ADVANCE MITIGATION PROGRAM

Klamath Mountains Ecoregion Section Overlapping Caltrans District 2 Regional Advance Mitigation Needs Assessment

Appendices

Version 1.0

Establishing Caltrans' Need for Advance Mitigation for Caltrans District 2 and Caltrans District 1 for the Klamath Mountains Ecoregion Section forecast fiscal years 2021/2022 to 2030/2031

California Department of Transportation – District 2

February 2023

This page is intentionally left blank.

APPENDICES

This page is intentionally left blank.

APPENDIX A: GIS SOURCES

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

Table A-1. District 2 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	2021/2022 Q1	8/3/2022	Caltrans System Planning
3	Ecoregion Section (GAI)	USFS	1/26/2021	1/26/2021	https://data.fs.usda.gov/geodata/edw/datasets.php?xmlKeyword=Ecomap
4	National Watershed Boundary Dataset	USGS	9/26/2014	10/19/2018	https://www.usgs.gov/core-science-systems/ngp/national-hydrography
5	California Conservation Easements	California Protected Areas Database	12/1/2020	2/2/2021	http://www.calands.org/cced
6	California Protected Areas Holdings	California Protected Areas Database	2/10/2021	2/10/2021	http://www.calands.org/data
7	Tribal Land Boundaries	U.S. Bureau of Indian Affairs	5/16/2017	10/11/2018	https://hub.arcgis.com/items/2e915ef3df48422283e5b2c7d89dfcba
8	U.S. Military Installations	U.S. Census Bureau	12/1/2017	10/11/2018	https://www.census.gov/cgi-bin/geo/shapefiles/index.php
9	County Boundaries	U.S. Census Bureau	7/8/2016	10/11/2018	https://data.ca.gov/dataset/ca-geographic-boundaries
10	Farmland Mapping & Monitoring Program	California Department of Conservation	6/7/2016	4/27/2021	https://gis.conservation.ca.gov/portal/home/item.html?id=16689151f4d240d2a16232ea650a6c62
11	ACE Climate Resilience – ACE [ds2738]	CDFW	2/22/2018	10/17/2018	https://map.dfg.ca.gov/metadata/ds2738.html?5.66.18
12	Vegetation D2/D1 in Caltrans District 2 Geospatial Data for the Advance Mitigation Needs Assessment for the First Quarter of FY 2021/2022	SAMNA	1/1/2017	6/15/2022	http://www.dot.ca.gov/env/advancemitigation/

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
13	Waters/Wetlands D2/D1 in Caltrans District 2 Geospatial Data for the Advance Mitigation Needs Assessment for the Second Quarter of FY 2021/2022	SAMNA	1/1/2017	6/15/2022	http://www.dot.ca.gov/env/advancemitigation/
14	USFWS Critical Habitat	FWS	10/1/2018	12/1/2021	https://ecos.fws.gov/ecp/report/table/critical-habitat.html
15	Essential Connectivity Areas – CEHC	CDFW	10/1/2017	10/17/2018	https://map.dfg.ca.gov/metadata/ds0620.html?5.66.18
16	Natural Landscape Blocks – CEHC	CDFW	10/1/2017	10/17/2018	https://map.dfg.ca.gov/metadata/ds0621.html?5.66.18
17	Potential Riparian Connections – CEHC	CDFW	3/1/2010	10/17/2018	https://map.dfg.ca.gov/metadata/ds0622.html?5.66.18
18	Salmonid Essential Fish Habitats	NOAA Fisheries	1/1/2014	10/12/2021	https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-groundfish-and-salmon
19	National Flood Hazard Layer	Federal Emergency Management Agency	6/29/2018	9/25/2019	https://www.fema.gov/national-flood-hazard-layer-nfhl
20	CalWater Hydrologic Areas	California Department of Forestry and Fire Protection	11/1/2016	10/19/2018	https://frap.fire.ca.gov/mapping/gis-data/
21	Terrestrial Connectivity – ACE [ds2734]	CDFW	8/28/2019	9/25/2019	https://map.dfg.ca.gov/metadata/ds2734.html?5.80.28l
22	SWAP Terrestrial Targets – 2015	CDFW	2/1/2018	10/29/2018	https://map.dfg.ca.gov/metadata/ds1966.html?5.66.18
23	Aquatic Biodiversity Summary – ACE [ds2768]	CDFW	2/22/2018	7/3/2019	https://map.dfg.ca.gov/metadata/ds2768.html?5.80.28l
24	Calfish PAD (Passage Assessment Database)	Calfish	10/3/2019	12/15/2019	https://map.dfg.ca.gov/metadata/ds0069.html?5.84.18vo

ID	GIS Layer	Source Agency	Source Date	Download Date	Website
25	Terrestrial Biodiversity Summary – ACE [ds2739]	CDFW	2/24/2018	7/3/2019	https://map.dfg.ca.gov/metadata/ds2739.html?5.80.28l
26	Corps Regulatory In-Lieu Fee & Bank Information Tracking System	Mitigation Service Banks	Not available	6/7/2021	https://ribits.usace.army.mil/ribits_apex/f?p=107:2
27	CDFW Approved Mitigation Service Areas	Mitigation Service Banks	7/23/2018	1/21/2021	https://map.dfg.ca.gov/metadata/ds2782.html?5.76.22
28	National Wild and Scenic Rivers	National Wild and Scenic Rivers System	3/2/2016	8/4/2021	https://www.rivers.gov/mapping-gis.php
29	National Hydrology Dataset Plus	EPA	3/13/2019	4/29/2021	https://www.epa.gov/waterdata/get-nhdplus-national-hydrography-dataset-plus-data
30	303(d) List of Impaired Waterbodies	SWRCB	6/9/2021	5/13/2022	https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html
31	Zipcodes	U.S. Postal Service	2/11/2020	3/11/2020	https://www.arcgis.com/home/item.html?id=8d2012a2016e484dafaac0451f9aea24
32	Fire Hazard Severity Zones in State Responsibility Area	California Department of Forestry and Fire Protection	11/1/2007	6/1/2022	https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/
33	Klamath Basin Ecological Connectivity for Pacific Fisher – Habitat Cores	Data Basin	7/10/2018	1/5/2023	https://databasin.org/galleries/b094c161429d4b1791c39dd6fddca12d/
33	Klamath Basin Ecological Connectivity for Pacific Fisher – Least-cost Corridors	Data Basin	5/16/2019	1/5/2023	https://databasin.org/galleries/b094c161429d4b1791c39dd6fddca12d/

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

To identify the list of SHOPP transportation 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. Nevertheless, for the purpose of the AMP's advance mitigation planning, it is the best available information.

The SHOPP Ten-Year Book includes 41 SHOPP transportation projects in the GAI that are currently in the planning and conceptual phases (Table B-1). Each planned transportation project, 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. Many of the transportation projects would address multiple needs; most of the planned activities consist of replacing and/or installing culverts on the SHS.

To identify the list of STIP-eligible transportation projects planned for the GAI, Caltrans consulted its Advance Planning functional unit, internally, and its local and regional transportation agency partners, externally. No STIP-eligible transportation projects were identified for the GAI during the planning period.

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
22373	Smith	Klamath Mountains	2023/24	1	Del Norte	199	24.11	24.267	Safety – SI
23294	Smith	Klamath Mountains	2028/29	1	Del Norte	199	33.3	33.42	Roadside
11281	Lower Klamath	Klamath Mountains	2021/22	1	Humboldt	96	28.07	29.92	Bridge
23127	Lower Klamath	Klamath Mountains	2030/31	1	Humboldt	96	0	R40.0	Protective betterments
23127	Trinity	Klamath Mountains	2030/31	2	Humboldt	96	0	R40.0	Protective betterments
11281	Lower Klamath	Klamath Mountains	2021/22	1	Humboldt	169	27.57	27.57	Bridge
17073	Trinity	Klamath Mountains	2021/22	1	Humboldt	299	R1.9	37.8	Drainage
21375	Trinity	Klamath Mountains	2021/22	1	Humboldt	299	31.4	33.2	Safety – SI
21813	McCloud	Klamath Mountains	2028/29	2	Plumas	36	R12.8	R12.8	Roadside
21813	Sacramento Headwaters	Klamath Mountains	2028/29	2	Plumas	36	R12.8	R12.8	Roadside
21813	McCloud	Klamath Mountains	2028/29	2	Plumas	70	49.8	49.8	Roadside
21813	McCloud	Klamath Mountains	2028/29	2	Plumas	70	R79.2	R79.2	Roadside
21813	Sacramento Headwaters	Klamath Mountains	2028/29	2	Plumas	70	49.8	49.8	Roadside
21813	Sacramento Headwaters	Klamath Mountains	2028/29	2	Plumas	70	R79.2	R79.2	Roadside
19223	Sacramento Headwaters	Klamath Mountains	2025/26	2	Shasta	5	58	67.019	Pavement
21813	McCloud	Klamath Mountains	2028/29	2	Shasta	5	R31.1R	R31.1R	Roadside

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route	Begin Mile	End Mile	Activity
21813	McCloud	Klamath Mountains	2028/29	2	Shasta	5	R43.2	R43.2	Roadside
21813	Sacramento Headwaters	Klamath Mountains	2028/29	2	Shasta	5	R31.1R	R31.1R	Roadside
21813	Sacramento Headwaters	Klamath Mountains	2028/29	2	Shasta	5	R43.2	R43.2	Roadside
21981	Clear Creek-Sacramento River	Klamath Mountains	2025/26	2	Shasta	5	R20.3	R27.9	Drainage
21981	Lower Pit	Klamath Mountains	2025/26	2	Shasta	5	R20.3	R27.9	Drainage
21982	Lower Pit	Klamath Mountains	2029/30	2	Shasta	5	R29.0R	R43.3	Drainage
21982	McCloud	Klamath Mountains	2029/30	2	Shasta	5	R29.0R	R43.3	Drainage
21982	Sacramento Headwaters	Klamath Mountains	2029/30	2	Shasta	5	R29.0R	R43.3	Drainage
22995	Sacramento Headwaters	Klamath Mountains	2026/27	2	Shasta	5	61.75	61.75	Bridge – health
23299	Sacramento Headwaters	Klamath Mountains	2027/28	2	Shasta	5	56.7	66.5	Drainage
21813	McCloud	Klamath Mountains	2028/29	2	Shasta	44	34.7	34.7	Roadside
21813	Sacramento Headwaters	Klamath Mountains	2028/29	2	Shasta	44	34.7	34.7	Roadside
21390	Cow Creek	Klamath Mountains	2021/22	2	Shasta	299	44.3	44.9	Safety – SI
21700	Lower Pit	Klamath Mountains	2025/26	2	Shasta	299	57.5	58.7	Safety – SI
21980	Cow Creek	Klamath Mountains	2025/26	2	Shasta	299	41.1	55.3	Drainage
21980	Lower Pit	Klamath Mountains	2025/26	2	Shasta	299	41.1	55.3	Drainage

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route	Begin Mile	End Mile	Activity
22996	Clear Creek-Sacramento River	Klamath Mountains	2027/28	2	Shasta	299	14.17	14.17	Bridge – health
15879	Shasta	Klamath Mountains	2021/22	2	Siskiyou	3	R46.8	R48.0	Pavement
19974	Shasta	Klamath Mountains	2025/26	2	Siskiyou	3	R48.6	54.187	Pavement
22010	Scott	Klamath Mountains	2029/30	2	Siskiyou	3	38.39	R46.79	Drainage
22010	Shasta	Klamath Mountains	2029/30	2	Siskiyou	3	38.39	R46.79	Drainage
14182	Sacramento Headwaters	Klamath Mountains	2021/22	2	Siskiyou	5	2.5	2.9	Bridge – health
16682	Sacramento Headwaters	Klamath Mountains	2021/22	2	Siskiyou	5	2.7	R15.9	Pavement
19223	Sacramento Headwaters	Klamath Mountains	2025/26	2	Siskiyou	5	0	2.7	Pavement
20044	Shasta	Klamath Mountains	2029/30	2	Siskiyou	5	R38.6	R51.2	Pavement
22159	Upper Klamath	Klamath Mountains	2026/27	2	Siskiyou	5	R58.2L	R69.293	Pavement
16613	Scott	Klamath Mountains	2026/27	2	Siskiyou	96	71.23	71.23	Bridge – health
16613	Upper Klamath	Klamath Mountains	2026/27	2	Siskiyou	96	71.23	71.23	Bridge – health
16639	Upper Klamath	Klamath Mountains	2023/24	2	Siskiyou	96	76.8	78	Bridge
17233	Lower Klamath	Klamath Mountains	2023/24	2	Siskiyou	96	43.5	57	Bridge
17233	Upper Klamath	Klamath Mountains	2023/24	2	Siskiyou	96	43.5	57	Bridge

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route	Begin Mile	End Mile	Activity
19219	Lower Klamath	Klamath Mountains	2025/26	2	Siskiyou	96	R0.0	R16.01	Pavement
19219	Salmon	Klamath Mountains	2025/26	2	Siskiyou	96	R0.0	R16.01	Pavement
21005	Upper Klamath	Klamath Mountains	2022/23	2	Siskiyou	96	60.8	93.8	Roadside
23304	Lower Klamath	Klamath Mountains	2029/30	2	Siskiyou	96	R4.0	105	Drainage
23304	Upper Klamath	Klamath Mountains	2029/30	2	Siskiyou	96	R4.0	105	Drainage
21813	McCloud	Klamath Mountains	2028/29	2	Tehama	5	33.3	33.3	Roadside
21813	McCloud	Klamath Mountains	2028/29	2	Tehama	5	34.4	34.4	Roadside
21813	Sacramento Headwaters	Klamath Mountains	2028/29	2	Tehama	5	33.3	33.3	Roadside
21813	Sacramento Headwaters	Klamath Mountains	2028/29	2	Tehama	5	34.4	34.4	Roadside
16672	South Fork Trinity	Klamath Mountains	2021/22	2	Trinity	3	0.6	0.6	Bridge – health
19983	Trinity	Klamath Mountains	2024/25	2	Trinity	3	67.7	T85.06	Pavement
19984	South Fork Trinity	Klamath Mountains	2027/28	2	Trinity	3	5	11	Pavement
21634	Trinity	Klamath Mountains	2027/28	2	Trinity	3	32.6	32.6	Drainage
16687	Trinity	Klamath Mountains	2021/22	2	Trinity	299	1.6	45.2	Drainage
16798	Trinity	Klamath Mountains	2021/22	2	Trinity	299	64.7	71.7	Sustainability/ Climate change
19049	Trinity	Klamath Mountains	2023/24	2	Trinity	299	15	25.7	Pavement
19845	Trinity	Klamath Mountains	2025/26	2	Trinity	299	8.3	15	Pavement

ID Number	HUC-8	Ecoregion Section	Advertised Year	Caltrans District	County	Route	Begin Mile	End Mile	Activity
19969	Trinity	Klamath Mountains	2025/26	2	Trinity	299	49	72	Drainage
21634	Trinity	Klamath Mountains	2027/28	2	Trinity	299	51.41	51.41	Drainage
21970	Trinity	Klamath Mountains	2027/28	2	Trinity	299	6.33	6.33	Bridge – health
23004	Trinity	Klamath Mountains	2027/28	2	Trinity	299	49.65	51.22	Drainage
23119	Trinity	Klamath Mountains	2028/29	2	Trinity	299	29.4	36.9	Pavement

Source: Caltrans 2021
Notes: L = left, R = right

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 2021a, 2021b; CDFW 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 2-2 in the main text indicates the acreages of each habitat type that are mapped in the Klamath Mountains Ecoregion Section.

A key map, provided after the list of habitat types, references mapbook pages, including zoomed-in views of locations in the GAI and mapped land cover types (page C-3). These 41 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 aspen, blue oak-foothill pine, blue oak woodland, closed-cone pine-cypress, coastal oak woodland, Douglas-fir, eastside pine, Jeffrey pine, juniper, Klamath mixed conifer, lodgepole pine, montane hardwood, montane hardwood-conifer, montane riparian, ponderosa pine, red fir, redwood, Sierran mixed conifer, subalpine conifer, valley foothill riparian, valley oak woodland, and white fir.

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, bitterbrush, chamise-redshank chaparral, coastal scrub, low sage, mixed chaparral, montane chaparral, and sagebrush.

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, and wet meadow.

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

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

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.

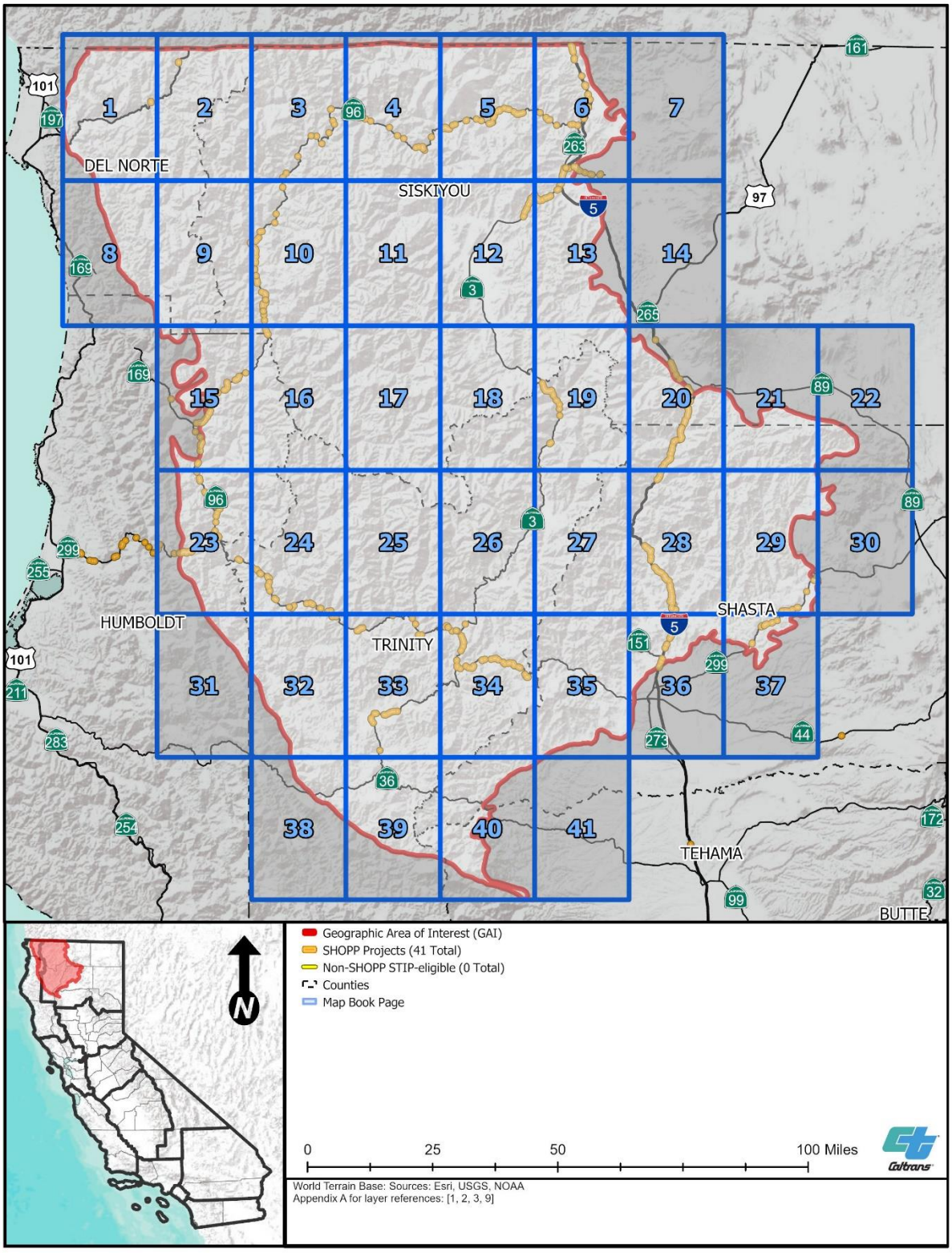
References

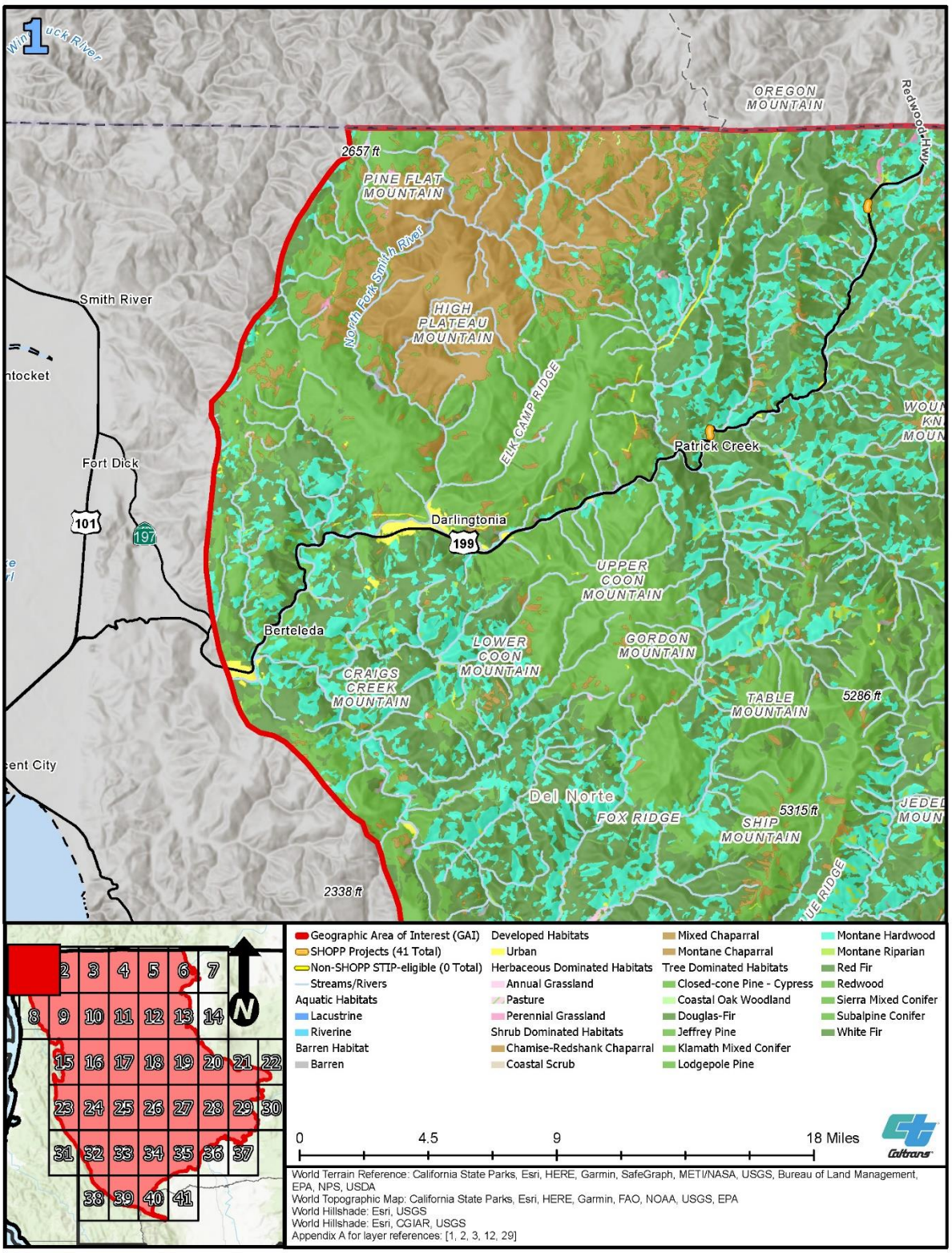
Caltrans (California Department of Transportation). 2021a. “Vegetation_ D2/D1 in Caltrans District 2 Geospatial Data for the Advance Mitigation Needs Assessment for the First Quarter of FY 2021/2022” (data file). Accessed June 15, 2022. http://www.dot.ca.gov/env/advancemitigation/.

