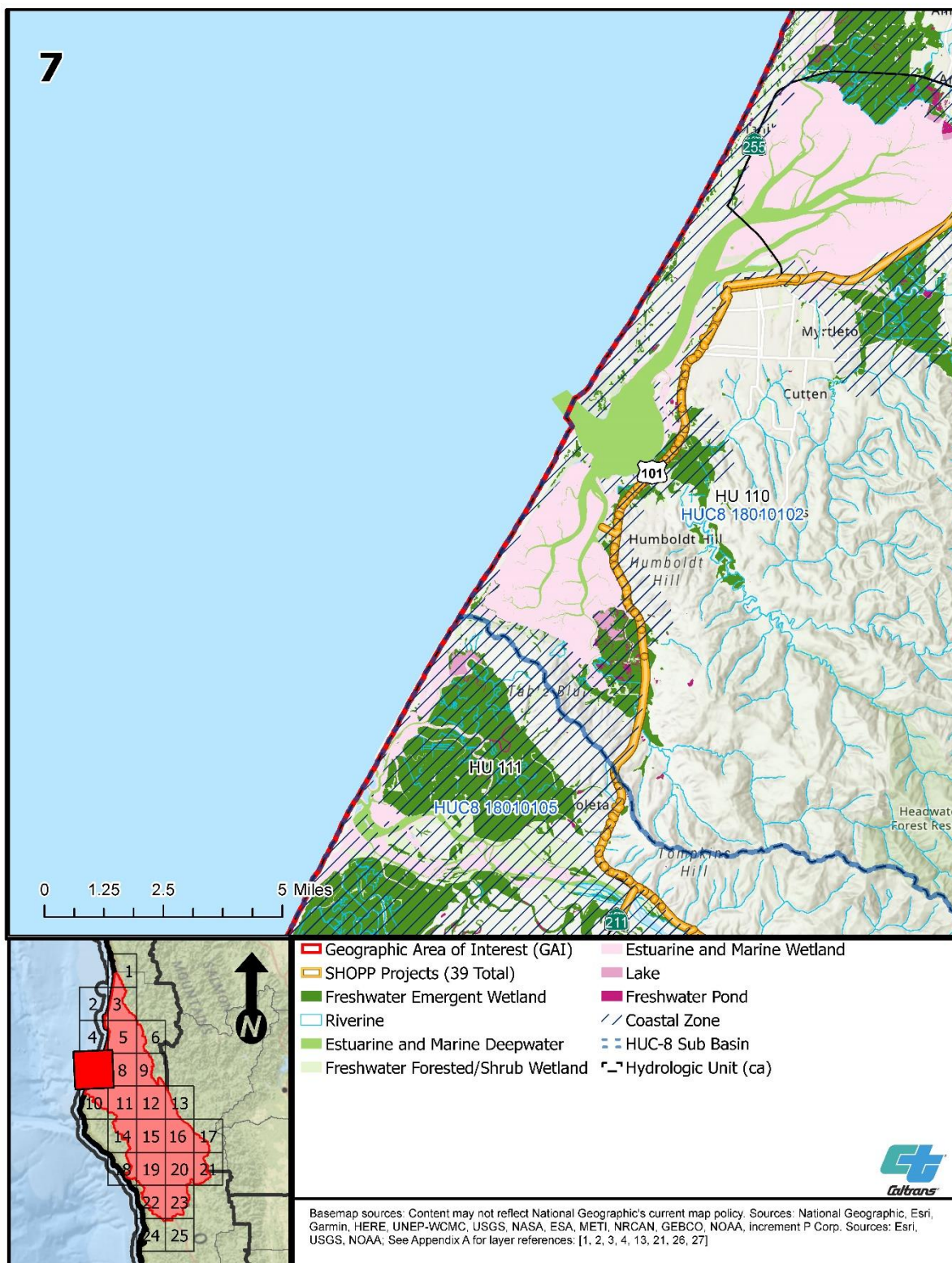


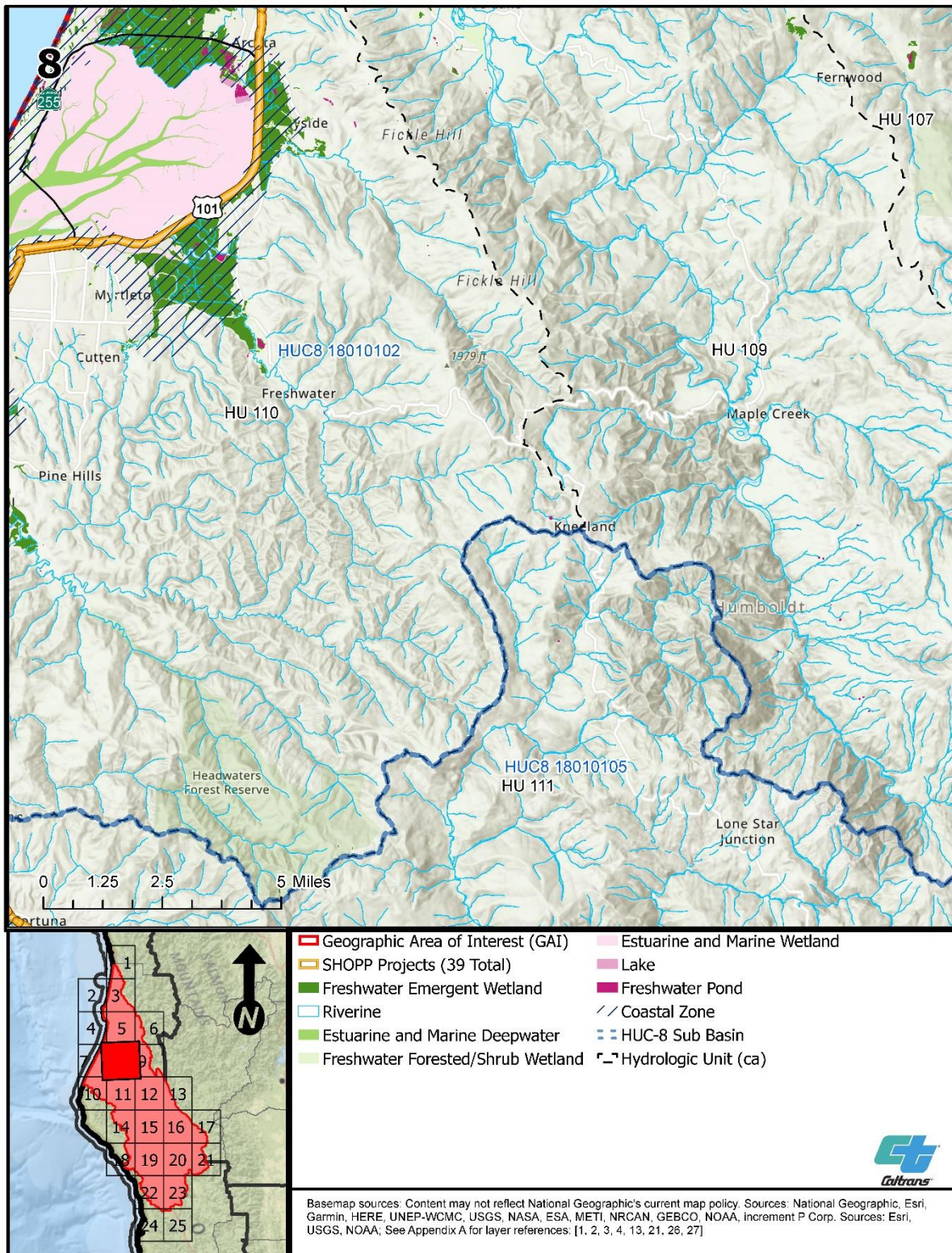


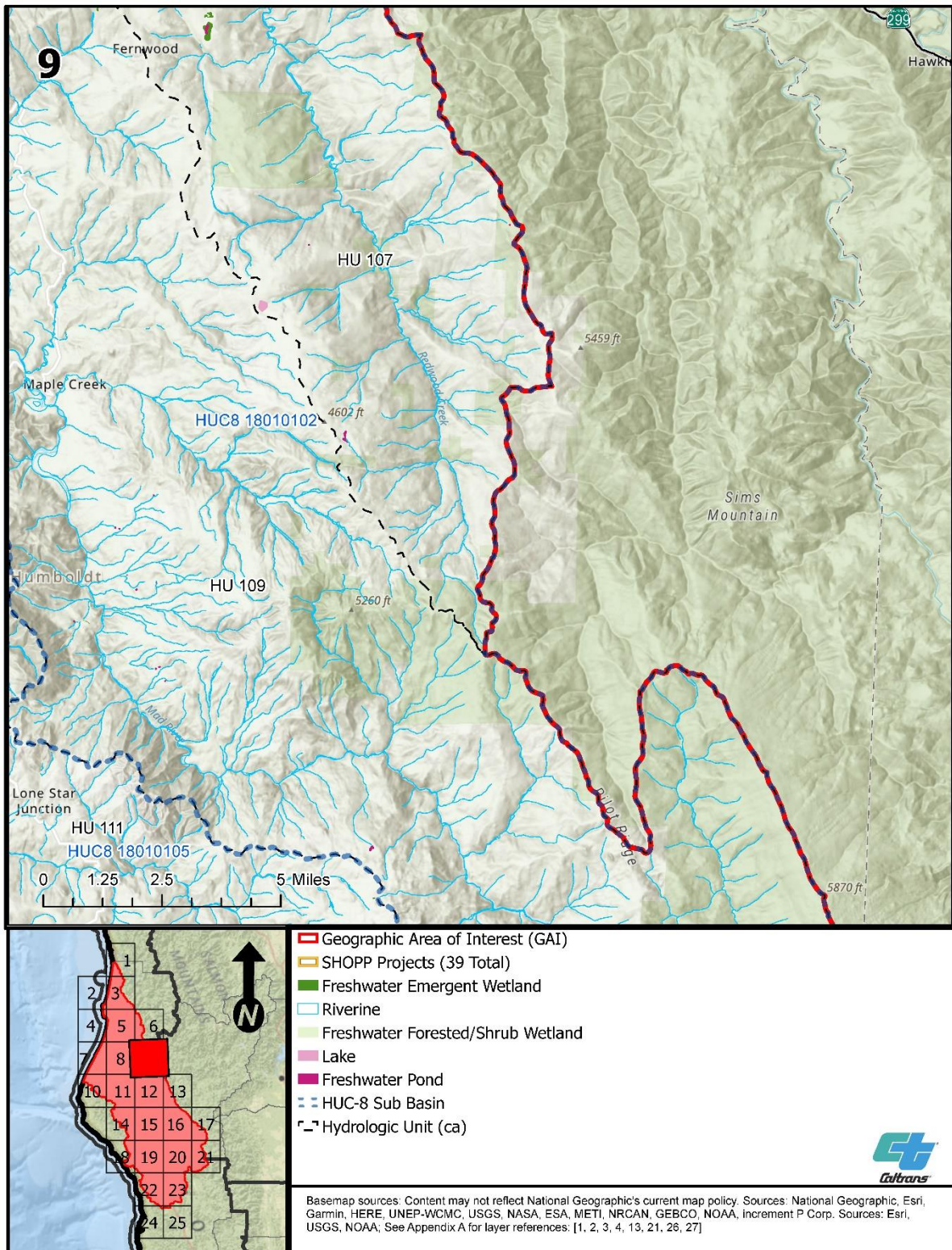


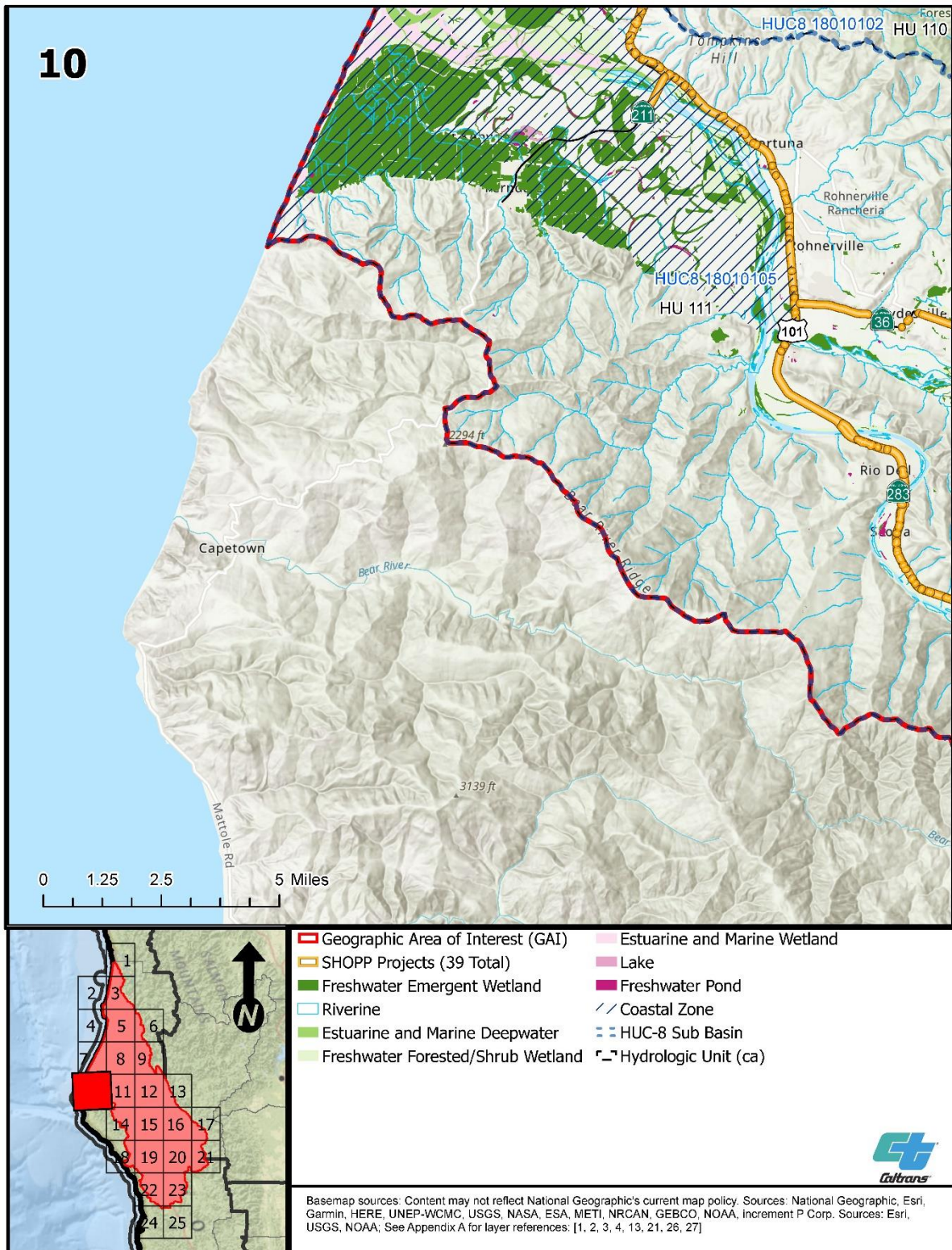