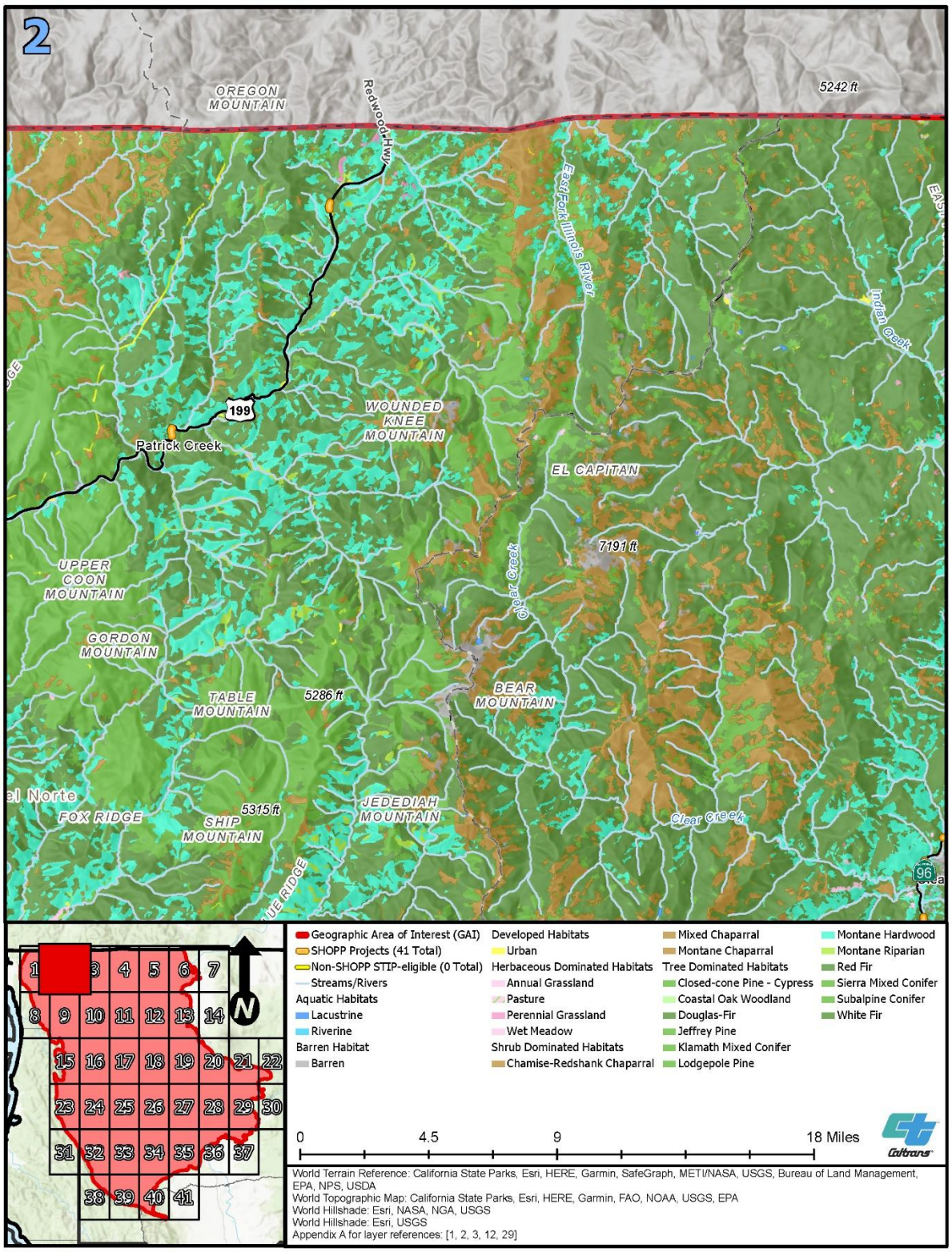
———. 2021b. *Statewide Advance Mitigation Needs Assessment Report*. State Highway Operation and Protection Program Ten-Year Project Book Second Quarter 2019/2020 Fiscal Year. April. Sacramento, California.

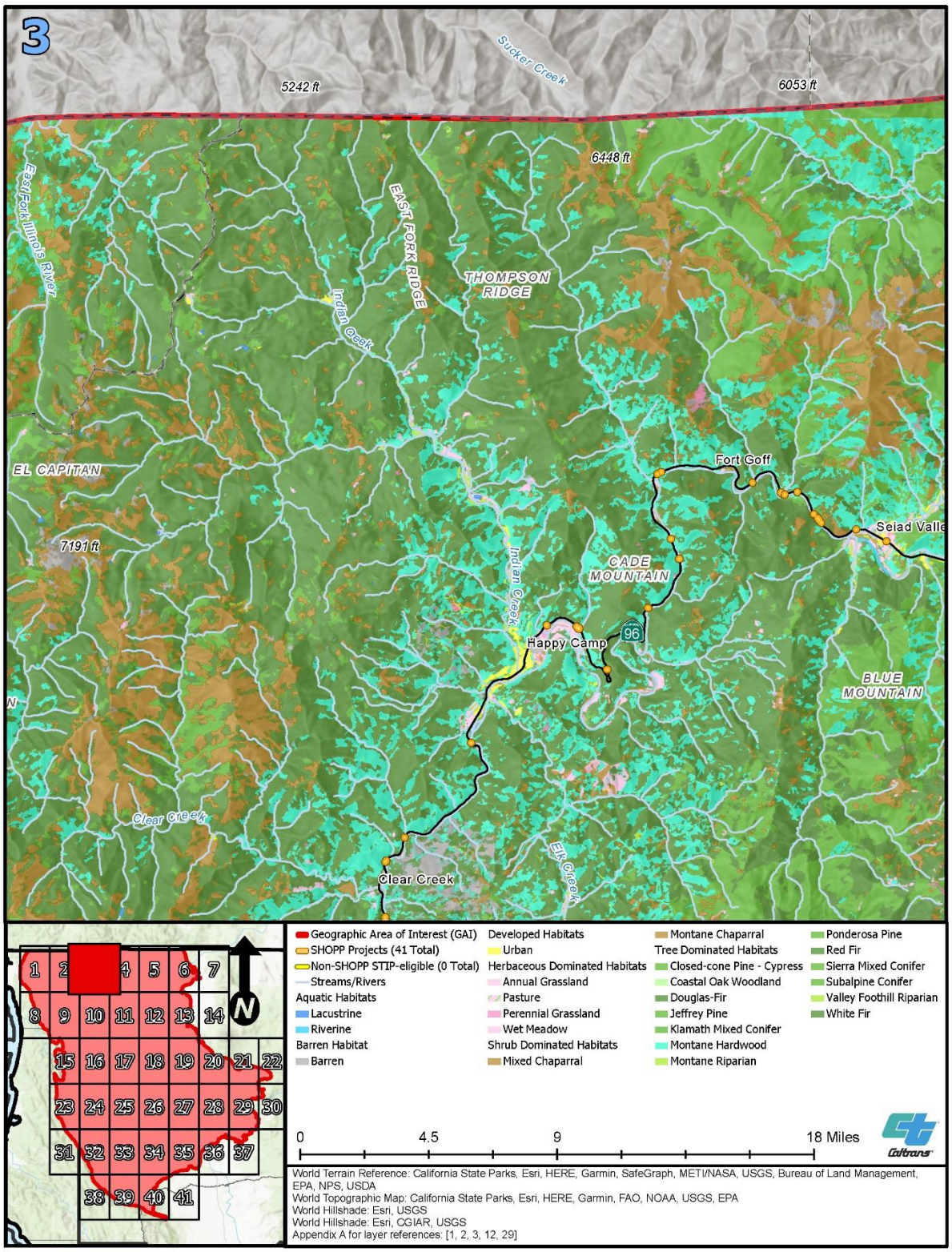
CDFW (California Department of Fish and Wildlife). 2019. *California Wildlife Habitat Relationships (CWHR) System*. Supported by the California Interagency Wildlife Task Group and maintained by the CDFW. Database Version 9.0.

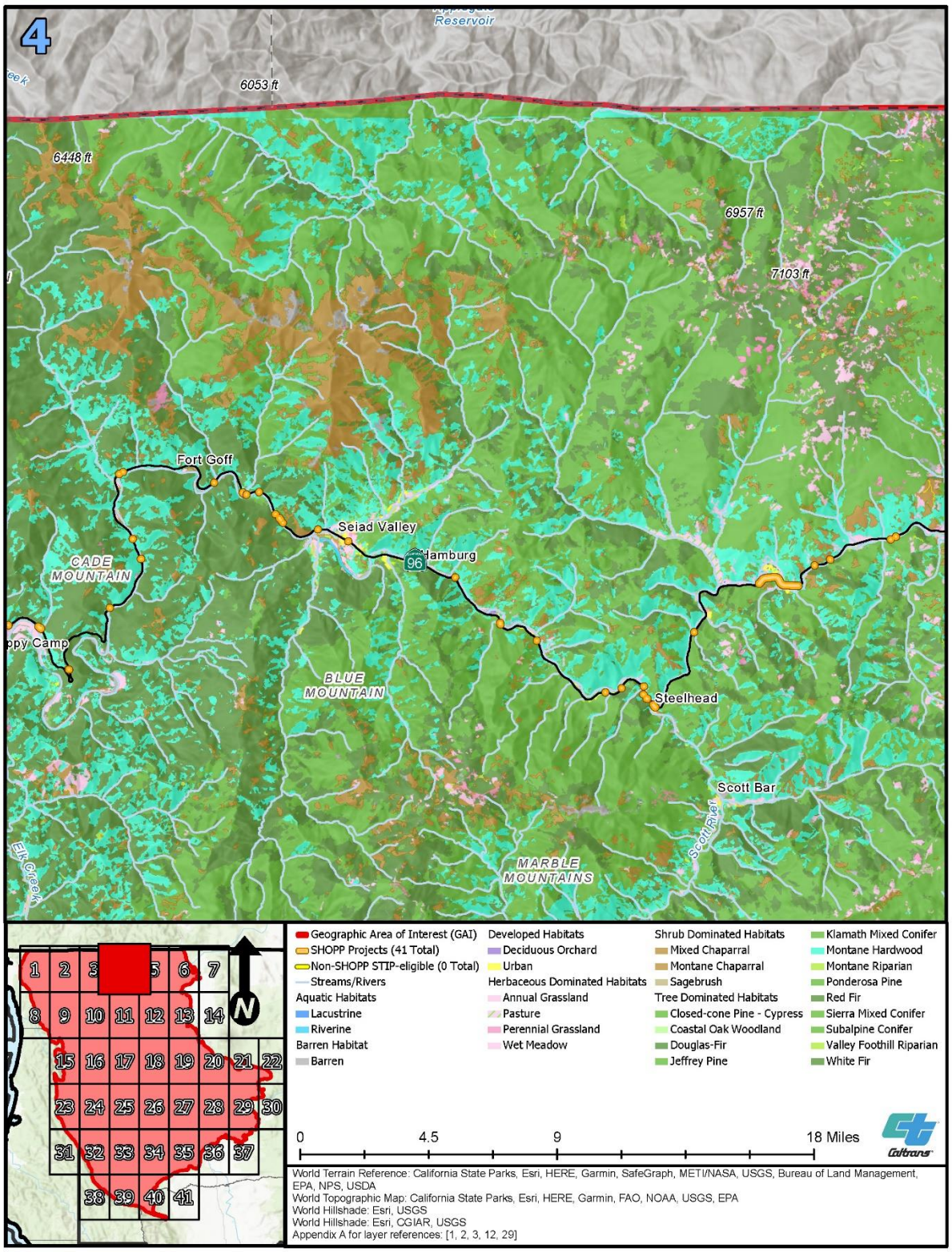
Mayer, Kenneth E., and William F. Laudenslayer, Jr., eds. 1988. “A Guide to Wildlife Habitats of California.” State of California, Resources Agency, Department of Fish and Game. Sacramento, California. Including Revisions and Updates. Accessed August 2, 2021. https://www.wildlife.ca.gov/Data/CWHR/Wildlife-Habitats.

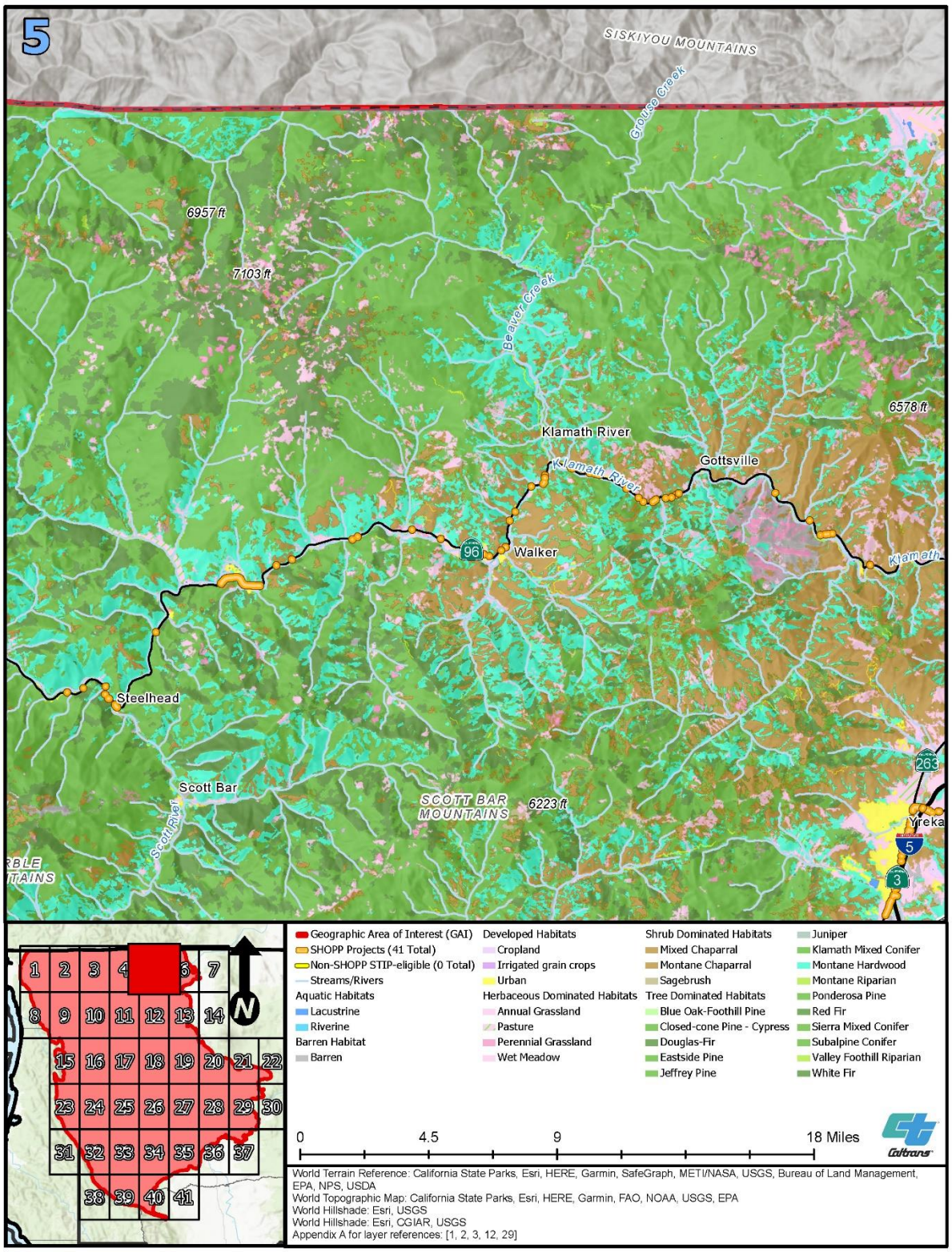

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
DEL NORTE
SISKIYOU
HUMBOLDT
TRINITY
SHASTA
TEHAMA
BUTTE
101
197
96
263
5
97
161
169
3
265
89
299
255
151
211
283
273
44
254
36
172
99
32
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Counties
Map Book Page
0
25
50
100 Miles
Caltrans
World Terrain Base: Sources: Esri, USGS, NOAA
Appendix A for layer references: [1, 2, 3, 9]

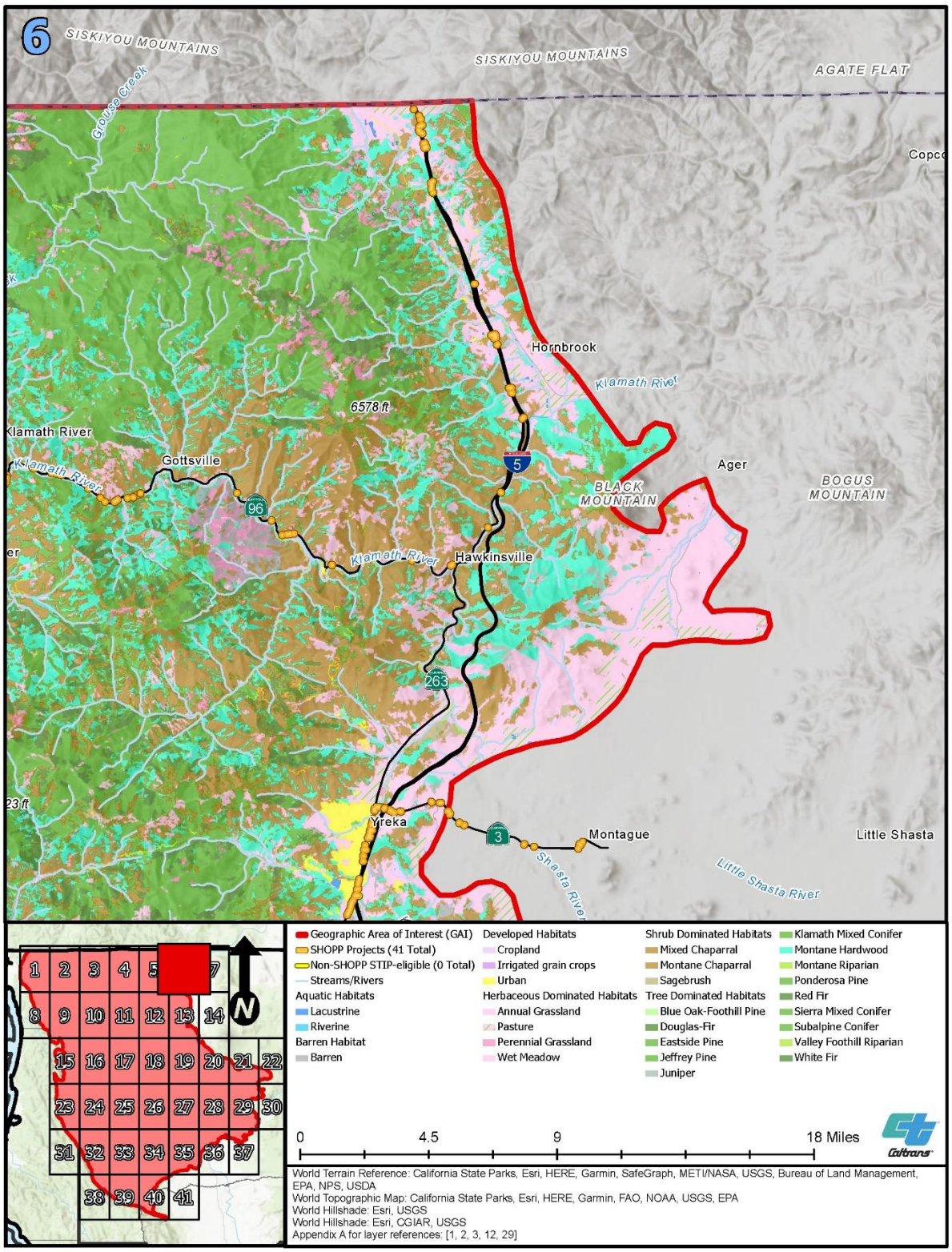

OREGON MOUNTAIN
Redwood Hwy
2657 ft
PINE FLAT MOUNTAIN
North Fork Smith River
HIGH PLATEAU MOUNTAIN
ELK CAMP RIDGE
Smith River
Fort Dick
101
197
Patrick Creek
Darlingtonia
199
UPPER COON MOUNTAIN
Berteleda
LOWER COON MOUNTAIN
GORDON MOUNTAIN
CRAIGS CREEK MOUNTAIN
TABLE MOUNTAIN
5286 ft
Del Norte
FOX RIDGE
5315 ft
SHIP MOUNTAIN
2338 ft
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Shrub Dominated Habitats
Chamise-Redshank Chaparral
Coastal Scrub
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Closed-cone Pine - Cypress
Coastal Oak Woodland
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Lodgepole Pine
Montane Hardwood
Montane Riparian
Red Fir
Redwood
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

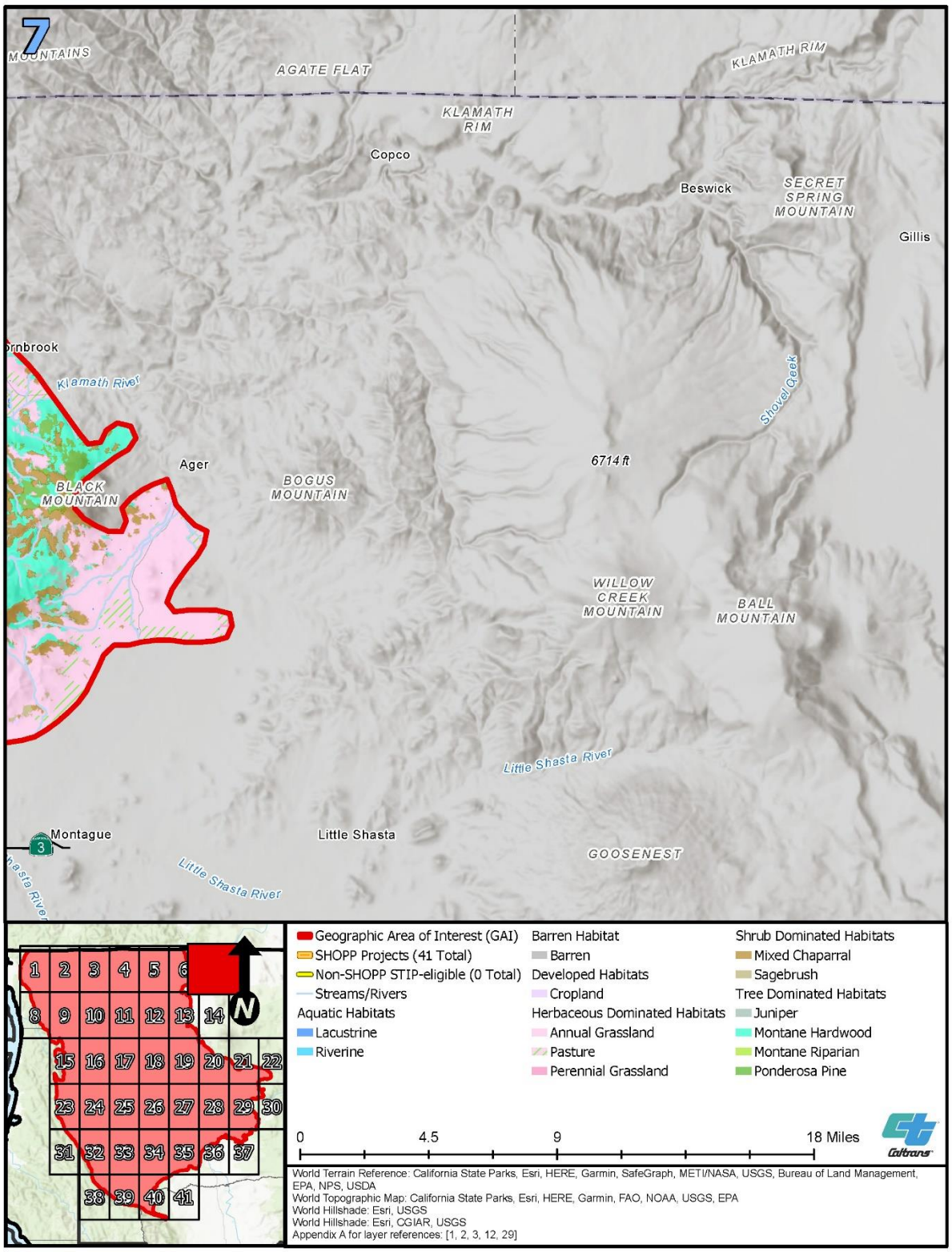

2
OREGON MOUNTAIN
Redwood Hwy
5242 ft
East Fork Illinois River
Indian Creek
199
Patrick Creek
WOUNDED KNEE MOUNTAIN
EL CAPITAN
7191 ft
Clear Creek
UPPER COON MOUNTAIN
GORDON MOUNTAIN
TABLE MOUNTAIN
5286 ft
BEAR MOUNTAIN
FOX RIDGE
5315 ft
SHIP MOUNTAIN
JEDEDIAH MOUNTAIN
Clear Creek
96
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Chamise-Redshank Chaparral
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Closed-cone Pine - Cypress
Coastal Oak Woodland
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Lodgepole Pine
Montane Hardwood
Montane Riparian
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, NASA, NGA, USGS
World Hillshade: Esri, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