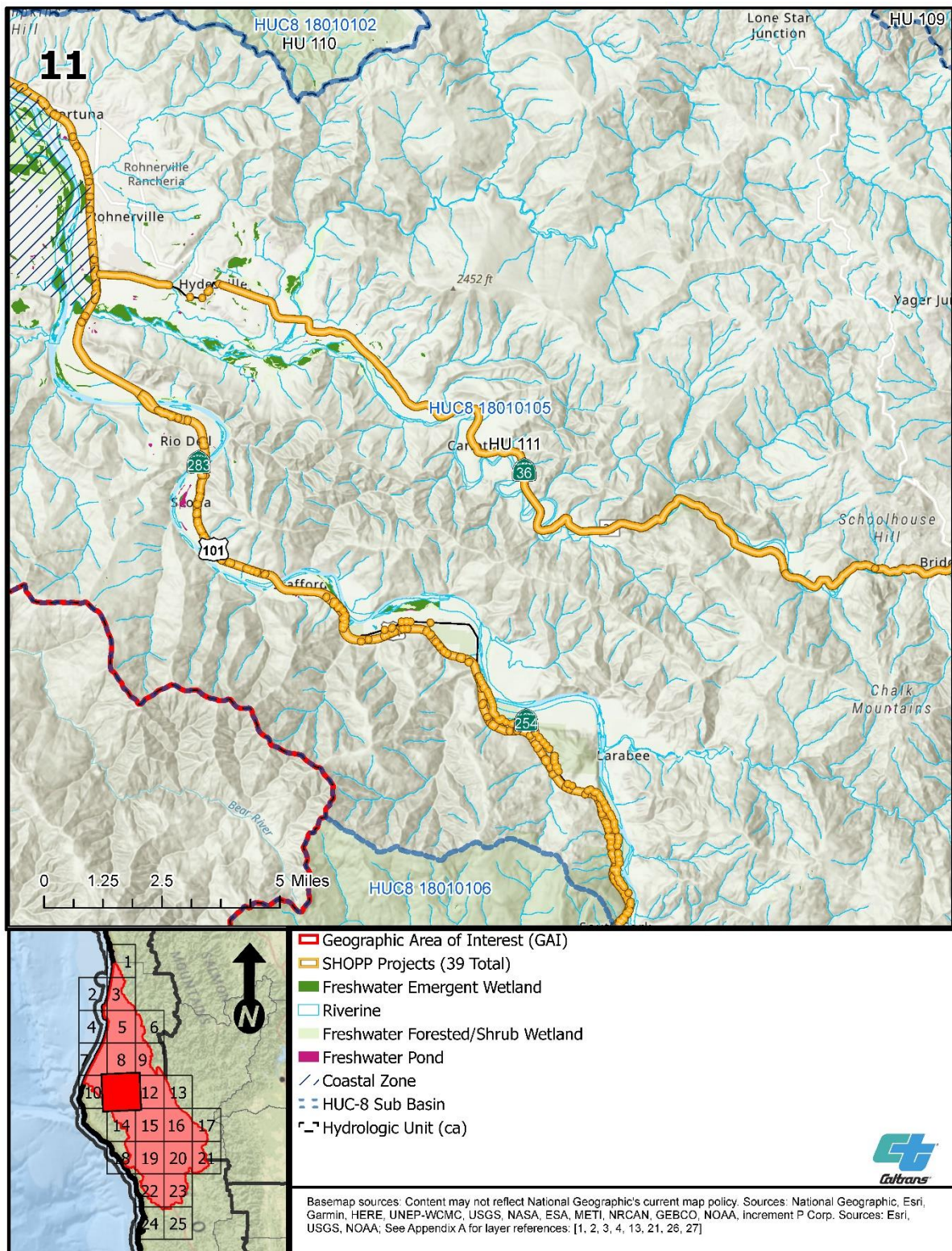


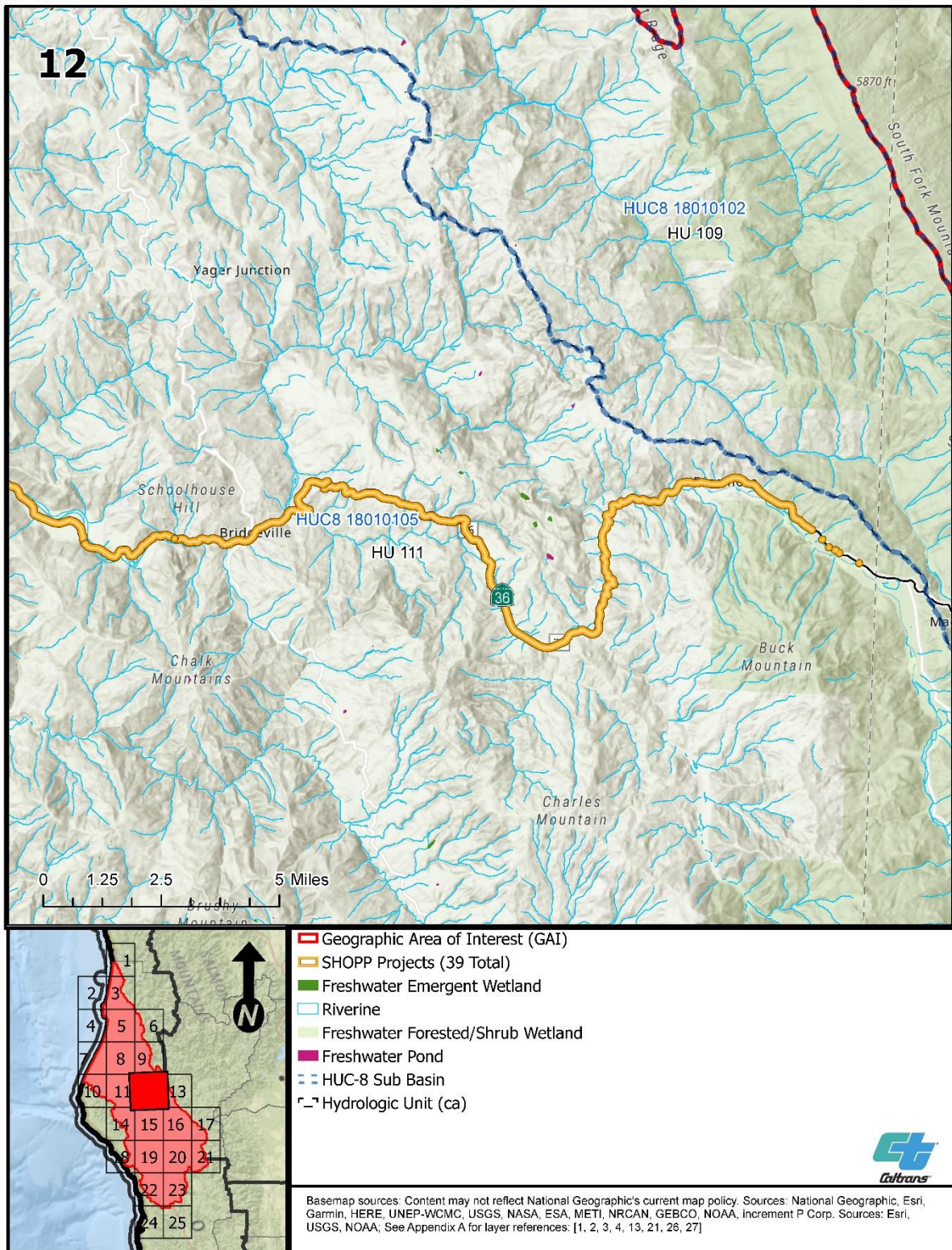


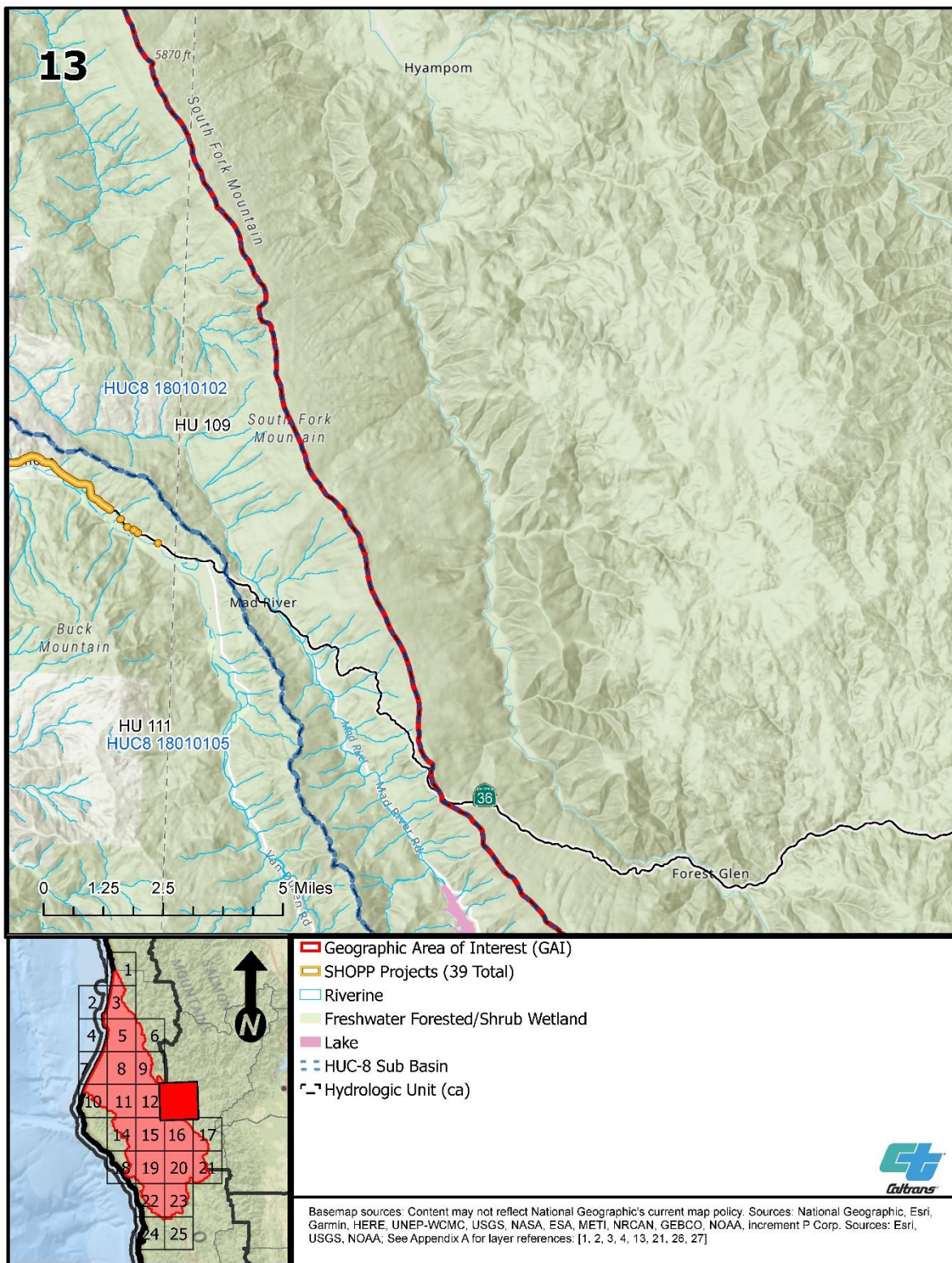