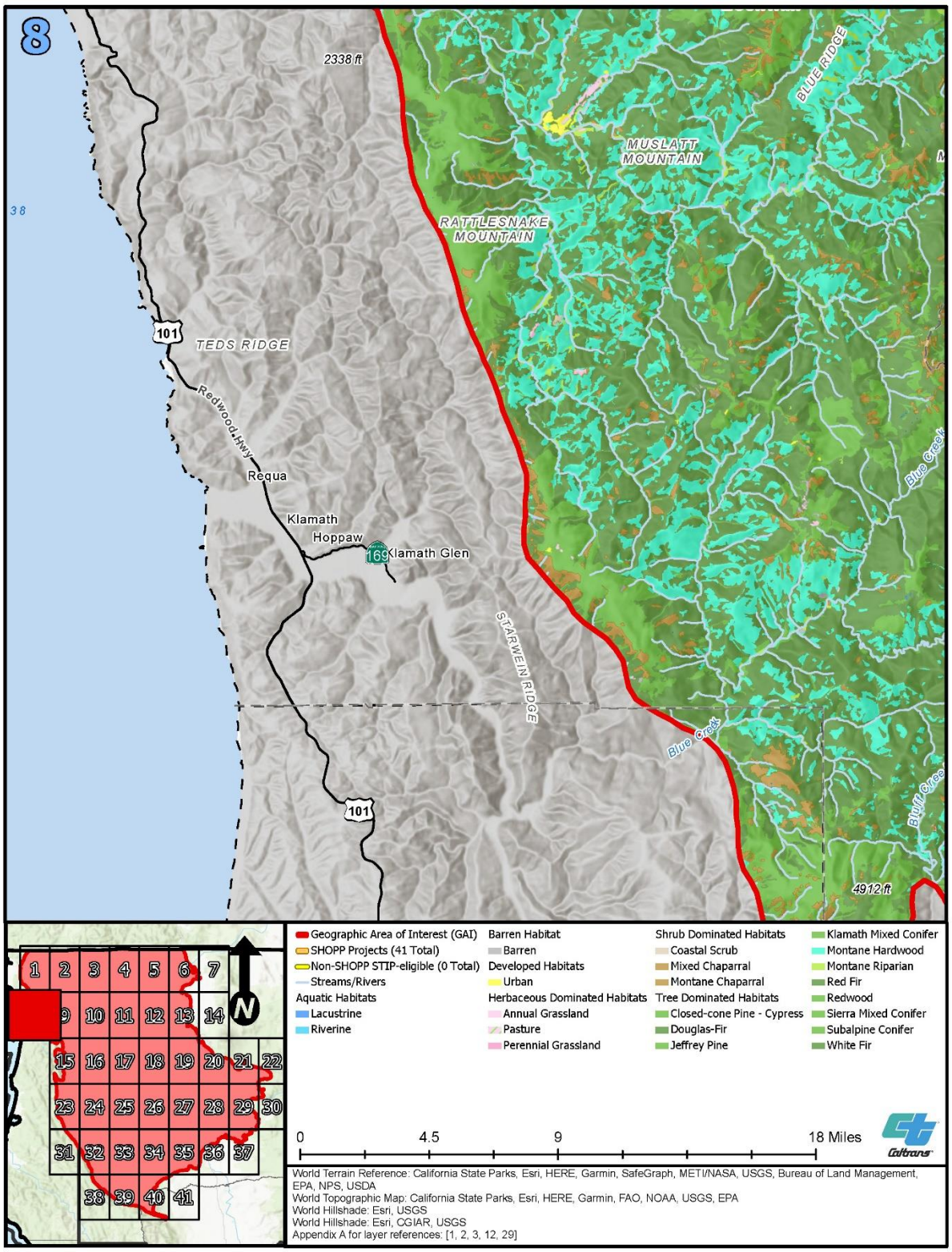

3
Sucker Creek
5242 ft
6053 ft
6448 ft
East Fork Illinois River
EAST FORK RIDGE
Indian Creek
THOMPSON RIDGE
EL CAPITAN
7191 ft
Fort Goff
Seiad Valle
CADE MOUNTAIN
Indian Creek
Happy Camp
96
BLUE MOUNTAIN
Clear Creek
Clear Creek
Elk Creek
N
1 2 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Closed-cone Pine - Cypress
Coastal Oak Woodland
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
Valley Foothill Riparian
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

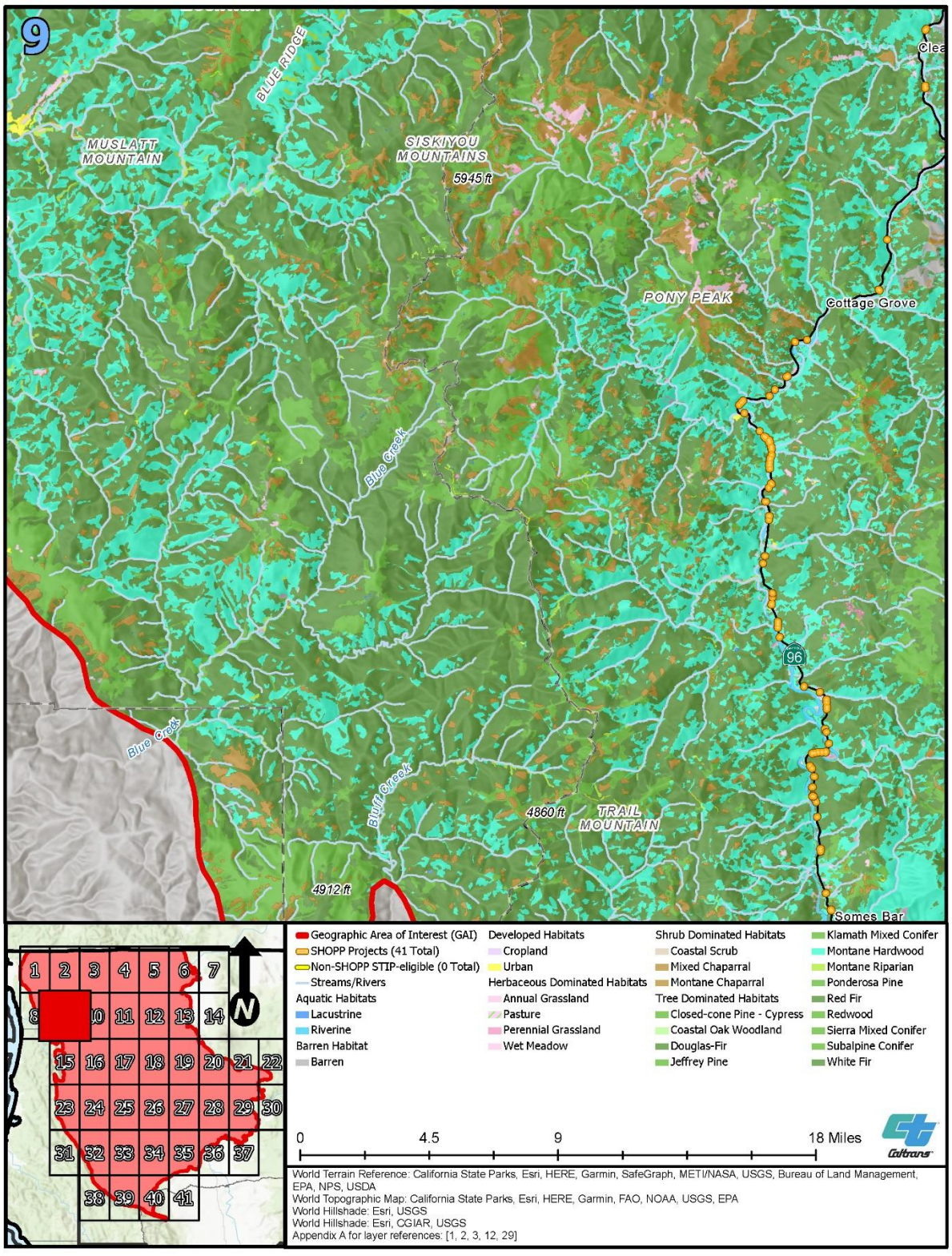

4
Reservoir
6053 ft
6448 ft
6957 ft
7103 ft
Fort Goff
Seiad Valley
Hamburg
96
CADE MOUNTAIN
BLUE MOUNTAIN
Steelhead
Scott Bar
Scott River
MARBLE MOUNTAINS
Elk Creek
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Deciduous Orchard
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Sagebrush
Tree Dominated Habitats
Closed-cone Pine - Cypress
Coastal Oak Woodland
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
Valley Foothill Riparian
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

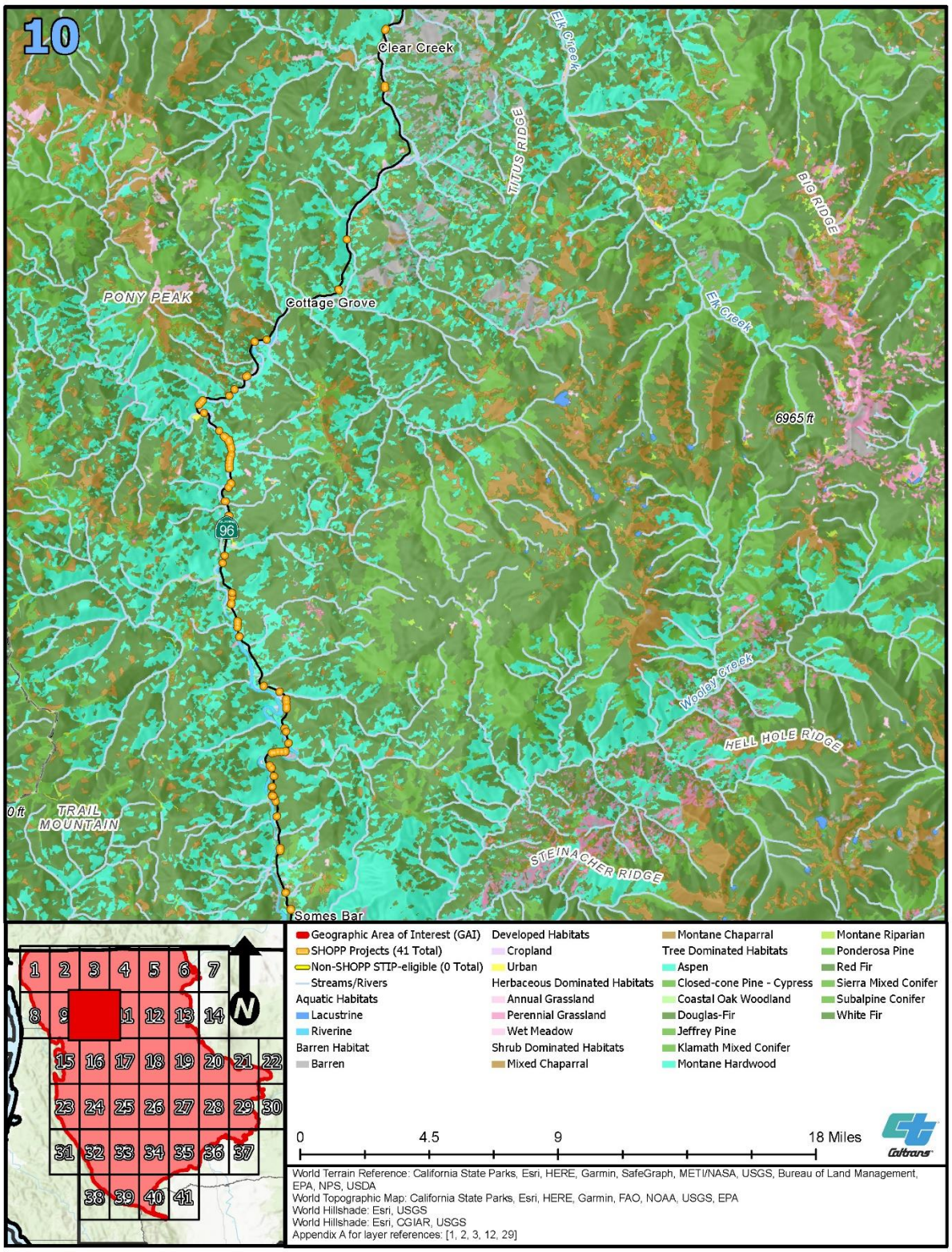

5
SISKIYOU MOUNTAINS
Grouse Creek
6957 ft
7103 ft
Beaver Creek
6578 ft
Klamath River
Klamath River
Gottsville
96
Walker
Klamath
Steelhead
Scott Bar
SCOTT BAR MOUNTAINS
6223 ft
Scott River
263
Yreka
5
3
1 2 3 4 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Irrigated grain crops
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Sagebrush
Tree Dominated Habitats
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Eastside Pine
Jeffrey Pine
Juniper
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
Valley Foothill Riparian
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

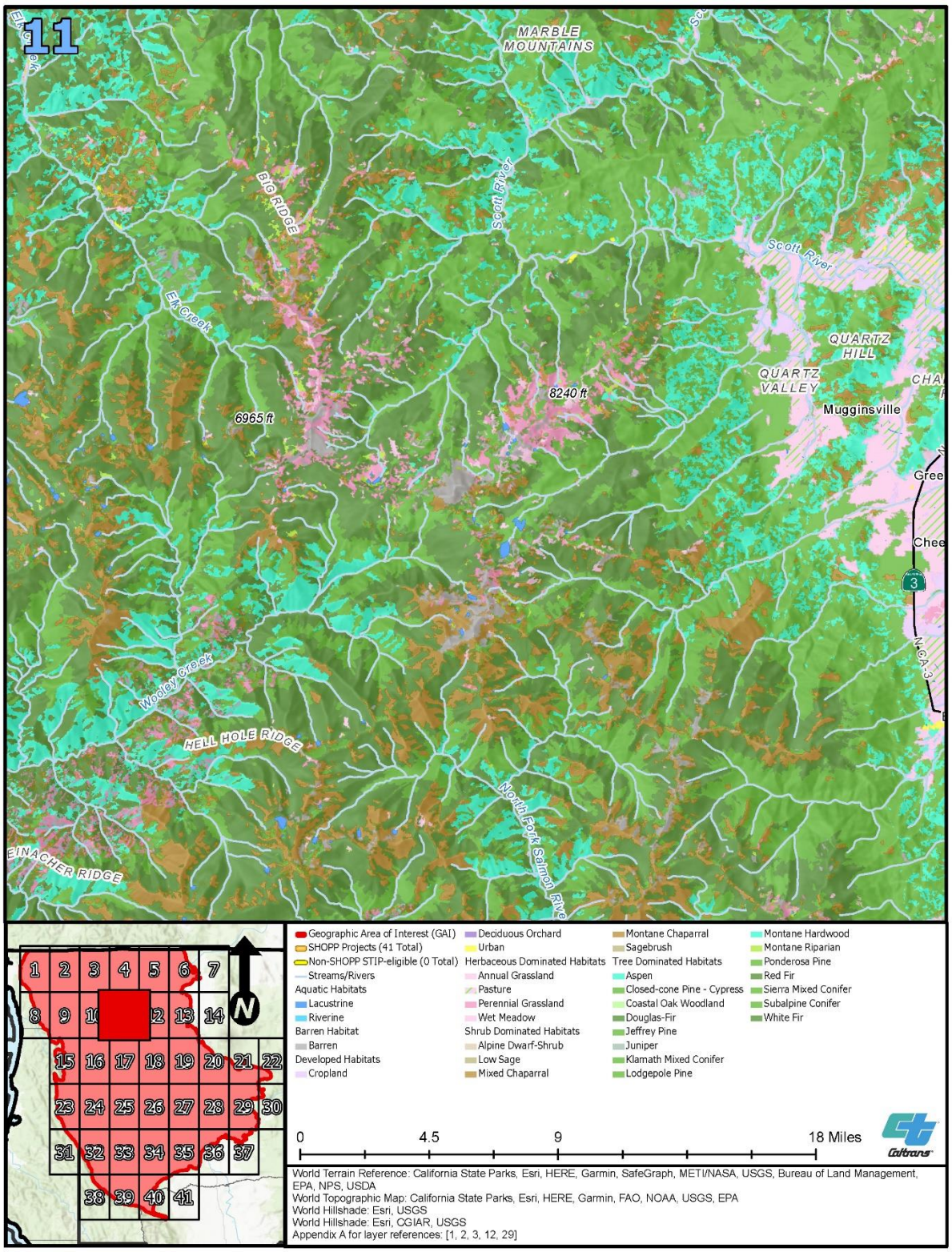

6
SISKIYOU MOUNTAINS
SISKIYOU MOUNTAINS
AGATE FLAT
Grouse Creek
Hornbrook
Klamath River
6578 ft
Klamath River
Gottsville
Klamath River
5
Ager
BLACK MOUNTAIN
BOGUS MOUNTAIN
96
Klamath River
Hawkinsville
263
23 ft
Yreka
3
Montague
Little Shasta
Shasta River
Little Shasta River
1 2 3 4 5 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Irrigated grain crops
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Sagebrush
Tree Dominated Habitats
Blue Oak-Foothill Pine
Douglas-Fir
Eastside Pine
Jeffrey Pine
Juniper
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
Valley Foothill Riparian
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

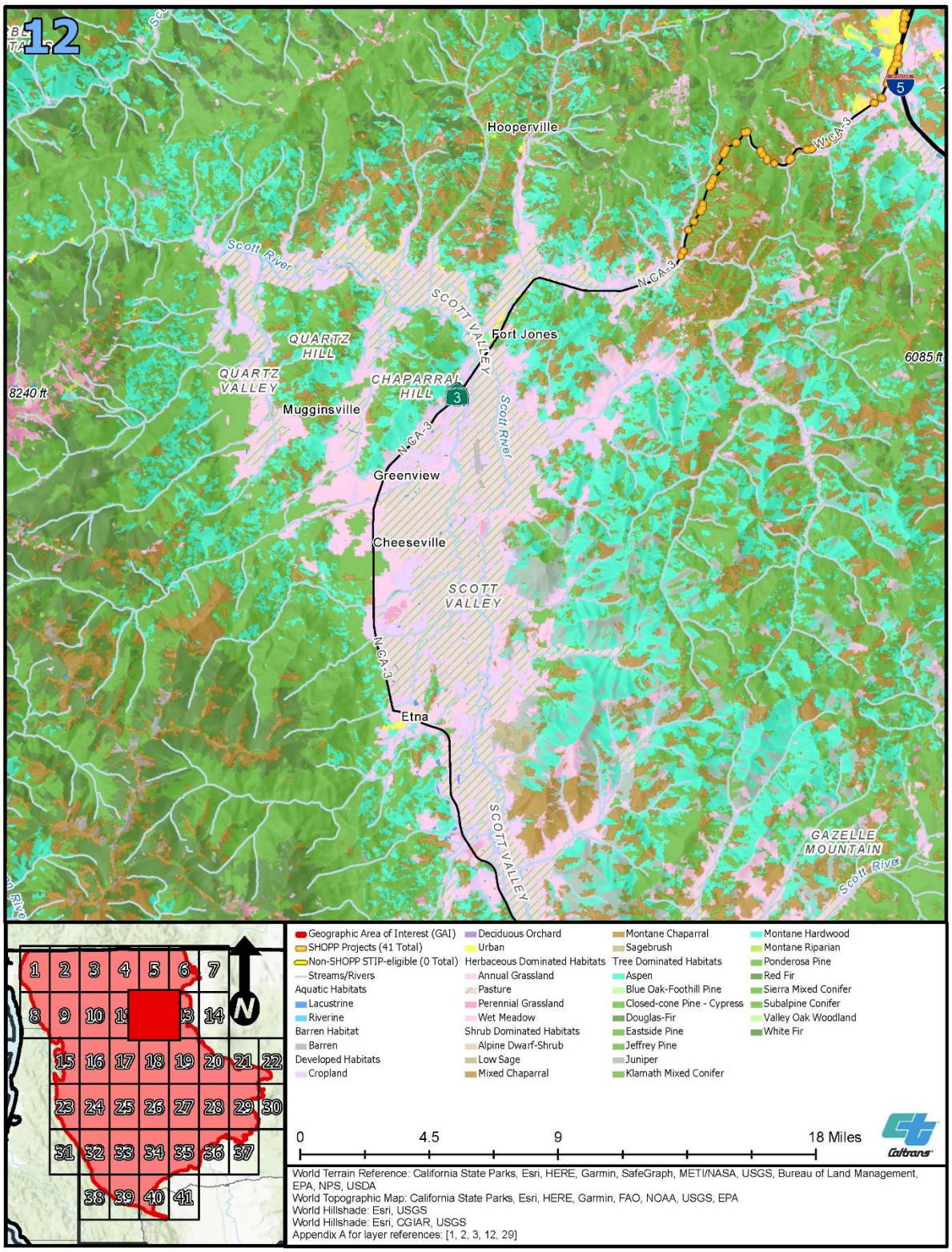

7
MOUNTAINS
AGATE FLAT
KLAMATH RIM
KLAMATH RIM
Copco
Beswick
SECRET SPRING MOUNTAIN
Gillis
Klamath River
Shovel Creek
Ager
6714 ft
BLACK MOUNTAIN
BOGUS MOUNTAIN
WILLOW CREEK MOUNTAIN
BALL MOUNTAIN
Little Shasta River
Montague
Little Shasta
GOOSENEST
Little Shasta River
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Shrub Dominated Habitats
Mixed Chaparral
Sagebrush
Tree Dominated Habitats
Juniper
Montane Hardwood
Montane Riparian
Ponderosa Pine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

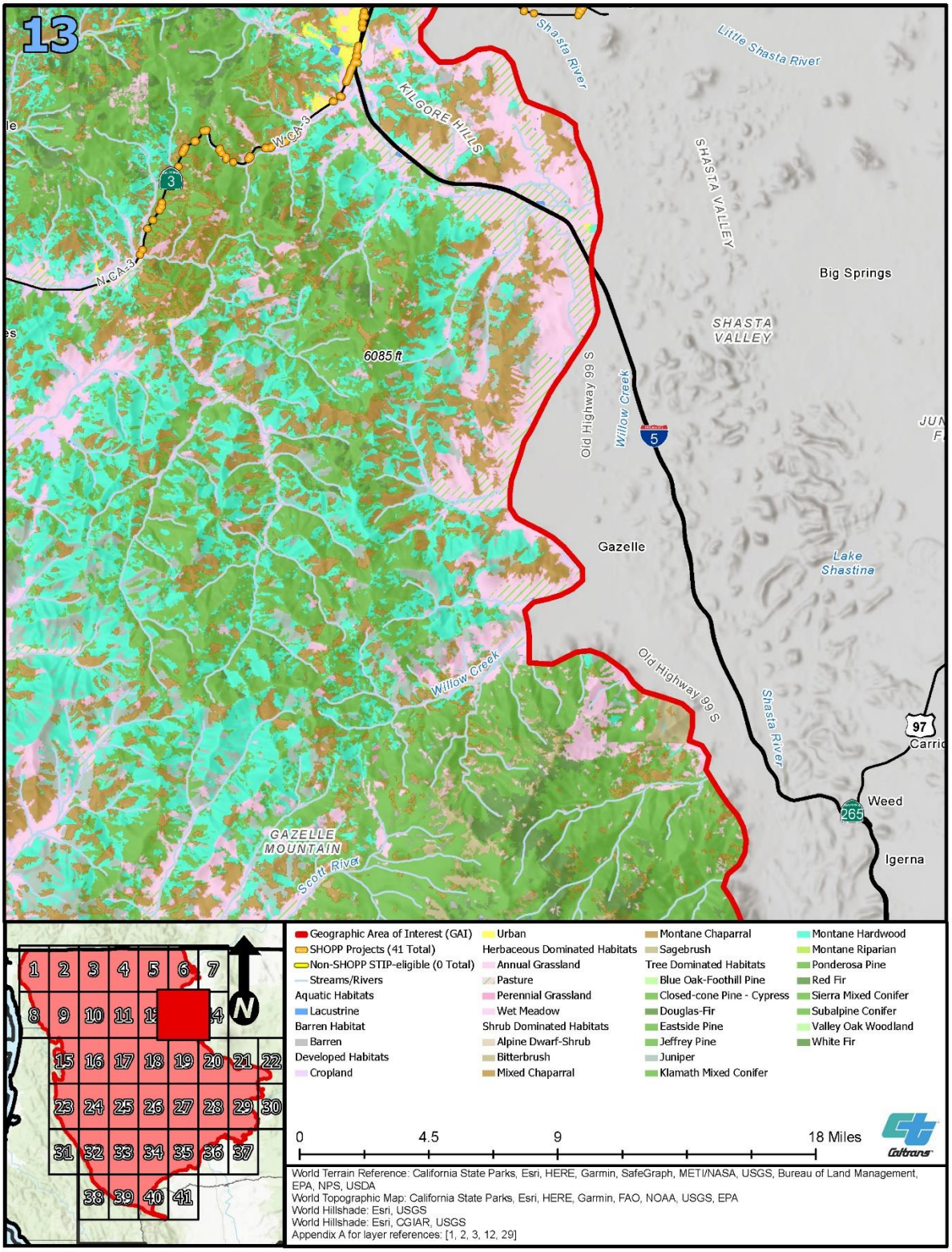

8
2338 ft
BLUE RIDGE
MUSLATT MOUNTAIN
RATTLESNAKE MOUNTAIN
101
TEDS RIDGE
Redwood Hwy
Requa
Klamath
Hoppaw
169
Klamath Glen
STARWEIN RIDGE
Blue Creek
101
4912 ft
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Shrub Dominated Habitats
Coastal Scrub
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Closed-cone Pine - Cypress
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Red Fir
Redwood
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

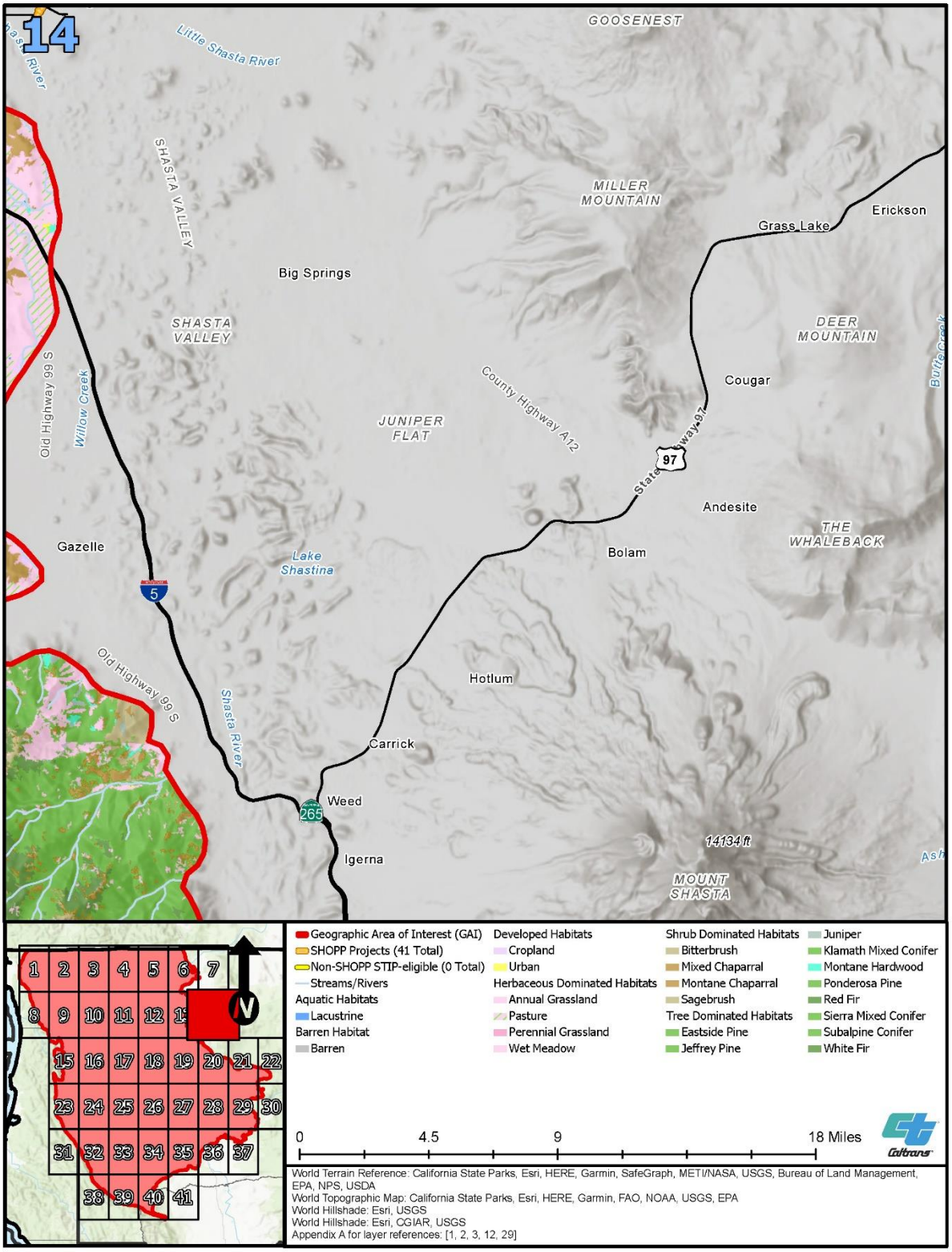

9
BLUE RIDGE
MUSLATT MOUNTAIN
SISKIYOU MOUNTAINS
5945 ft
PONY PEAK
Cottage Grove
Blue Creek
96
Blue Creek
Bluff Creek
4860 ft
TRAIL MOUNTAIN
4912 ft
Somes Bar
1 2 3 4 5 6 7
8 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Coastal Scrub
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Closed-cone Pine - Cypress
Coastal Oak Woodland
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Redwood
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

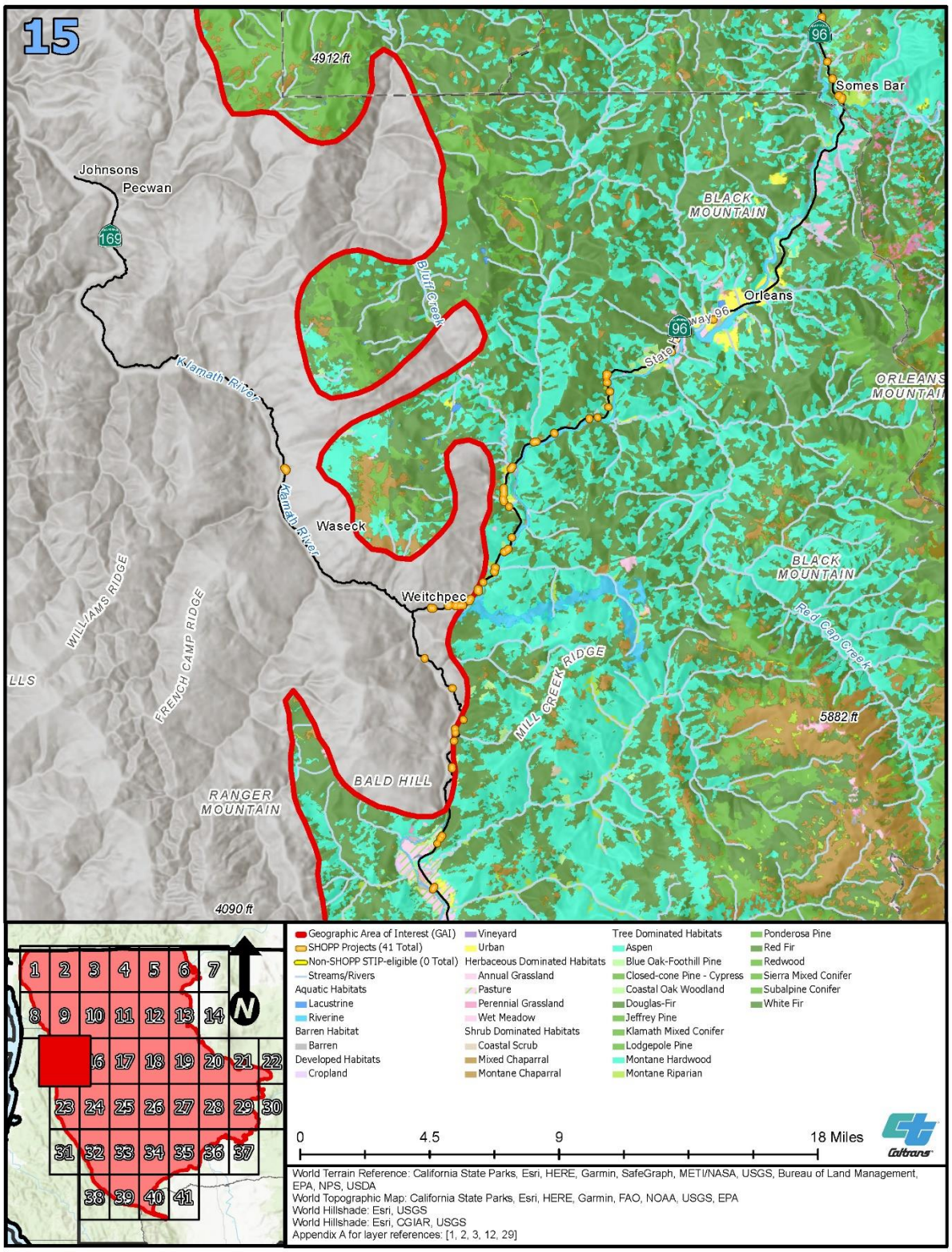

10
Clear Creek
Elk Creek
TITUS RIDGE
BIG RIDGE
PONY PEAK
Cottage Grove
Elk Creek
6965 ft
96
Wooley Creek
HELL HOLE RIDGE
TRAIL MOUNTAIN
STEINACHER RIDGE
Somes Bar
1 2 3 4 5 6 7
8 9 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Aspen
Closed-cone Pine - Cypress
Coastal Oak Woodland
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

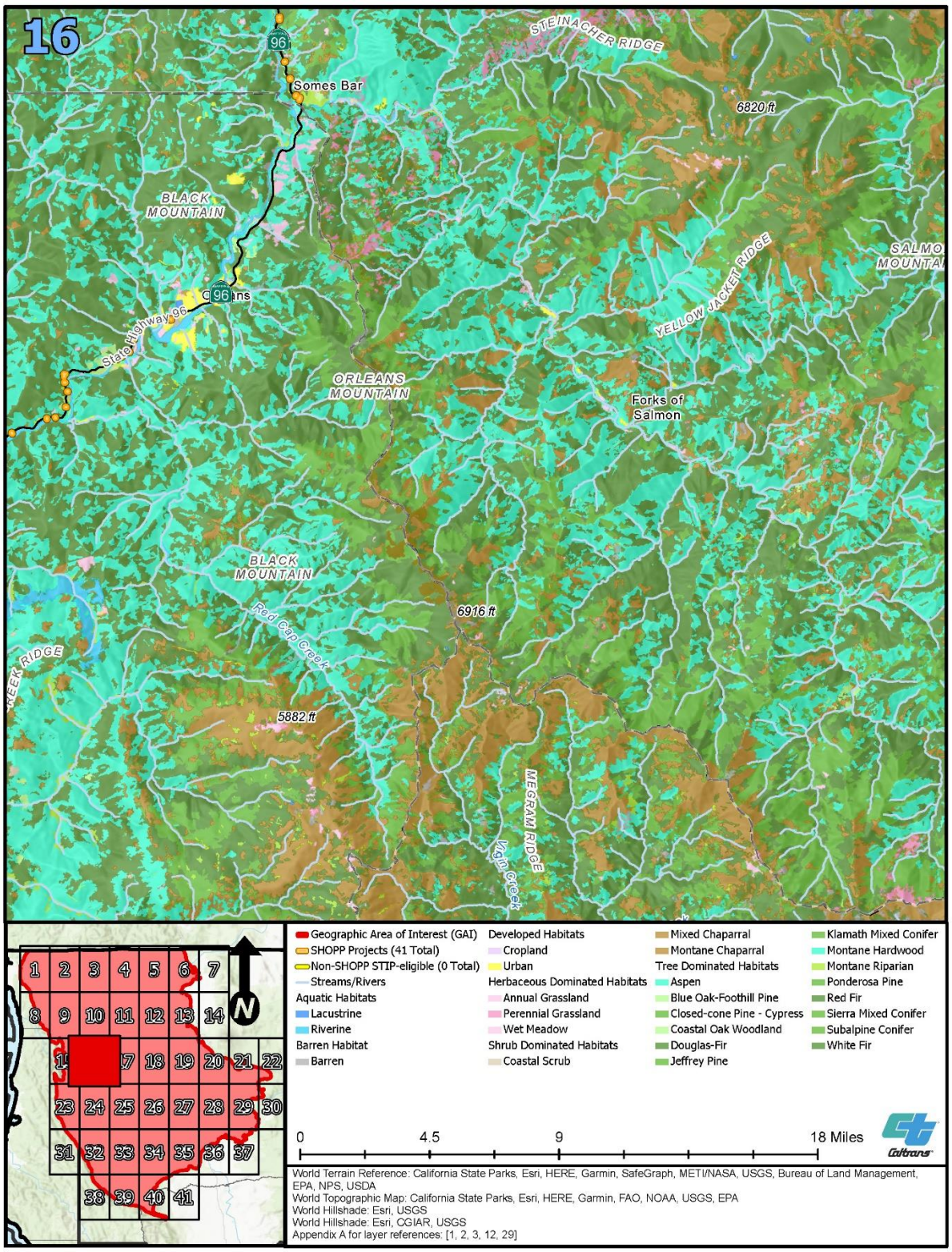

11
MARBLE MOUNTAINS
BIG RIDGE
Scott River
Scott River
Elk Creek
QUARTZ HILL
QUARTZ VALLEY
8240 ft
6965 ft
Mugginsville
Wooley Creek
HELL HOLE RIDGE
North Fork Salmon River
EINACHER RIDGE
1 2 3 4 5 6 7
8 9 10 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Deciduous Orchard
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Alpine Dwarf-Shrub
Low Sage
Mixed Chaparral
Montane Chaparral
Sagebrush
Tree Dominated Habitats
Aspen
Closed-cone Pine - Cypress
Coastal Oak Woodland
Douglas-Fir
Jeffrey Pine
Juniper
Klamath Mixed Conifer
Lodgepole Pine
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

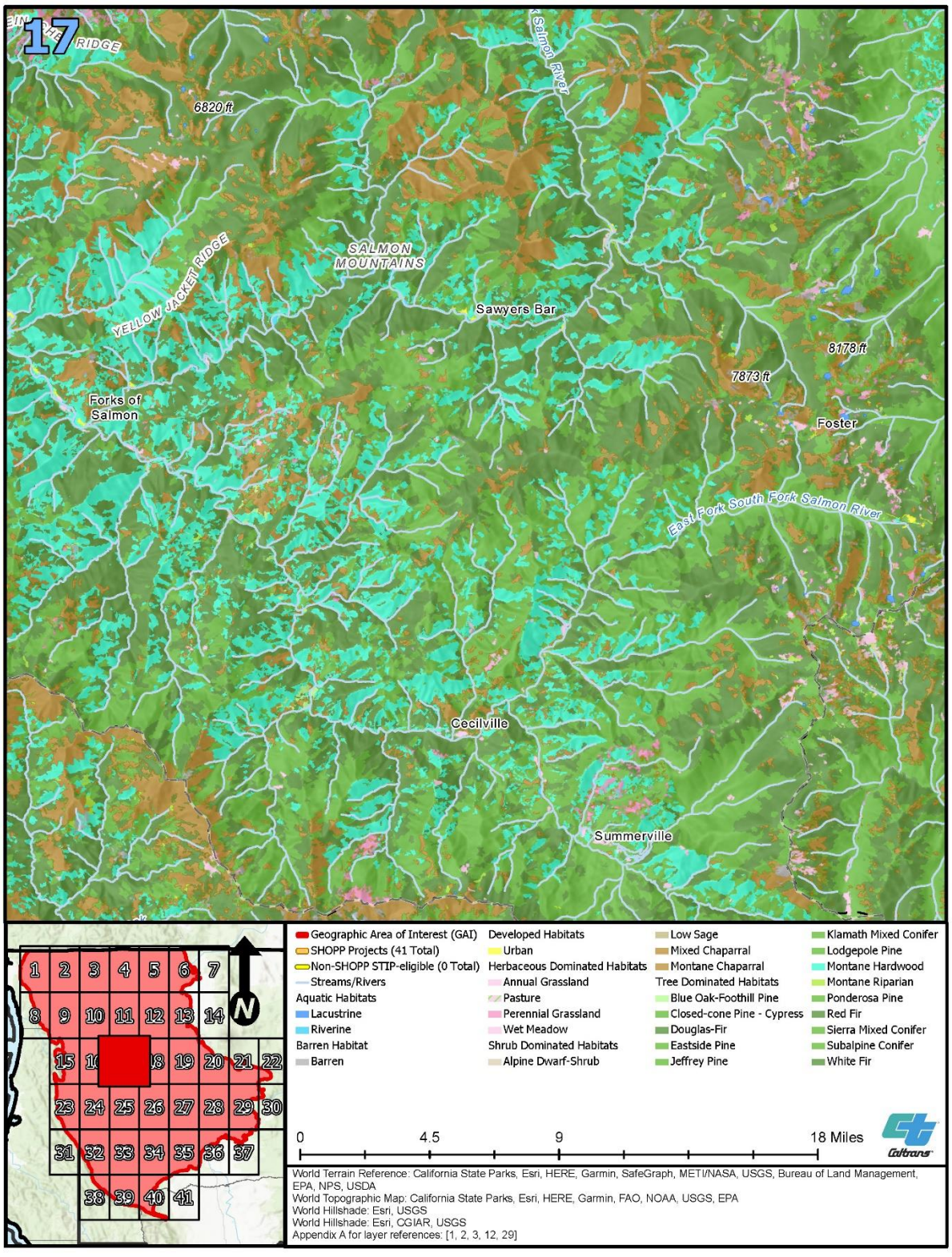

12
Hooperville
Scott River
SCOTT VALLEY
N-CA-3
Fort Jones
QUARTZ HILL
QUARTZ VALLEY
CHAPARRAL HILL
Mugginsville
8240 ft
6085 ft
Greenview
Cheeseville
SCOTT VALLEY
Etna
GAZELLE MOUNTAIN
Scott River
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Deciduous Orchard
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Alpine Dwarf-Shrub
Low Sage
Mixed Chaparral
Montane Chaparral
Sagebrush
Tree Dominated Habitats
Aspen
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Eastside Pine
Jeffrey Pine
Juniper
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
Valley Oak Woodland
White Fir
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

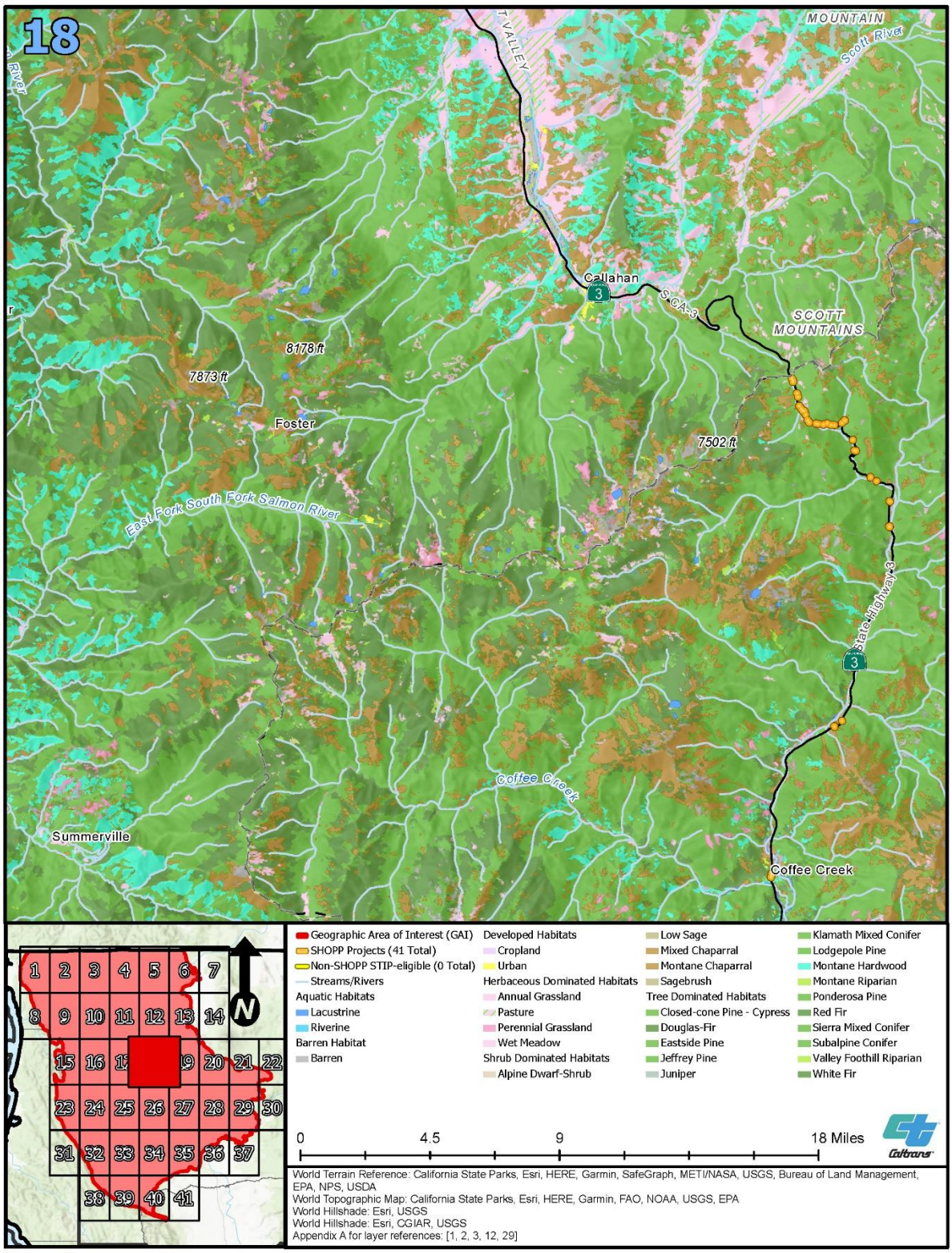

13
Shasta River
Little Shasta River
KILGORE HILLS
SHASTA VALLEY
Big Springs
SHASTA VALLEY
6085 ft
Old Highway 99 S
Willow Creek
5
Gazelle
Lake Shastina
Willow Creek
Old Highway 99 S
Shasta River
97
Weed
265
Igerna
GAZELLE MOUNTAIN
Scott River
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Alpine Dwarf-Shrub
Bitterbrush
Mixed Chaparral
Montane Chaparral
Sagebrush
Tree Dominated Habitats
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Eastside Pine
Jeffrey Pine
Juniper
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
Valley Oak Woodland
White Fir
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

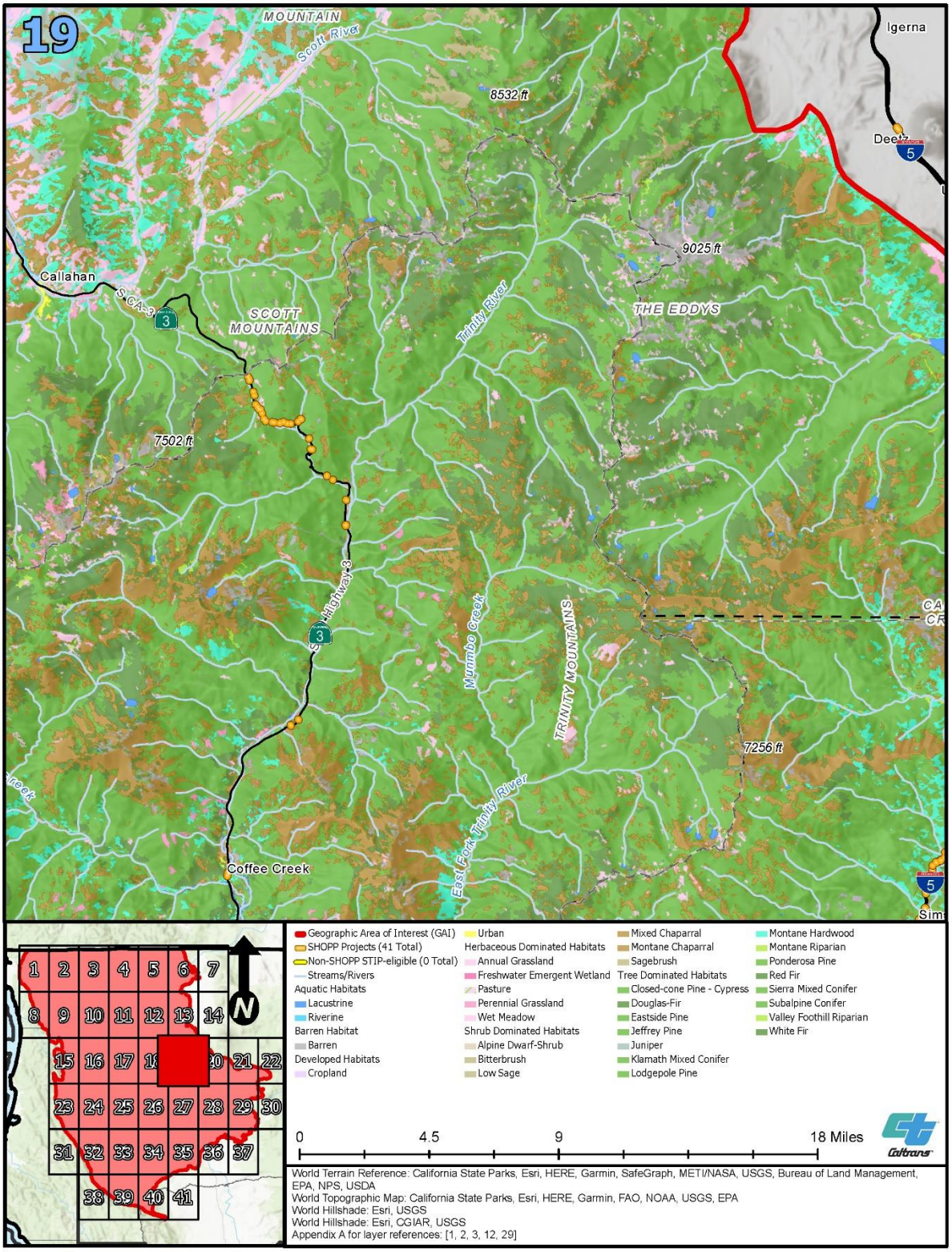

14
Little Shasta River
GOOSENEST
SHASTA VALLEY
MILLER MOUNTAIN
Erickson
Grass Lake
Big Springs
SHASTA VALLEY
DEER MOUNTAIN
Old Highway 99 S
Willow Creek
County Highway A12
Cougar
JUNIPER FLAT
97
Andesite
THE WHALEBACK
Gazelle
Lake Shastina
Bolam
5
Old Highway 99 S
Hotlum
Shasta River
Carrick
Weed
265
14134 ft
Igerna
MOUNT SHASTA
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Bitterbrush
Mixed Chaparral
Montane Chaparral
Sagebrush
Tree Dominated Habitats
Eastside Pine
Jeffrey Pine
Juniper
Klamath Mixed Conifer
Montane Hardwood
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