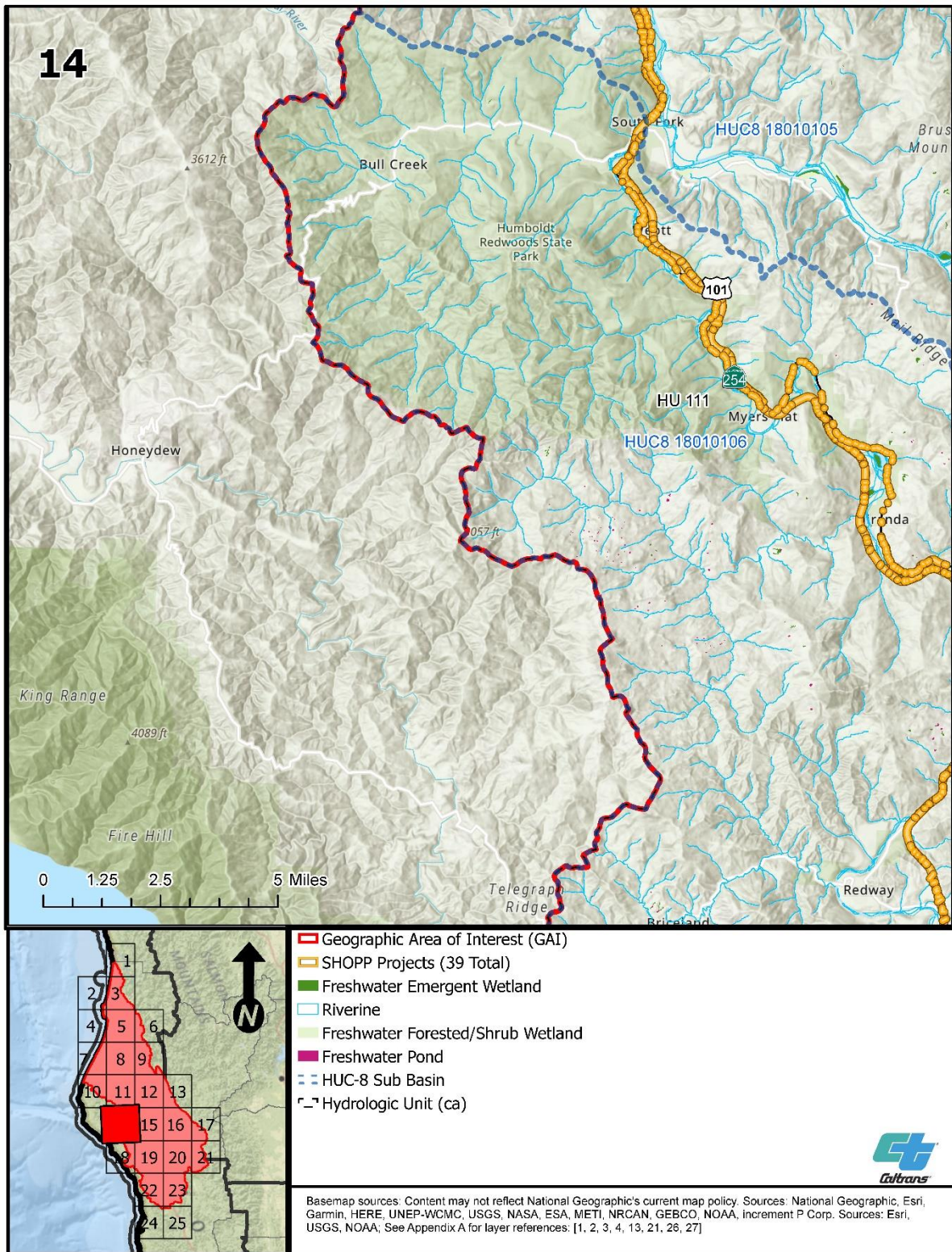


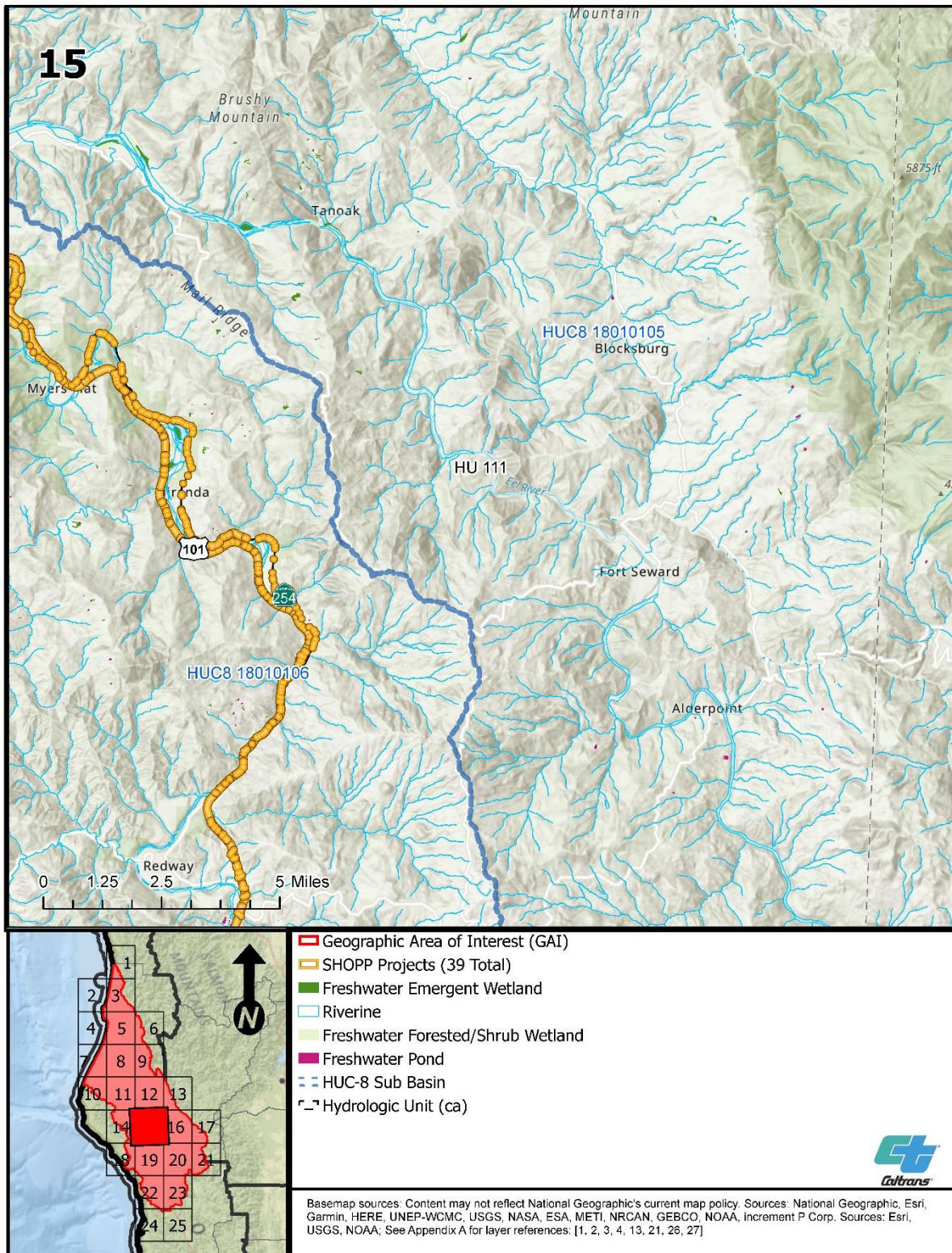