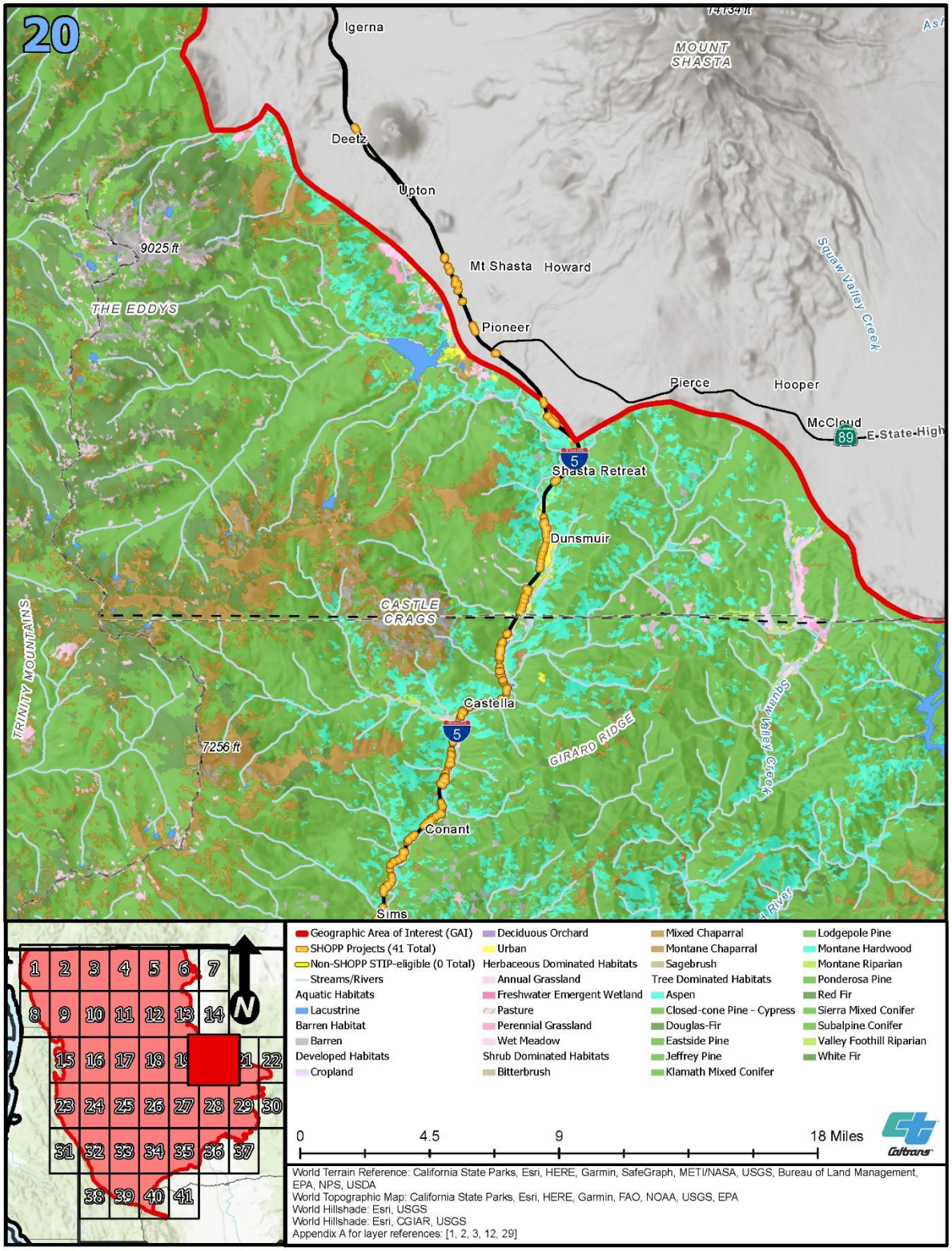

15
4912 ft
Somes Bar
Johnsons
Pecwan
BLACK MOUNTAIN
Bluff Creek
Orleans
Klamath River
Waseck
Weitchpec
WILLIAMS RIDGE
FRENCH CAMP RIDGE
MILL CREEK RIDGE
Red Cap Creek
5882 ft
BALD HILL
RANGER MOUNTAIN
4090 ft
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Vineyard
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Coastal Scrub
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Aspen
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Coastal Oak Woodland
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Lodgepole Pine
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Redwood
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

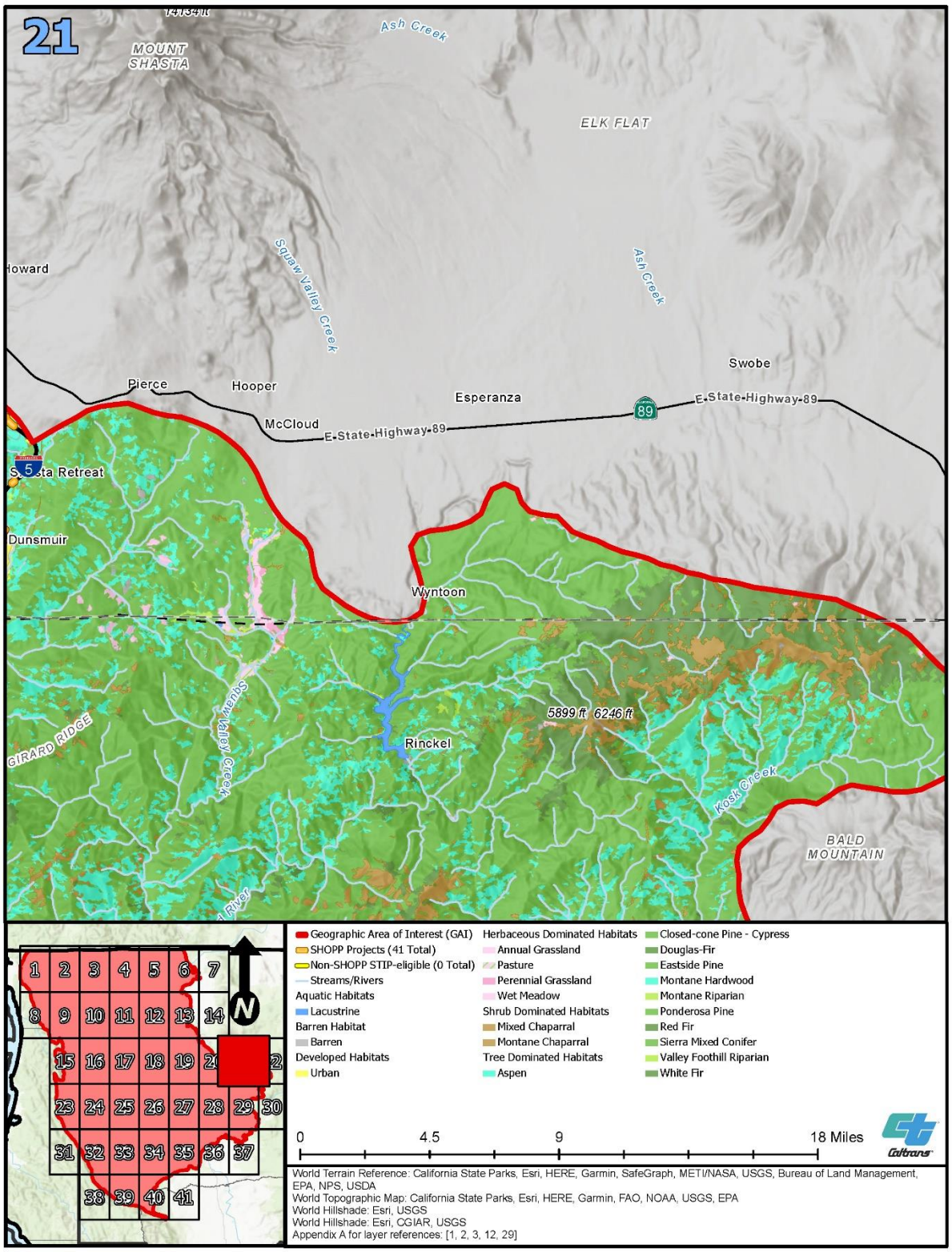

16
96
Somes Bar
STEINACHER RIDGE
6820 ft
BLACK MOUNTAIN
YELLOW JACKET RIDGE
SALMO MOUNTA
State Highway 96
ORLEANS MOUNTAIN
Forks of Salmon
BLACK MOUNTAIN
Red Cap Creek
6916 ft
5882 ft
MEGRAM RIDGE
Virgin Creek
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Coastal Scrub
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Aspen
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Coastal Oak Woodland
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

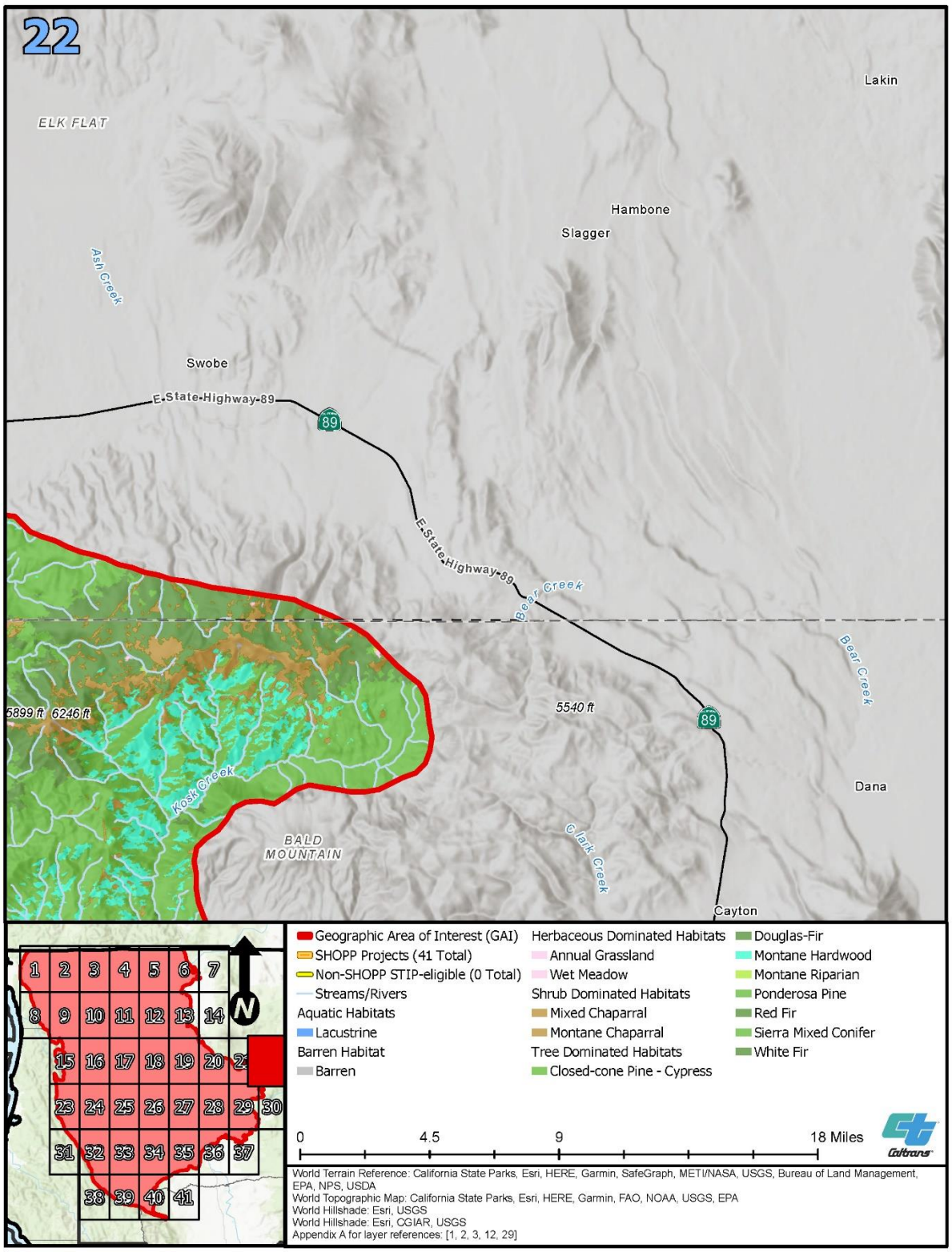

17
RIDGE
6820 ft
Salmon River
SALMON MOUNTAINS
YELLOW JACKET RIDGE
Sawyers Bar
8178 ft
7873 ft
Forks of Salmon
Foster
East Fork South Fork Salmon River
Cecilville
Summerville
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Alpine Dwarf-Shrub
Low Sage
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Eastside Pine
Jeffrey Pine
Klamath Mixed Conifer
Lodgepole Pine
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

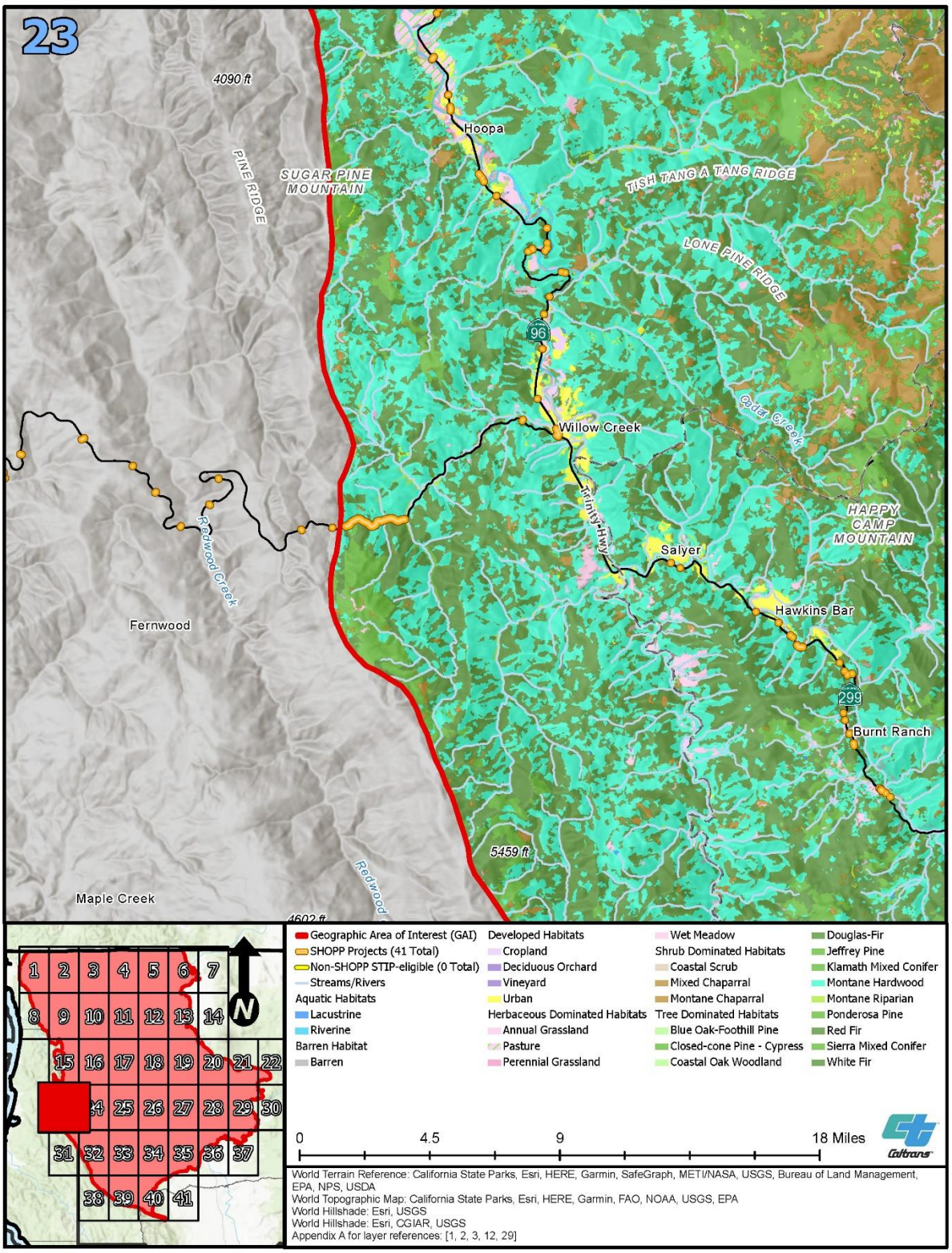

18
MOUNTAIN
Scott River
Callahan
3
SCOTT MOUNTAINS
8178 ft
7873 ft
Foster
7502 ft
East Fork South Fork Salmon River
State Highway 3
Coffee Creek
Summerville
Coffee Creek
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Alpine Dwarf-Shrub
Low Sage
Mixed Chaparral
Montane Chaparral
Sagebrush
Tree Dominated Habitats
Closed-cone Pine - Cypress
Douglas-Fir
Eastside Pine
Jeffrey Pine
Juniper
Klamath Mixed Conifer
Lodgepole Pine
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
Valley Foothill Riparian
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

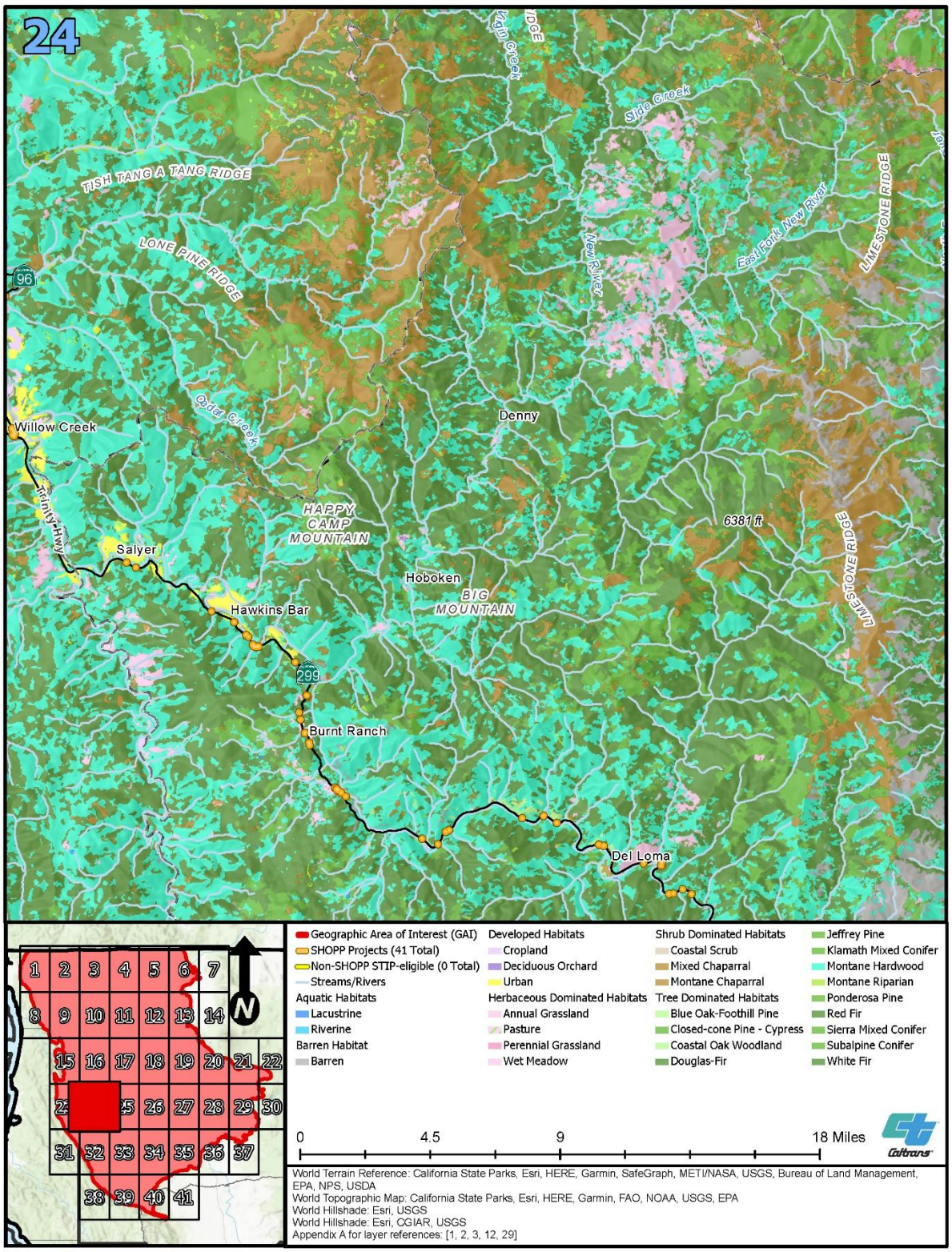

19
MOUNTAIN
Scott River
8532 ft
Igerna
Deetz
5
9025 ft
Callahan
SCOTT MOUNTAINS
Trinity River
THE EDDYS
7502 ft
Highway 3
Mumbo Creek
TRINITY MOUNTAINS
7256 ft
East Fork Trinity River
Coffee Creek
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Freshwater Emergent Wetland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Alpine Dwarf-Shrub
Bitterbrush
Low Sage
Mixed Chaparral
Montane Chaparral
Sagebrush
Tree Dominated Habitats
Closed-cone Pine - Cypress
Douglas-Fir
Eastside Pine
Jeffrey Pine
Juniper
Klamath Mixed Conifer
Lodgepole Pine
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
Valley Foothill Riparian
White Fir
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

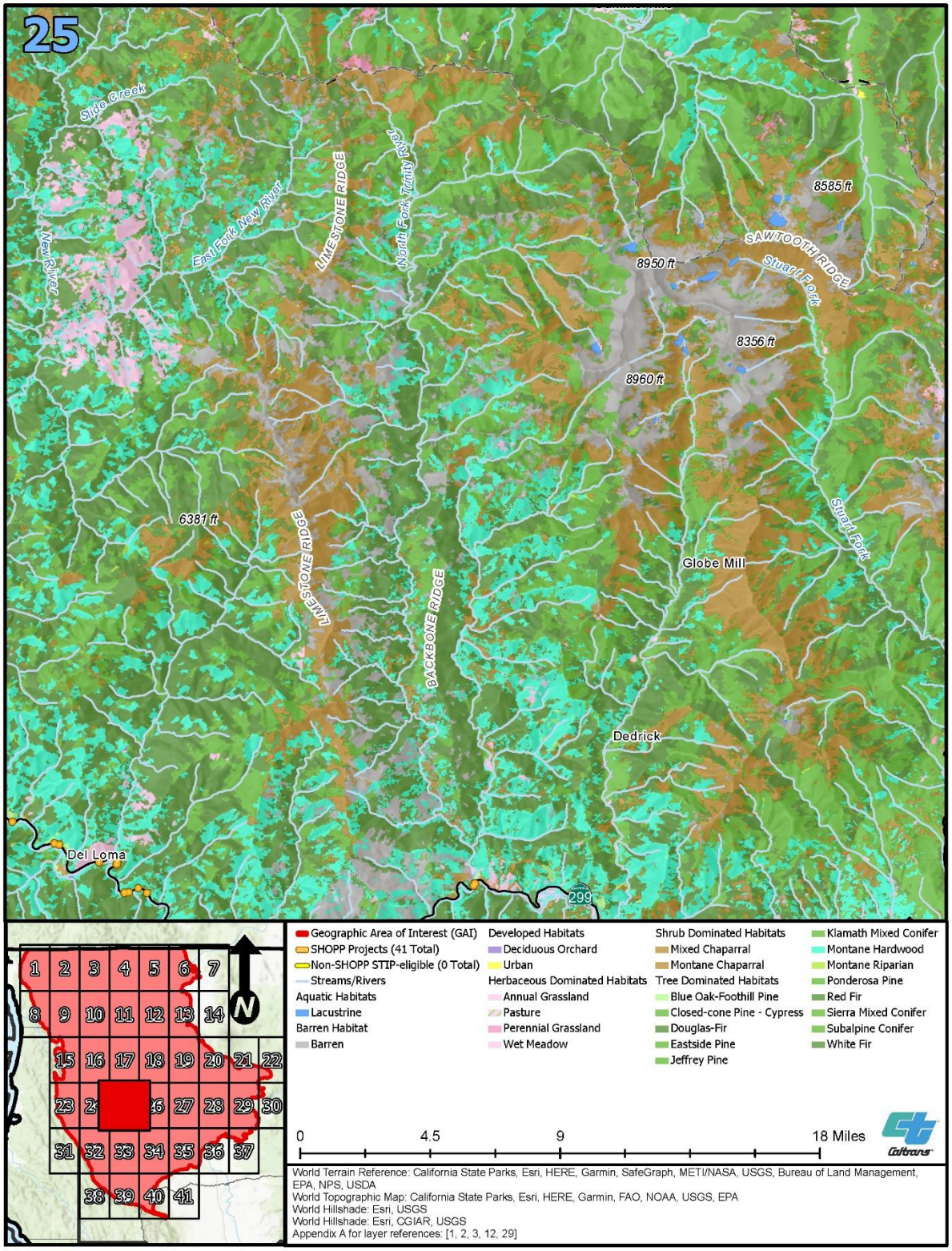

20
Igerna
MOUNT SHASTA
Deetz
Upton
9025 ft
Mt Shasta
Howard
THE EDDYS
Pioneer
Squaw Valley Creek
Pierce
Hooper
McCloud
89
E-State-High
5
Shasta Retreat
Dunsmuir
CASTLE CRAGS
TRINITY MOUNTAINS
Castella
5
7256 ft
GIRARD RIDGE
Squaw Valley Creek
Conant
Sims
1 River
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Developed Habitats
Cropland
Deciduous Orchard
Urban
Herbaceous Dominated Habitats
Annual Grassland
Freshwater Emergent Wetland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Bitterbrush
Mixed Chaparral
Montane Chaparral
Sagebrush
Tree Dominated Habitats
Aspen
Closed-cone Pine - Cypress
Douglas-Fir
Eastside Pine
Jeffrey Pine
Klamath Mixed Conifer
Lodgepole Pine
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
Valley Foothill Riparian
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

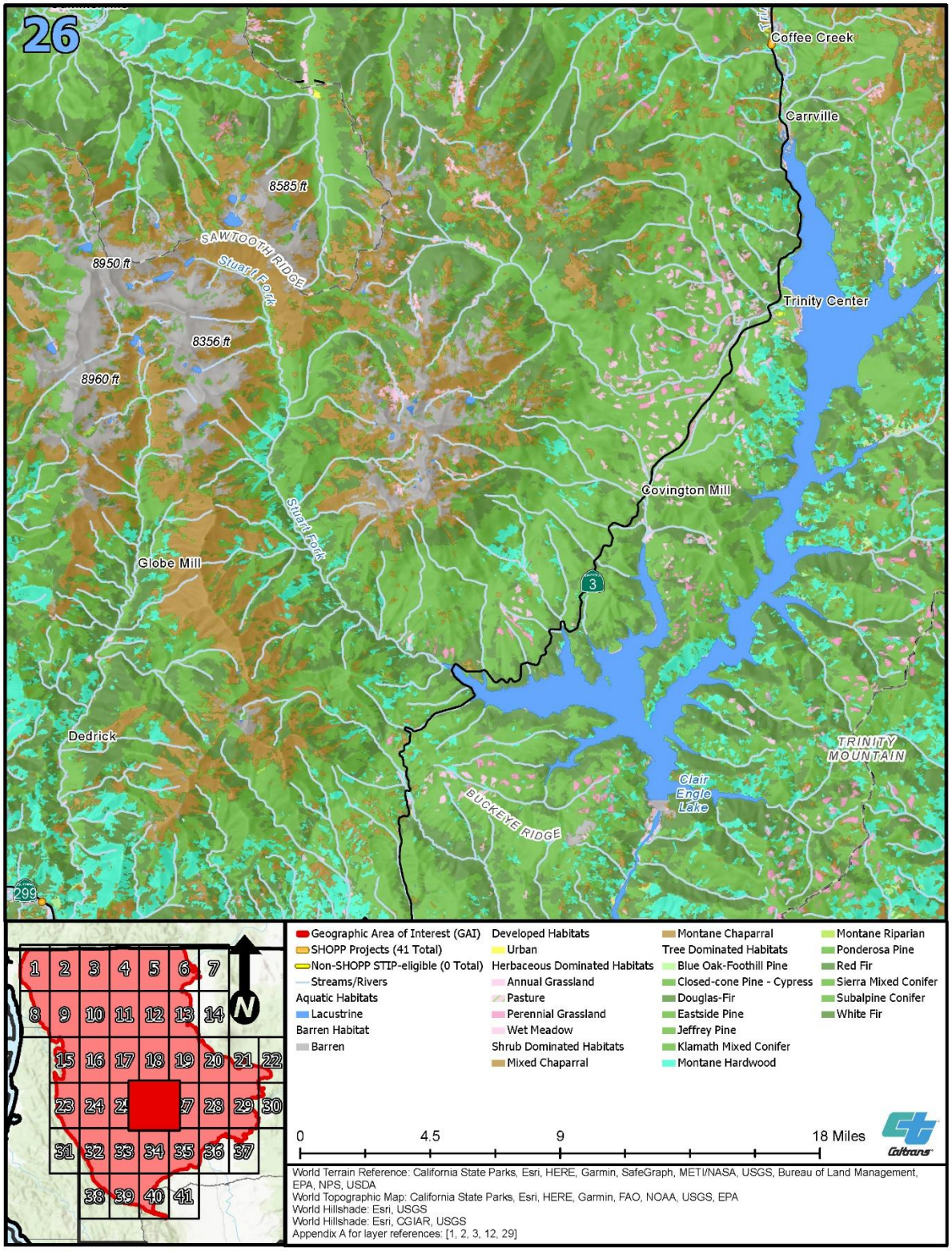

21
14134ft
MOUNT SHASTA
Ash Creek
ELK FLAT
Howard
Squaw Valley Creek
Ash Creek
Swobe
Pierce
Hooper
Esperanza
E State Highway 89
McCloud
E State Highway 89
5
Dunsmuir
Wyntoon
5899 ft
6246 ft
GIRARD RIDGE
Squaw Valley Creek
Rinckel
Kosk Creek
BALD MOUNTAIN
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Developed Habitats
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Aspen
Closed-cone Pine - Cypress
Douglas-Fir
Eastside Pine
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Valley Foothill Riparian
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

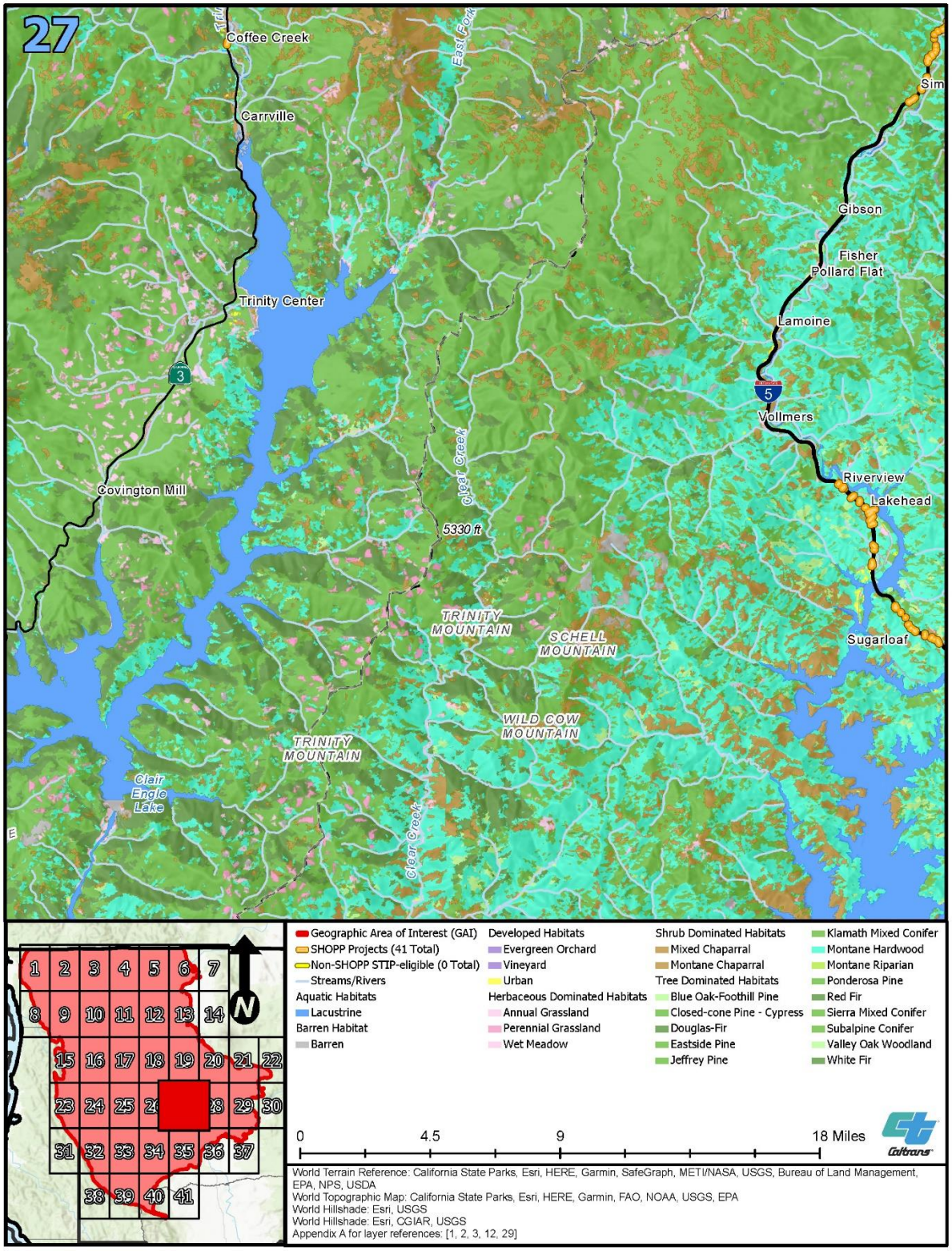

22
Lakin
ELK FLAT
Hambone
Slagger
Ash Creek
Swobe
E State Highway 89
89
E State Highway 89
Bear Creek
Bear Creek
5899 ft
6246 ft
5540 ft
89
Dana
Kosk Creek
BALD MOUNTAIN
Clark Creek
Cayton
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Herbaceous Dominated Habitats
Annual Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Closed-cone Pine - Cypress
Douglas-Fir
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

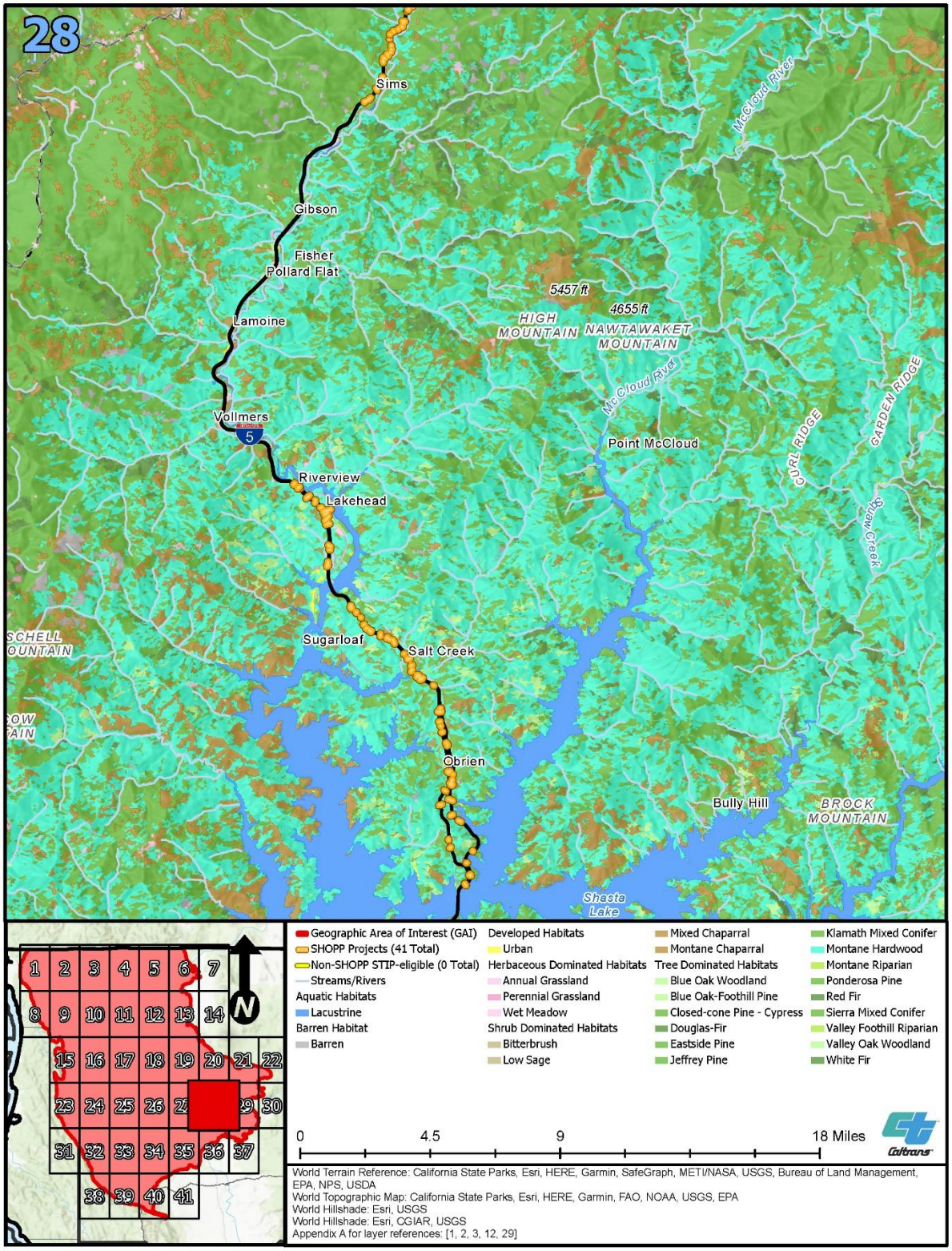

23
4090 ft
PINE RIDGE
SUGAR PINE MOUNTAIN
Hoopa
TISH TANG A TANG RIDGE
LONE PINE RIDGE
96
Willow Creek
Cedar Creek
Trinity Hwy
HAPPY CAMP MOUNTAIN
Salyer
Hawkins Bar
299
Burnt Ranch
Redwood Creek
Fernwood
5459 ft
Maple Creek
4602 ft
Redwood
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Deciduous Orchard
Vineyard
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Coastal Scrub
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Coastal Oak Woodland
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

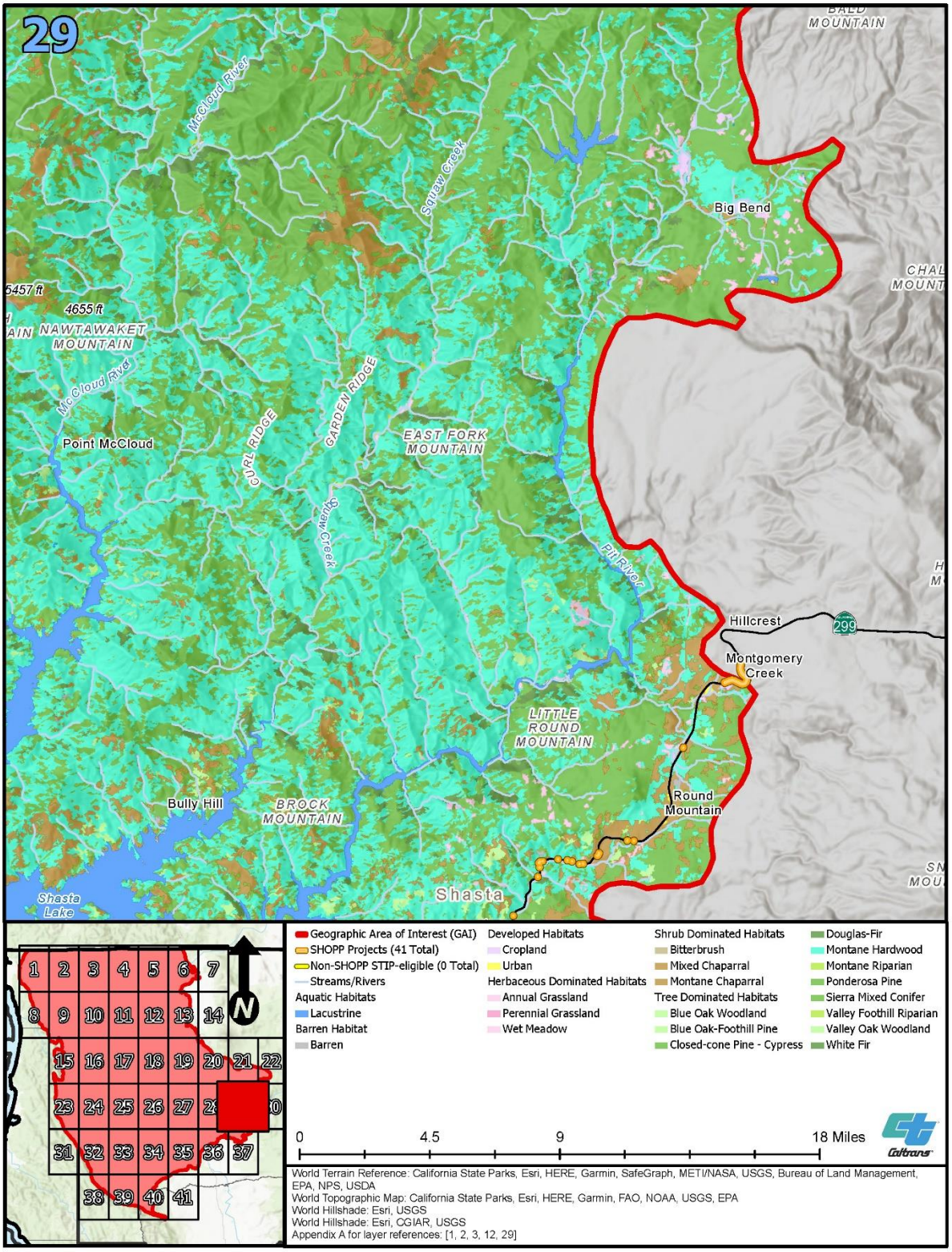

24
TISH TANG A TANG RIDGE
LONE PINE RIDGE
Side Creek
New River
East Fork New River
LIMESTONE RIDGE
Willow Creek
Cedar Creek
Denny
HAPPY CAMP MOUNTAIN
6381 ft
Salyer
Hoboken
BIG MOUNTAIN
Hawkins Bar
Trinity Hwy
299
96
Burnt Ranch
Del Loma
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Deciduous Orchard
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Coastal Scrub
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Coastal Oak Woodland
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

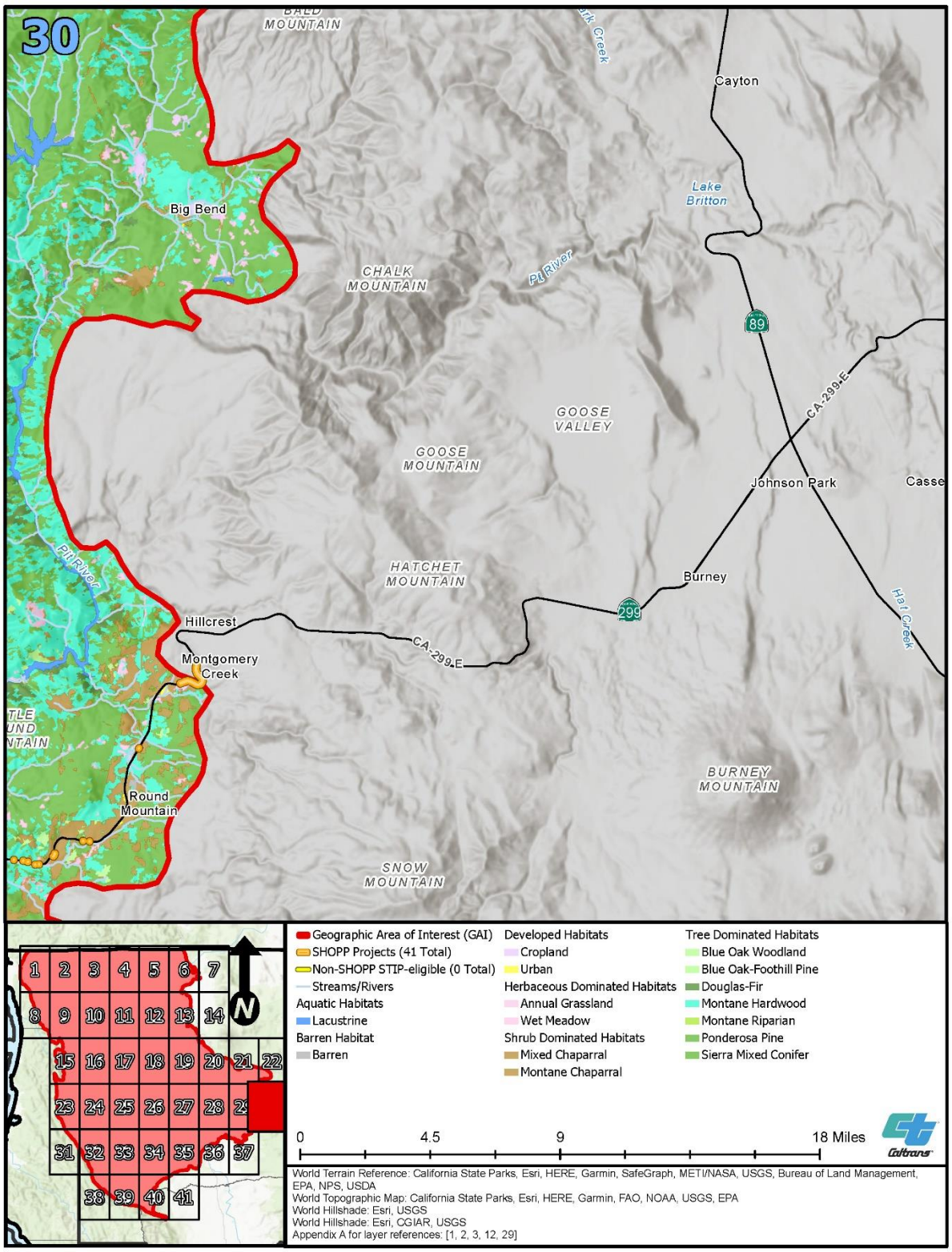

25
Side Creek
New River
East Fork New River
LIMESTONE RIDGE
North Fork Trinity River
8585 ft
SAWTOOTH RIDGE
8950 ft
Stuart Fork
8356 ft
8960 ft
6381 ft
LIMESTONE RIDGE
BACKBONE RIDGE
Globe Mill
Stuart Fork
Dedrick
Del Loma
299
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Developed Habitats
Deciduous Orchard
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Eastside Pine
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