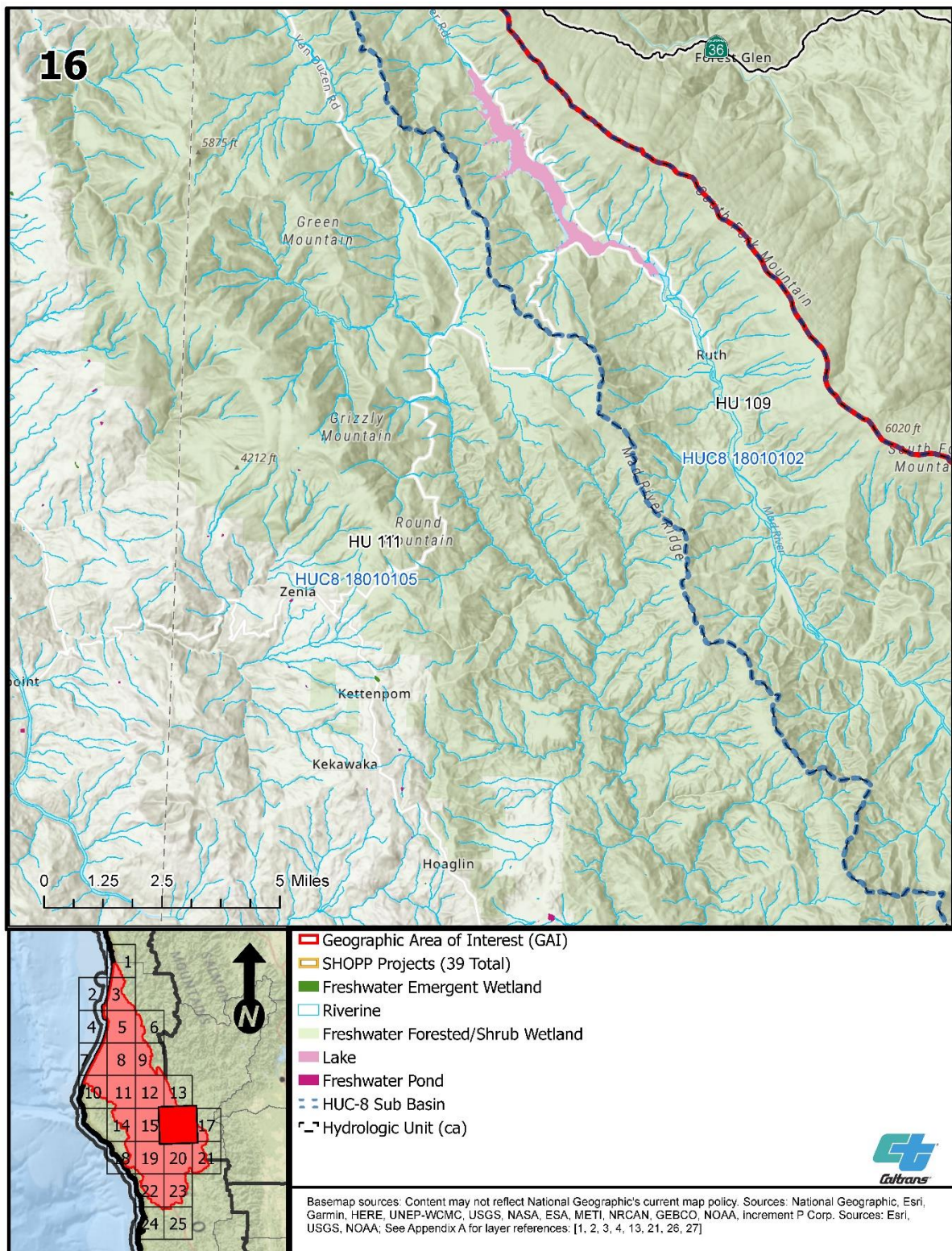






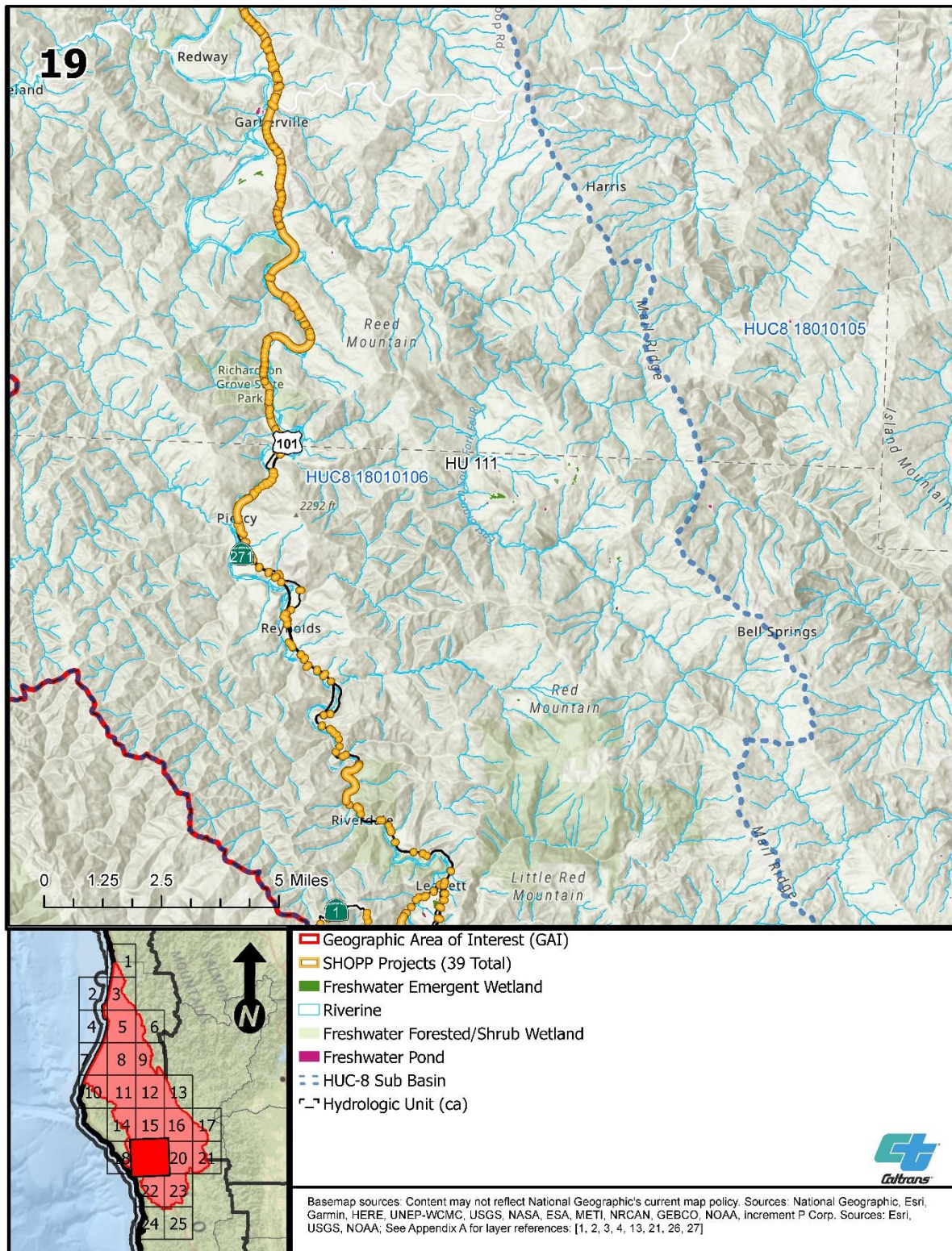