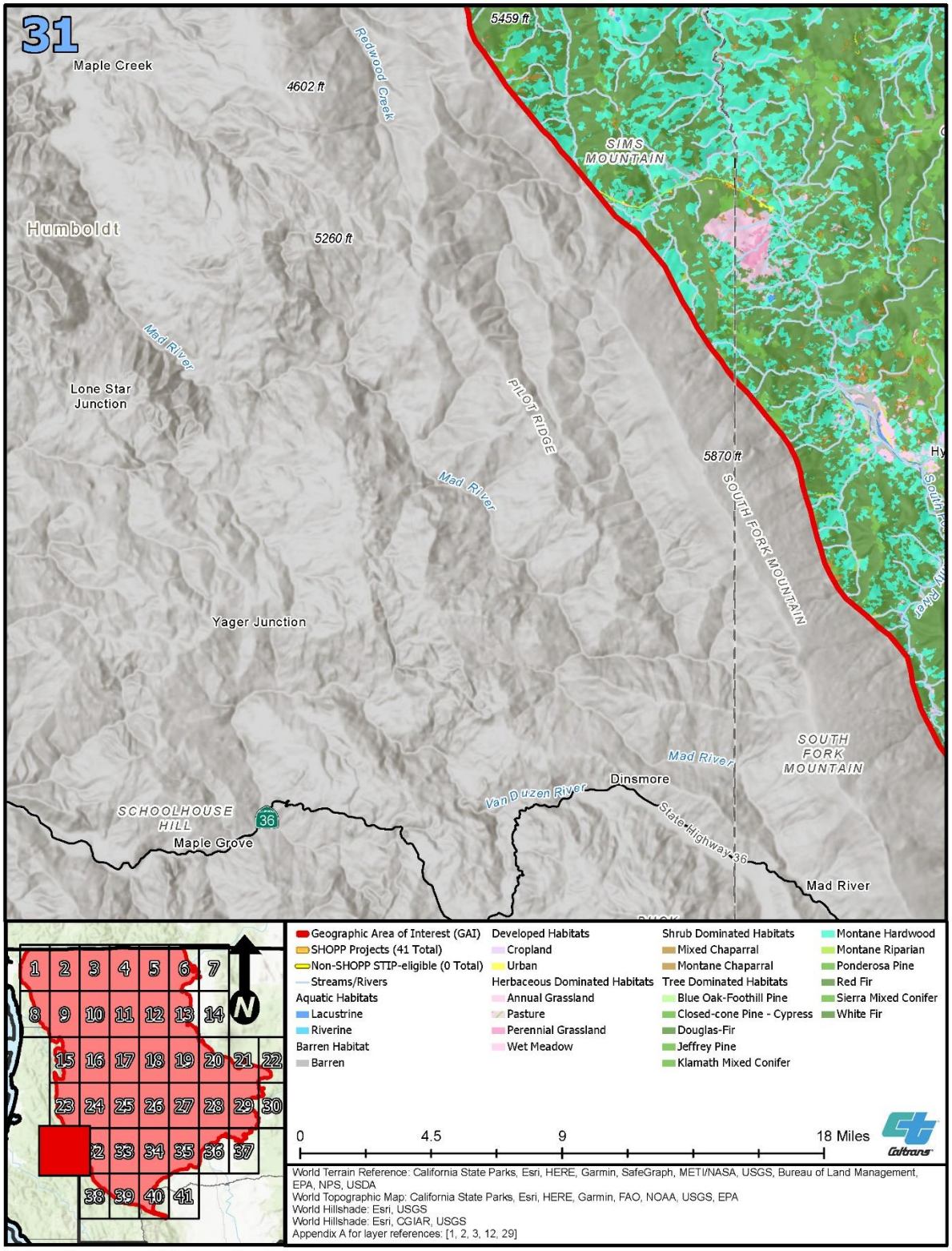

26
Coffee Creek
Carrville
Trinity Center
Covington Mill
Globe Mill
Dedrick
8585 ft
8950 ft
8356 ft
8960 ft
SAWTOOTH RIDGE
Stuart Fork
Stuart Fork
TRINITY MOUNTAIN
Clair Engle Lake
BUCKEYE RIDGE
3
299
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Developed Habitats
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Eastside Pine
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

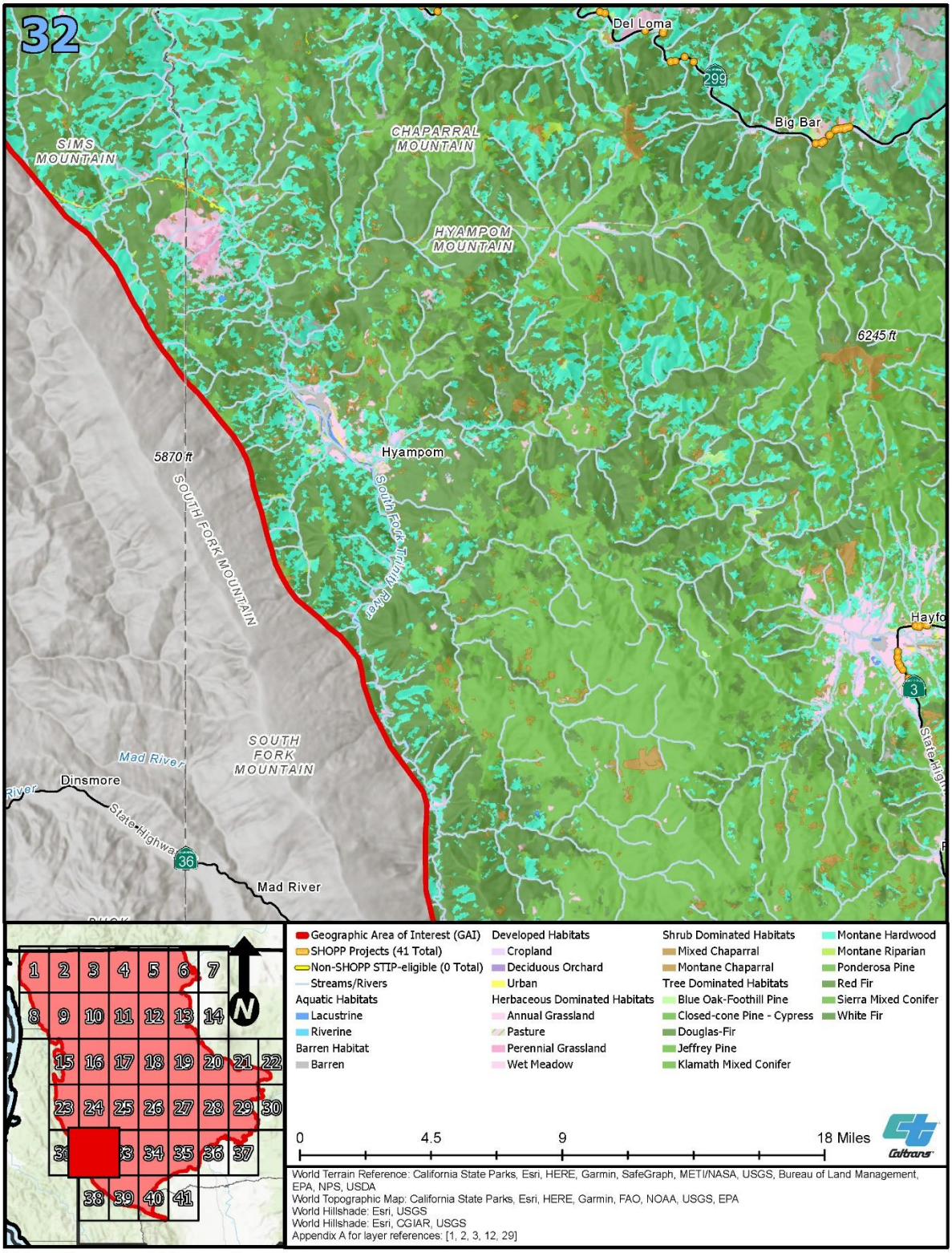

27
Coffee Creek
Carrville
Trinity Center
Covington Mill
Clear Creek
5330 ft
TRINITY MOUNTAIN
SCHELL MOUNTAIN
WILD COW MOUNTAIN
TRINITY MOUNTAIN
Clair Engle Lake
Clear Creek
Sim
Gibson
Fisher
Pollard Flat
Lamoine
Vollmers
Riverview
Lakehead
Sugarloaf
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Developed Habitats
Evergreen Orchard
Vineyard
Urban
Herbaceous Dominated Habitats
Annual Grassland
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Eastside Pine
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Subalpine Conifer
Valley Oak Woodland
White Fir
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

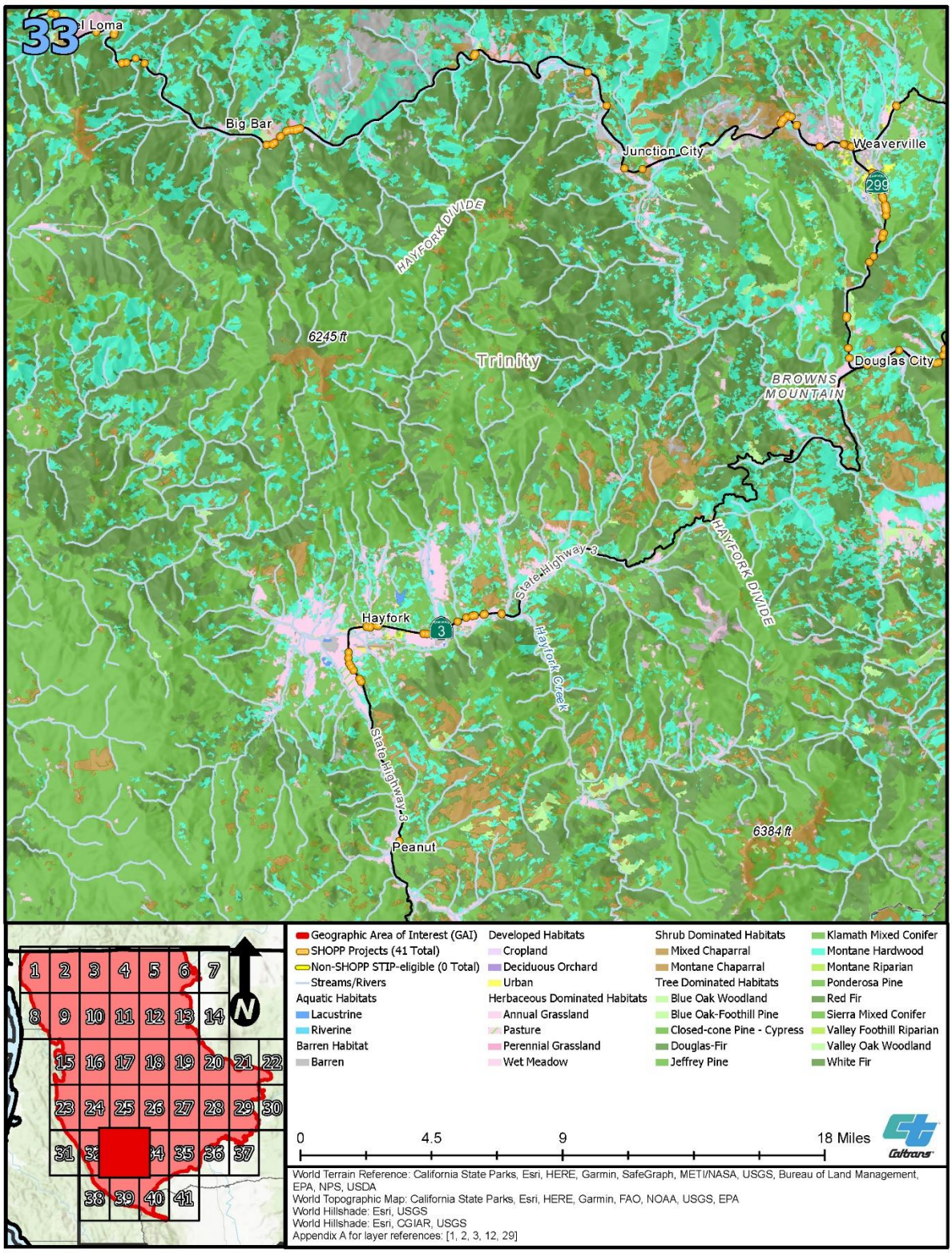

28
Sims
Gibson
Fisher
Pollard Flat
Lamoine
Vollmers
5
Riverview
Lakehead
Sugarloaf
Salt Creek
Obrien
Bully Hill
BROCK MOUNTAIN
Shasta Lake
Point McCloud
McCloud River
5457 ft
4655 ft
HIGH MOUNTAIN
NAWTAWAKET MOUNTAIN
CURL RIDGE
GARDEN RIDGE
Squaw Creek
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Developed Habitats
Urban
Herbaceous Dominated Habitats
Annual Grassland
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Bitterbrush
Low Sage
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak Woodland
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Eastside Pine
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Valley Foothill Riparian
Valley Oak Woodland
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

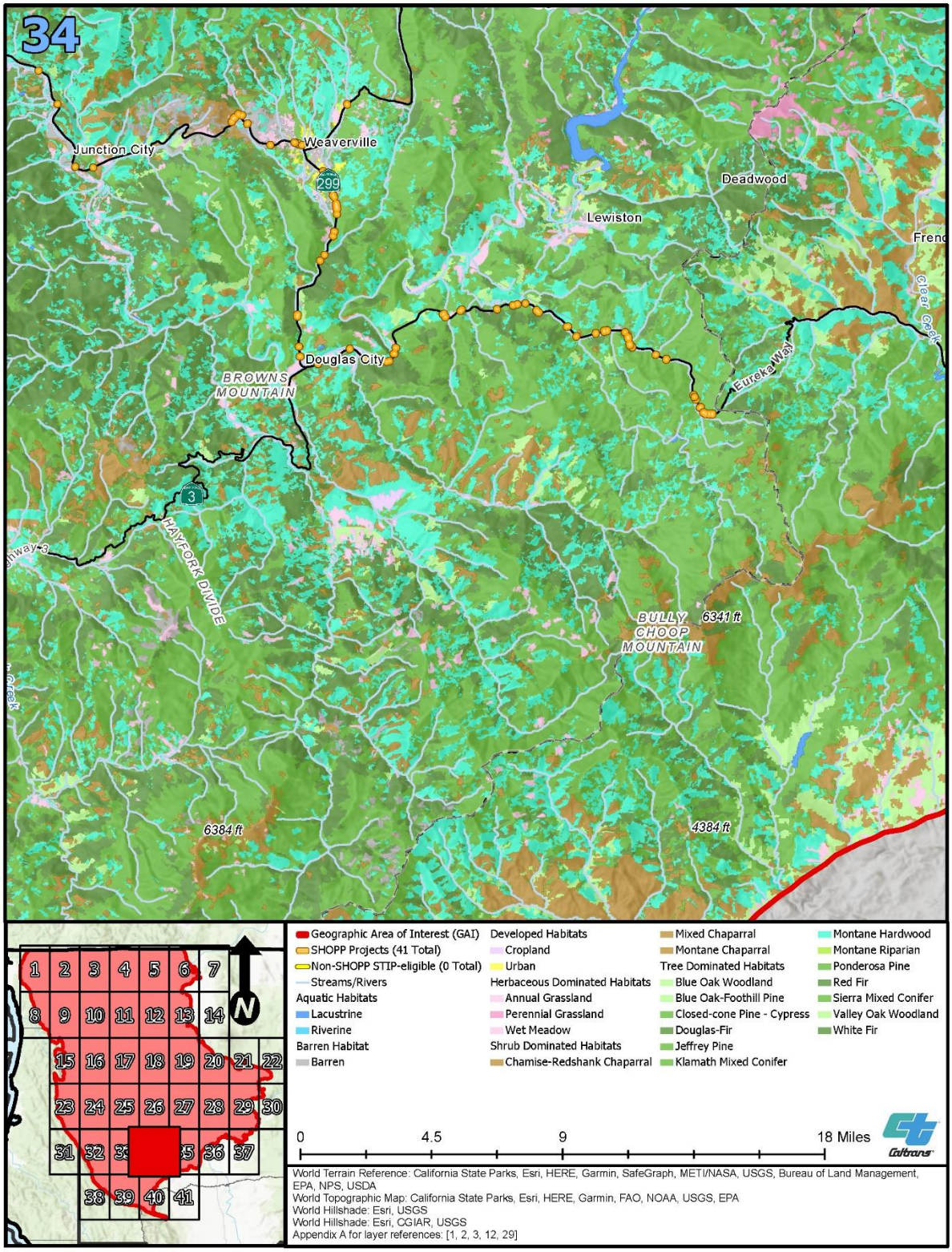

29
McCloud River
Squaw Creek
Big Bend
5457 ft
4655 ft
NAWTAWAKET MOUNTAIN
McCloud River
Point McCloud
CURL RIDGE
GARDEN RIDGE
EAST FORK MOUNTAIN
Squaw Creek
Pit River
Hillcrest
299
Montgomery Creek
LITTLE ROUND MOUNTAIN
Round Mountain
Bully Hill
BROCK MOUNTAIN
Shasta Lake
Shasta
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Bitterbrush
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak Woodland
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Montane Hardwood
Montane Riparian
Ponderosa Pine
Sierra Mixed Conifer
Valley Foothill Riparian
Valley Oak Woodland
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

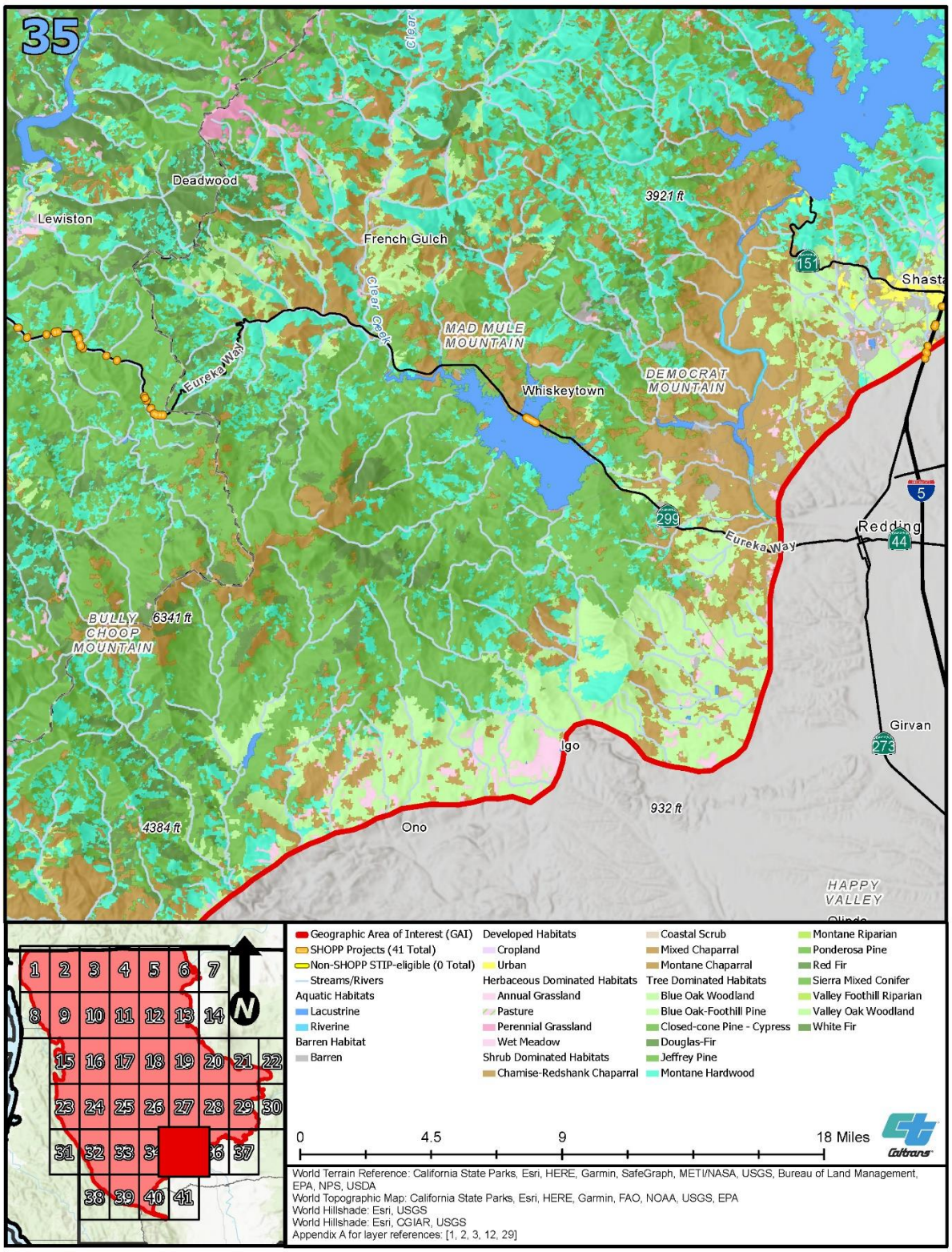

30
BALD MOUNTAIN
Cayton
Lake Britton
Big Bend
CHALK MOUNTAIN
Pit River
89
GOOSE VALLEY
GOOSE MOUNTAIN
CA-299-E
Johnson Park
Pit River
HATCHET MOUNTAIN
Burney
299
Hillcrest
CA-299-E
Montgomery Creek
Round Mountain
BURNEY MOUNTAIN
SNOW MOUNTAIN
N
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29
31 32 33 34 35 36 37
38 39 40 41
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak Woodland
Blue Oak-Foothill Pine
Douglas-Fir
Montane Hardwood
Montane Riparian
Ponderosa Pine
Sierra Mixed Conifer
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

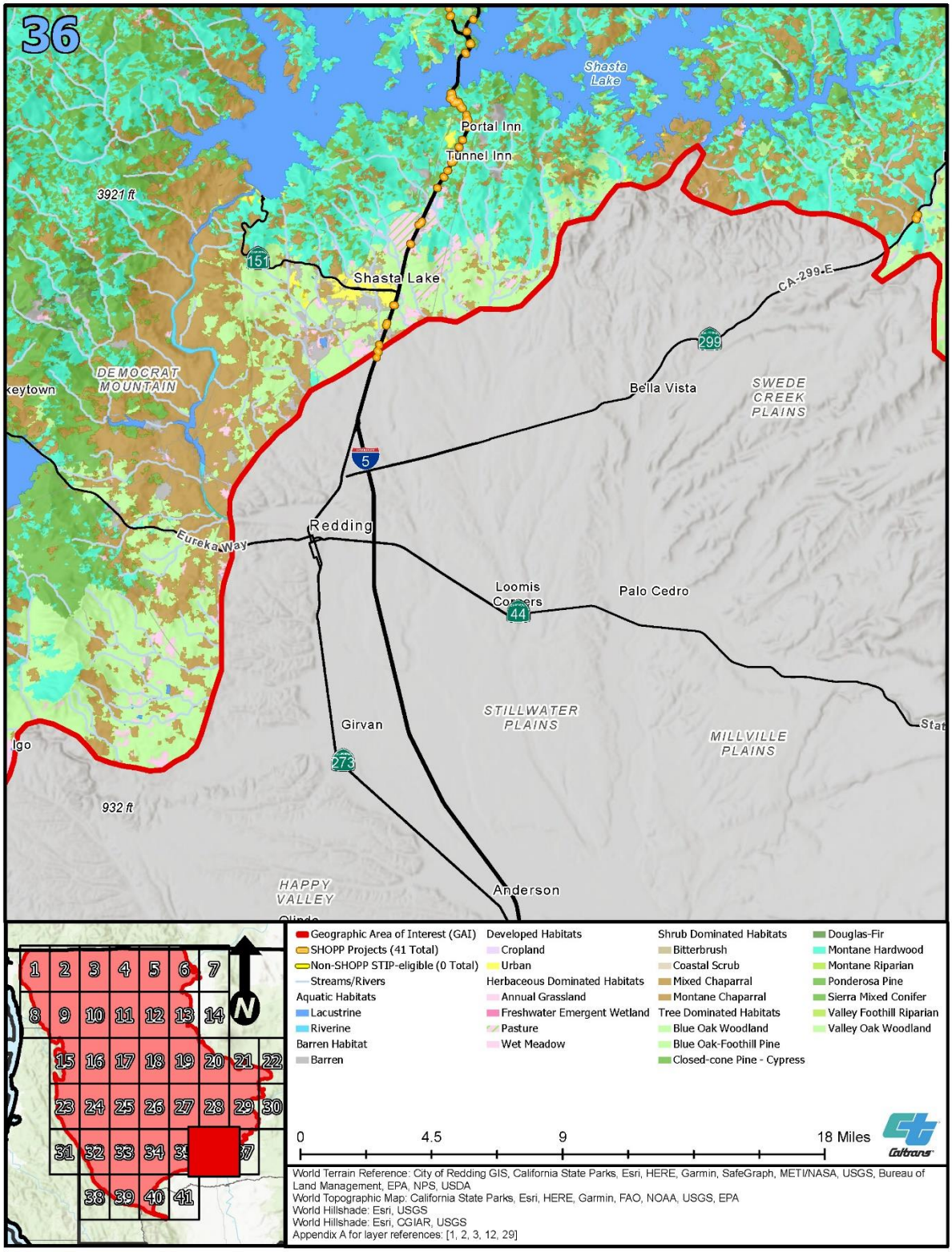

31
Maple Creek
4602 ft
Redwood Creek
5459 ft
SIMS MOUNTAIN
Humboldt
5260 ft
Mad River
Lone Star Junction
PILOT RIDGE
5870 ft
SOUTH FORK MOUNTAIN
Mad River
Yager Junction
SOUTH FORK MOUNTAIN
Mad River
Dinsmore
Van Duzen River
SCHOOLHOUSE HILL
36
Maple Grove
State Highway 36
Mad River
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