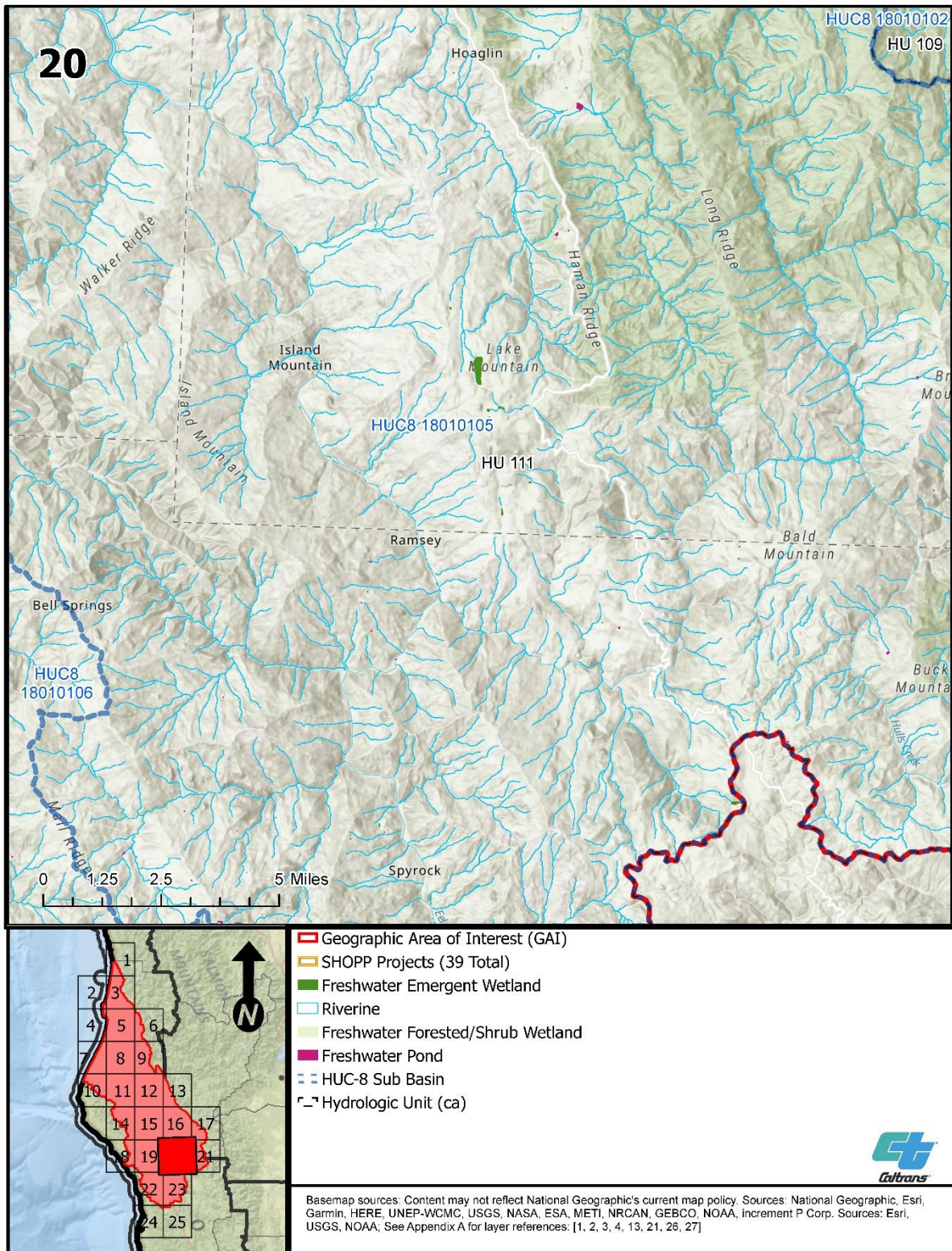


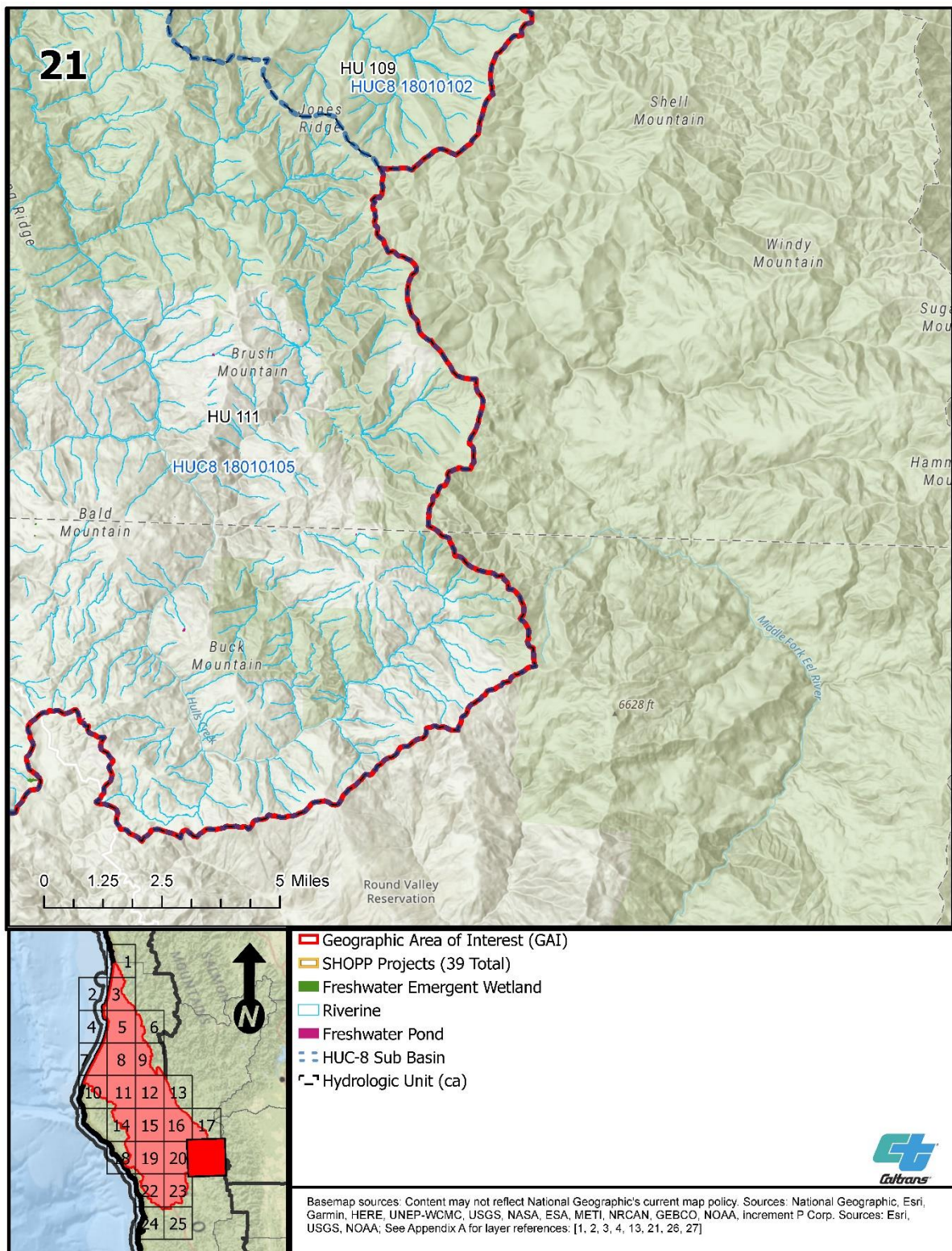




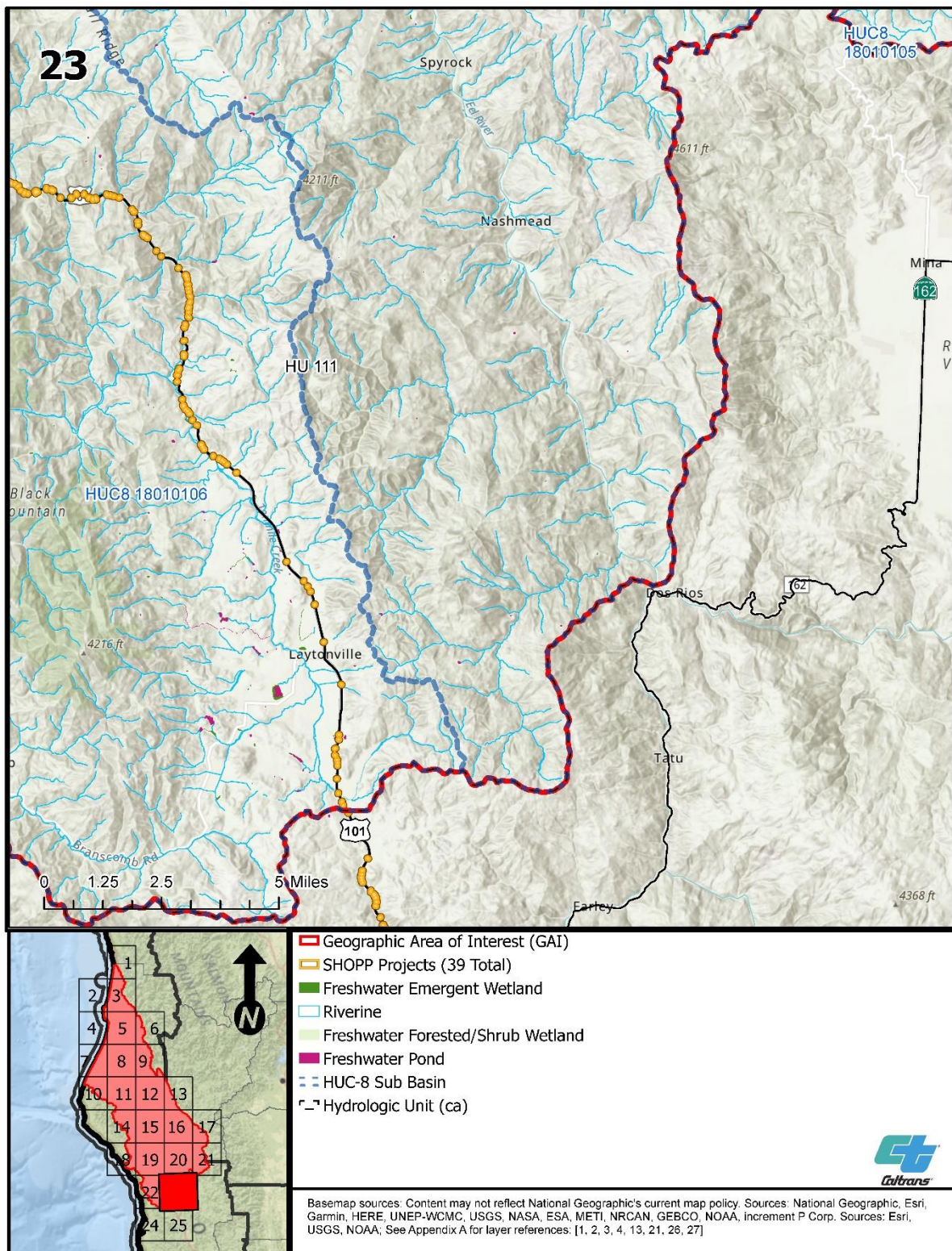


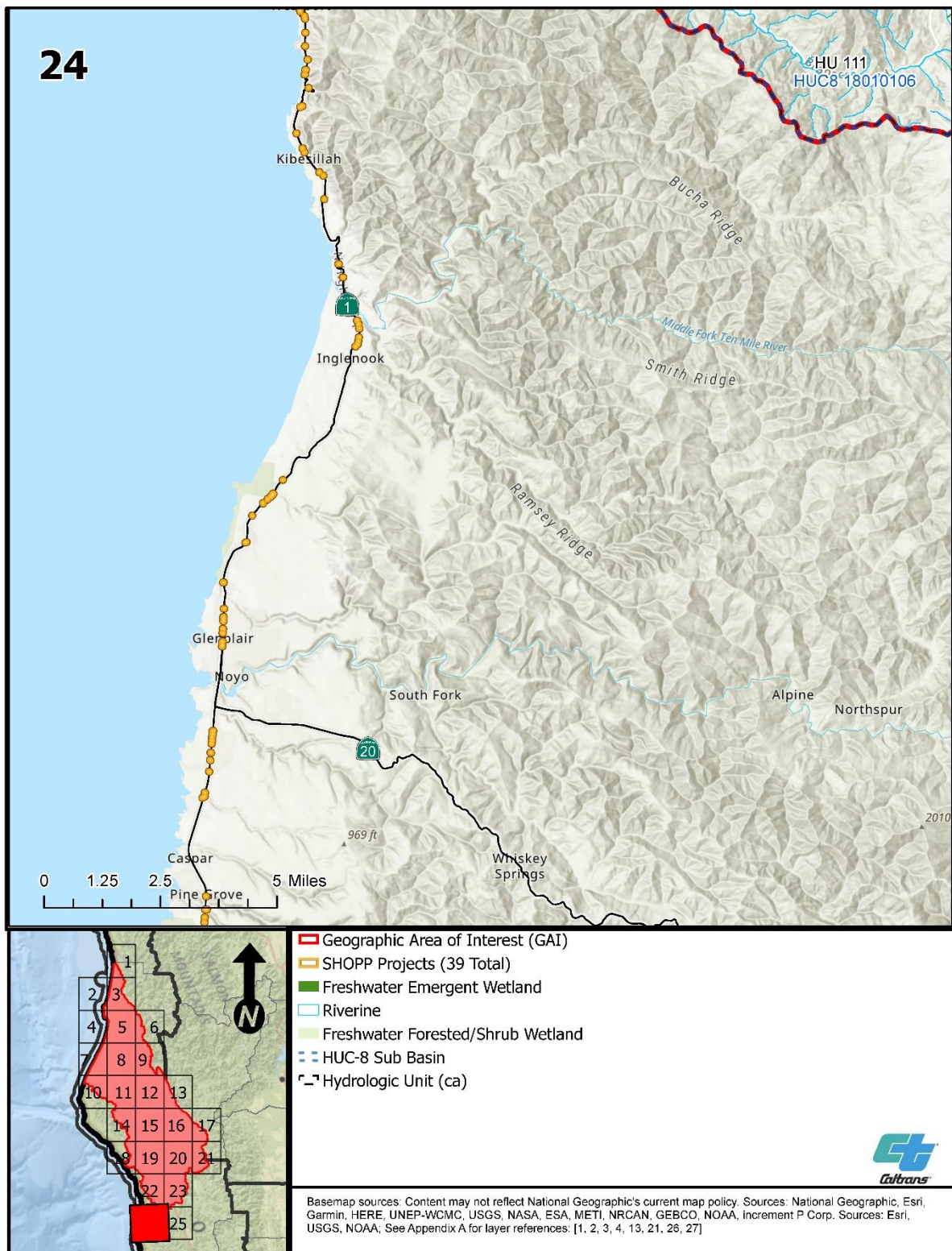


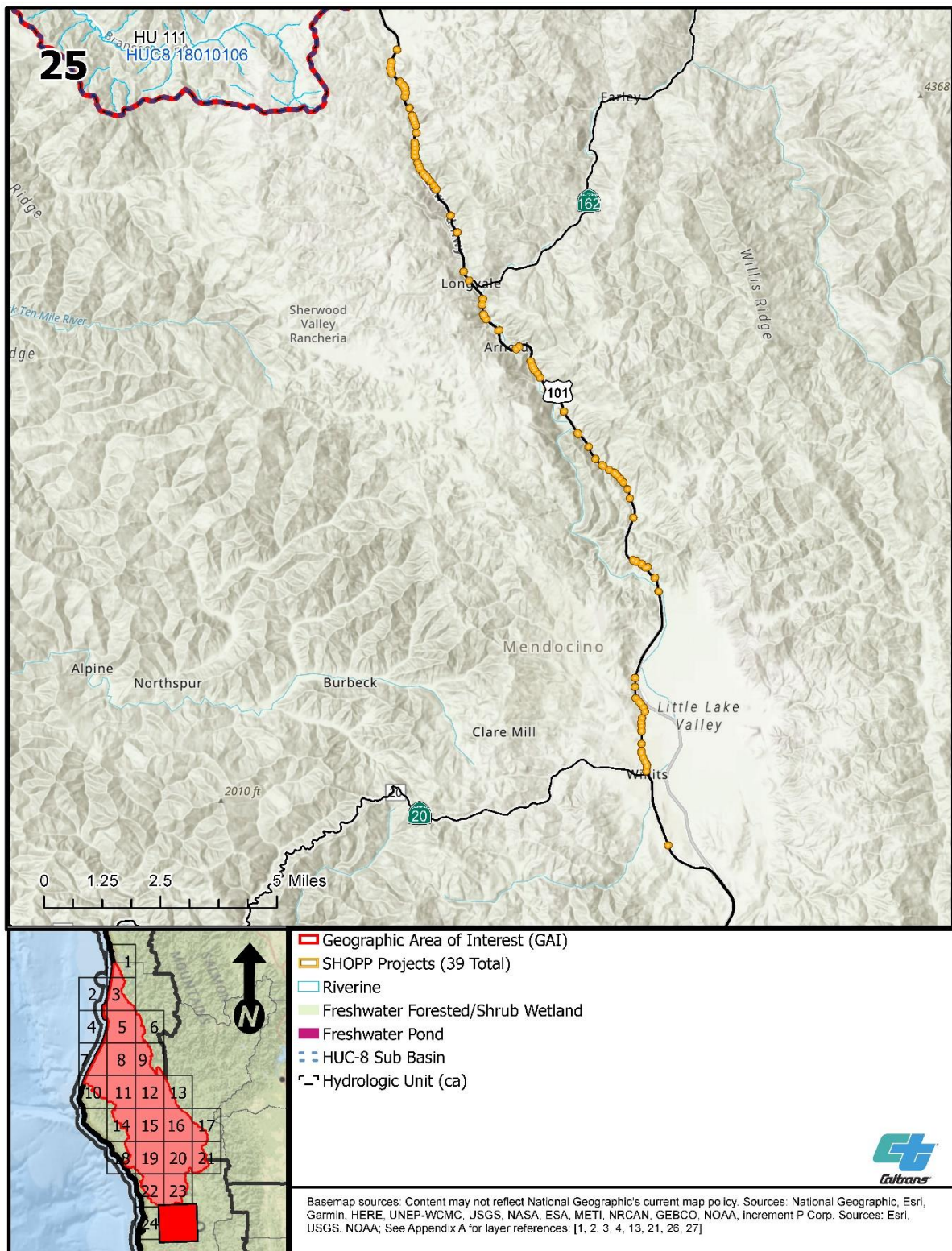












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