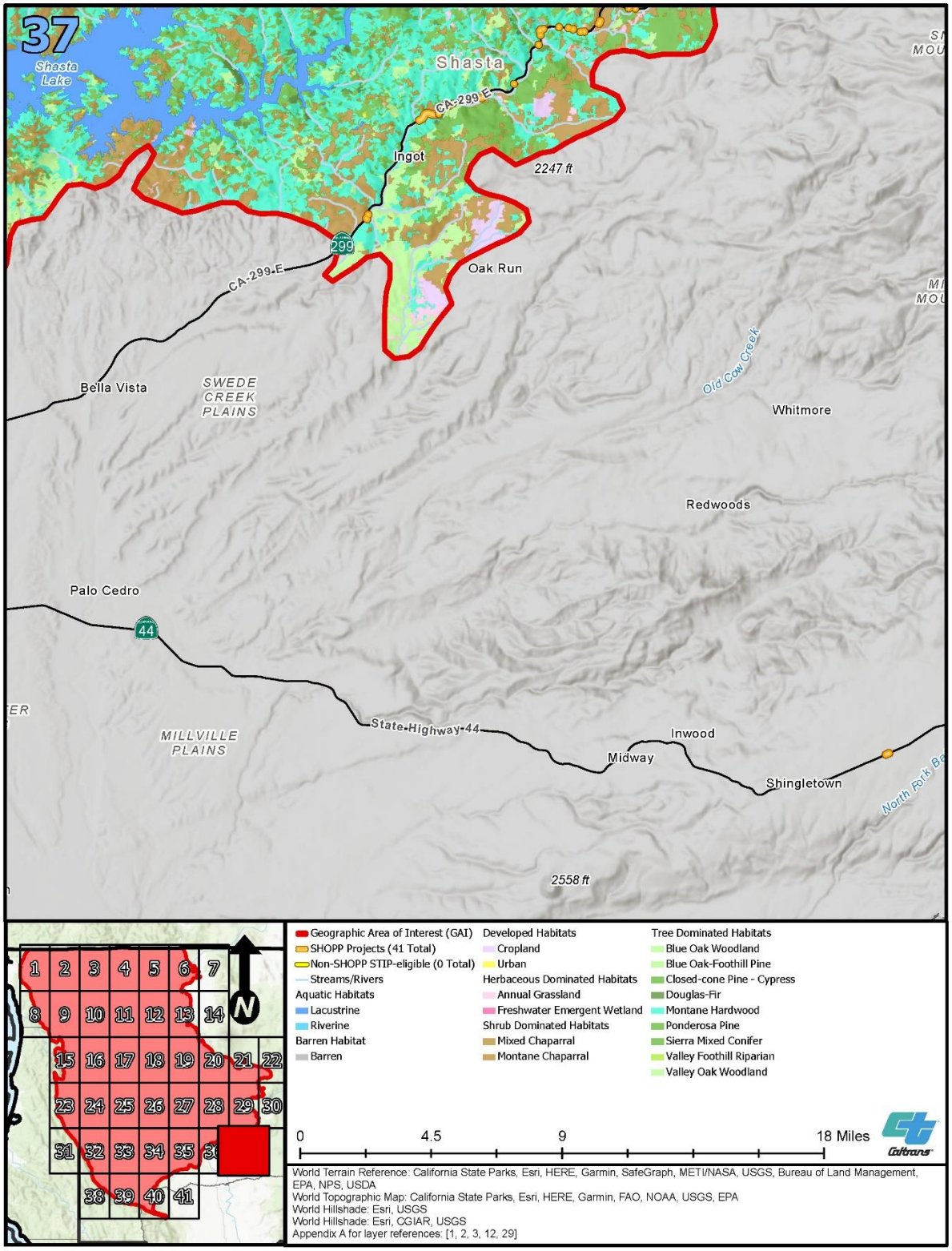

32
Del Loma
299
Big Bar
SIMS MOUNTAIN
CHAPARRAL MOUNTAIN
HYAMPOM MOUNTAIN
6245 ft
5870 ft
Hyampom
SOUTH FORK MOUNTAIN
South Fork Trinity River
Hayfo
3
SOUTH FORK MOUNTAIN
Mad River
Dinsmore
State Highway
36
Mad River
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Deciduous Orchard
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
White Fir
0 4.5 9 18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

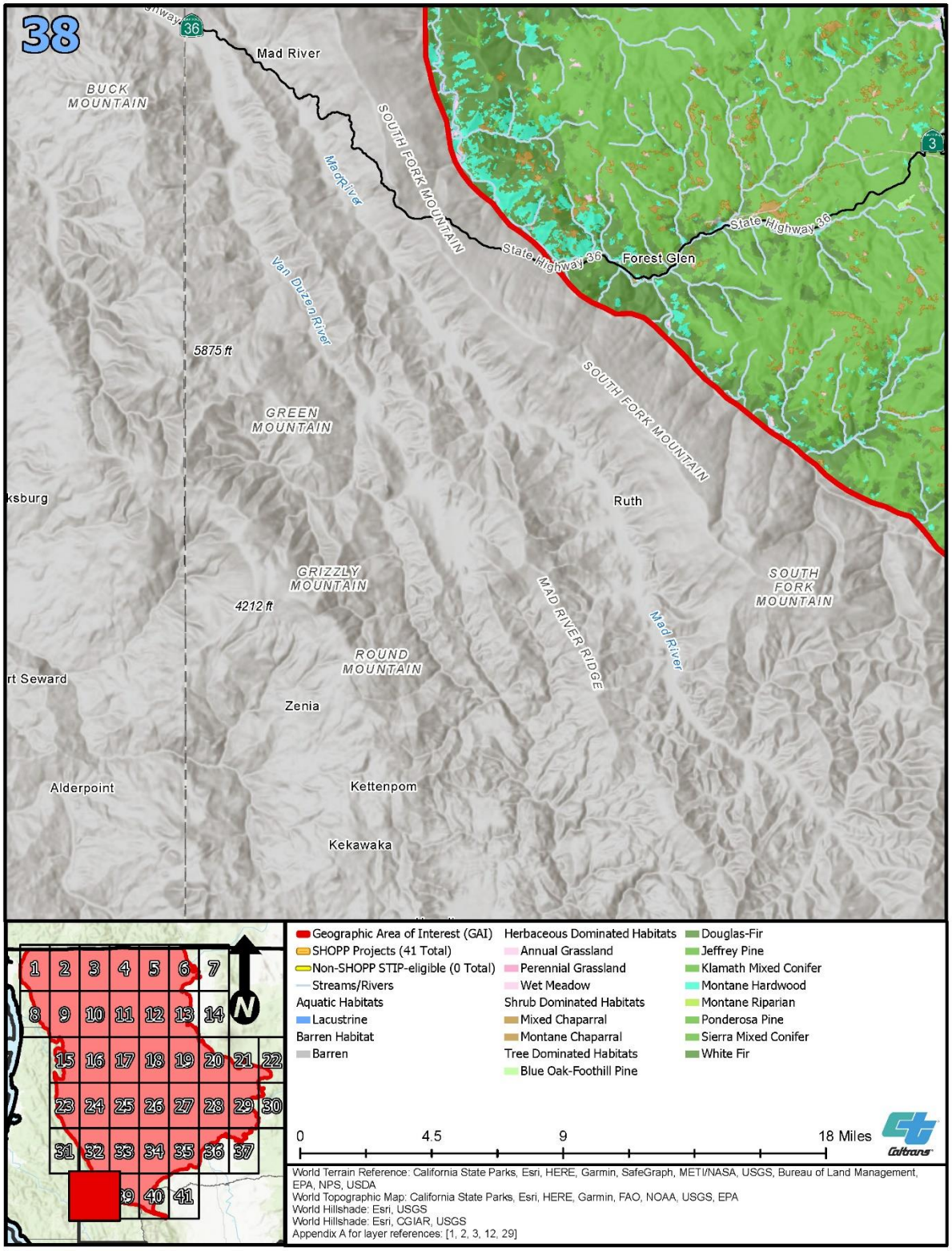

33
Big Bar
Junction City
Weaverville
299
HAYFORK DIVIDE
6245 ft
Trinity
Douglas City
BROWNS MOUNTAIN
State Highway 3
Hayfork
3
Hayfork Creek
6384 ft
Peanut
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Deciduous Orchard
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak Woodland
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Valley Foothill Riparian
Valley Oak Woodland
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

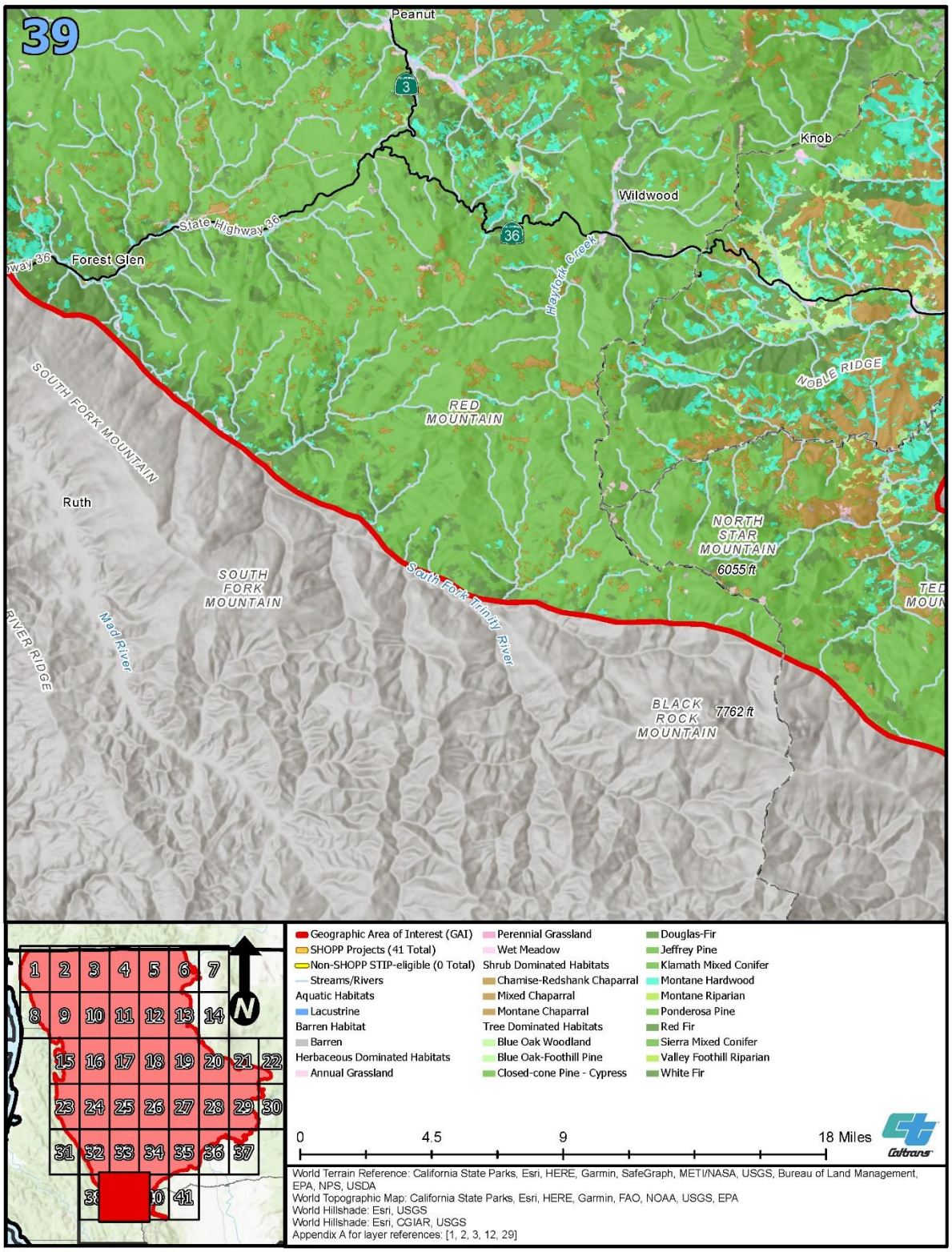

34
Junction City
Weaverville
299
Deadwood
Lewiston
Douglas City
BROWNS MOUNTAIN
Eureka Way
3
HAYFORK DIVIDE
BULLY CHOOP MOUNTAIN
6341 ft
6384 ft
4384 ft
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Chamise-Redshank Chaparral
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak Woodland
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Valley Oak Woodland
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

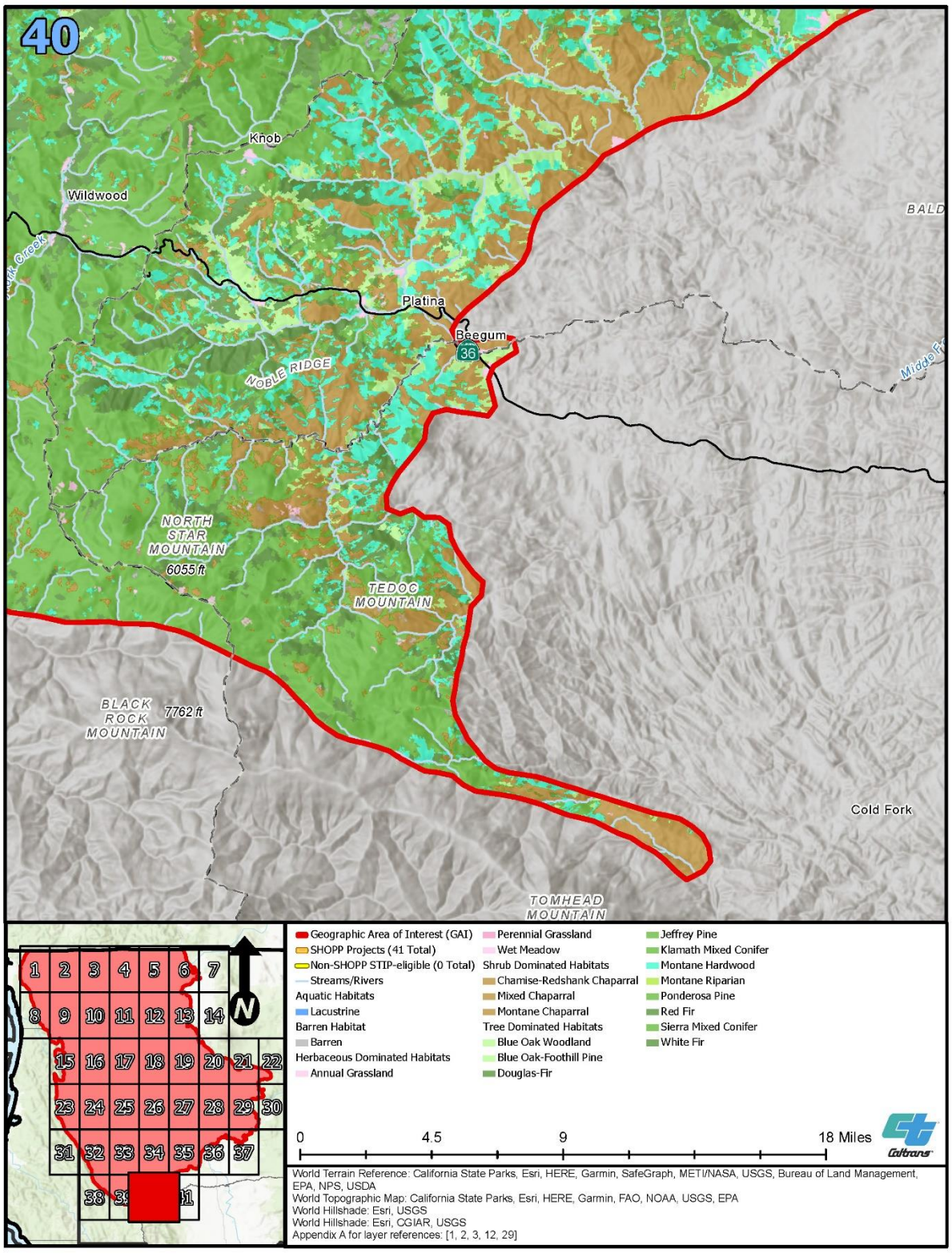

35
Deadwood
Lewiston
French Gulch
Clear Creek
MAD MULE MOUNTAIN
DEMOCRAT MOUNTAIN
3921 ft
Whiskeytown
Eureka Way
Shasta
Redding
Girvan
Igo
Ono
932 ft
4384 ft
BULLY CHOOP MOUNTAIN
6341 ft
HAPPY VALLEY
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Pasture
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Chamise-Redshank Chaparral
Coastal Scrub
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak Woodland
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Jeffrey Pine
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Valley Foothill Riparian
Valley Oak Woodland
White Fir
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

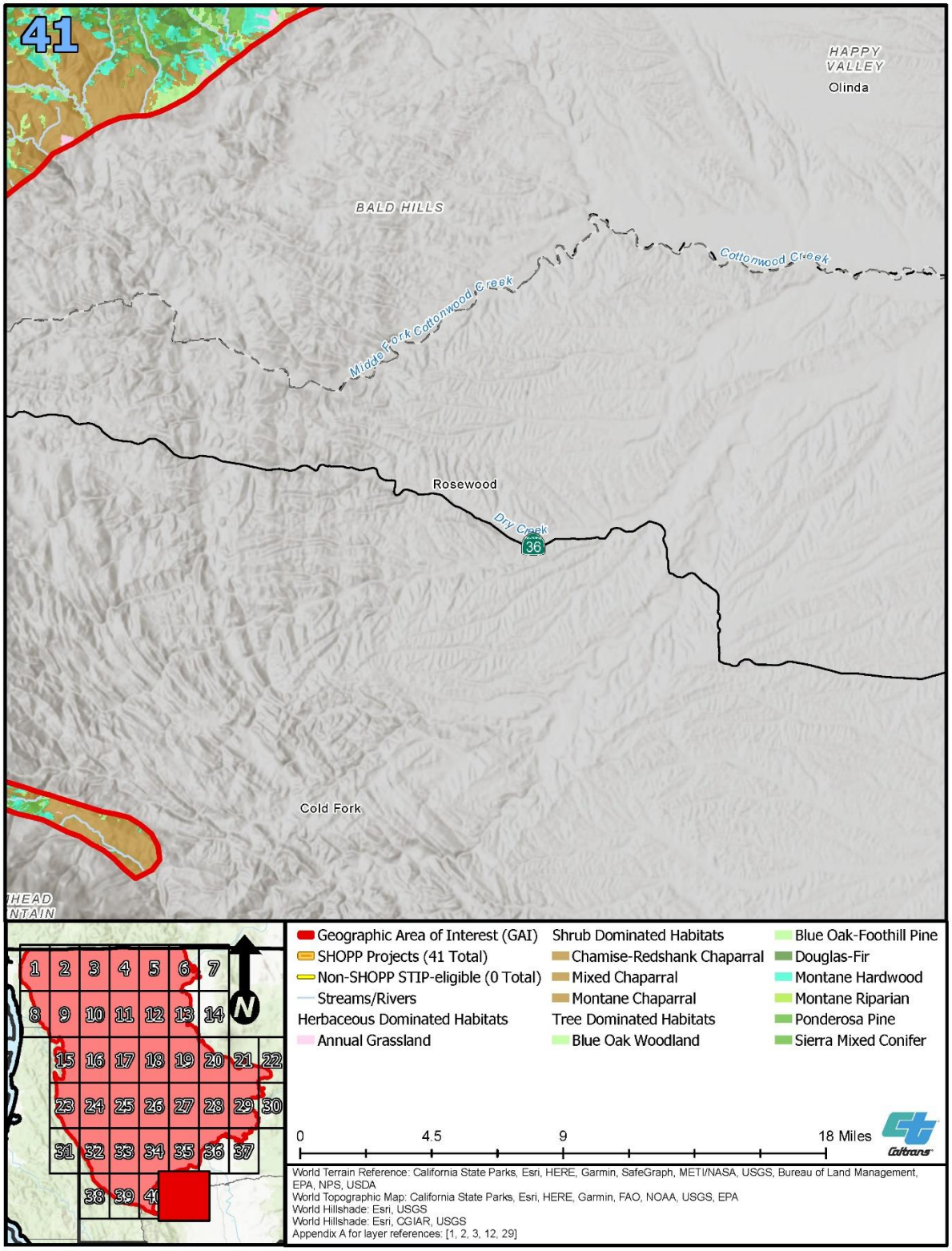

36
Shasta Lake
Portal Inn
Tunnel Inn
3921 ft
151
Shasta Lake
CA-299-E
299
DEMOCRAT MOUNTAIN
Bella Vista
SWEDE CREEK PLAINS
5
Redding
Eureka Way
Loomis
Palo Cedro
44
STILLWATER PLAINS
Girvan
MILLVILLE PLAINS
273
932 ft
HAPPY VALLEY
Anderson
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Freshwater Emergent Wetland
Pasture
Wet Meadow
Shrub Dominated Habitats
Bitterbrush
Coastal Scrub
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak Woodland
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Montane Hardwood
Montane Riparian
Ponderosa Pine
Sierra Mixed Conifer
Valley Foothill Riparian
Valley Oak Woodland
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: City of Redding GIS, California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]


37
Shasta Lake
Shasta
CA-299-E
Ingot
2247 ft
299
Oak Run
CA-299-E
Bella Vista
SWEDE CREEK PLAINS
Old Cow Creek
Whitmore
Redwoods
Palo Cedro
44
State-Highway-44
MILLVILLE PLAINS
Inwood
Midway
Shingletown
North Fork Ba
2558 ft
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Riverine
Barren Habitat
Barren
Developed Habitats
Cropland
Urban
Herbaceous Dominated Habitats
Annual Grassland
Freshwater Emergent Wetland
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak Woodland
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Montane Hardwood
Ponderosa Pine
Sierra Mixed Conifer
Valley Foothill Riparian
Valley Oak Woodland
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]


38
36
Mad River
BUCK MOUNTAIN
SOUTH FORK MOUNTAIN
Mad River
3
State Highway 36
State Highway 36
Forest Glen
Van Duzen River
5875 ft
GREEN MOUNTAIN
SOUTH FORK MOUNTAIN
ksburg
Ruth
GRIZZLY MOUNTAIN
4212 ft
MAD RIVER RIDGE
Mad River
SOUTH FORK MOUNTAIN
ROUND MOUNTAIN
rt Seward
Zenia
Alderpoint
Kettenpom
Kekawaka
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Herbaceous Dominated Habitats
Annual Grassland
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak-Foothill Pine
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Sierra Mixed Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]


39
Peanut
3
Knob
Wildwood
36
State Highway 36
Forest Glen
Hayfork Creek
SOUTH FORK MOUNTAIN
RED MOUNTAIN
NOBLE RIDGE
Ruth
NORTH STAR MOUNTAIN
6055 ft
SOUTH FORK MOUNTAIN
South Fork Trinity River
Mad River
RIVER RIDGE
BLACK ROCK MOUNTAIN
7762 ft
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Herbaceous Dominated Habitats
Annual Grassland
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Chamise-Redshank Chaparral
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak Woodland
Blue Oak-Foothill Pine
Closed-cone Pine - Cypress
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
Valley Foothill Riparian
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]


40
Knob
Wildwood
Platina
Beegum
36
NOBLE RIDGE
NORTH STAR MOUNTAIN
6055 ft
TEDOC MOUNTAIN
BLACK ROCK MOUNTAIN
7762 ft
Cold Fork
TOMHEAD MOUNTAIN
BALD
Middle Fk
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Aquatic Habitats
Lacustrine
Barren Habitat
Barren
Herbaceous Dominated Habitats
Annual Grassland
Perennial Grassland
Wet Meadow
Shrub Dominated Habitats
Chamise-Redshank Chaparral
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak Woodland
Blue Oak-Foothill Pine
Douglas-Fir
Jeffrey Pine
Klamath Mixed Conifer
Montane Hardwood
Montane Riparian
Ponderosa Pine
Red Fir
Sierra Mixed Conifer
White Fir
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]


41
HAPPY VALLEY
Olinda
BALD HILLS
Cottonwood Creek
Middle Fork Cottonwood Creek
Rosewood
Dry Creek
36
Cold Fork
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
Herbaceous Dominated Habitats
Annual Grassland
Shrub Dominated Habitats
Chamise-Redshank Chaparral
Mixed Chaparral
Montane Chaparral
Tree Dominated Habitats
Blue Oak Woodland
Blue Oak-Foothill Pine
Douglas-Fir
Montane Hardwood
Montane Riparian
Ponderosa Pine
Sierra Mixed Conifer
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 12, 29]

APPENDIX D: COMPLETE SAMNA SPECIES RESULTS

Complete terrestrial species SAMNA results for the GAI are provided in Table D-1. The table lists 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 not be incorporated into the SAMNA model (that is, from a geographically based, available dataset), SAMNA results are provided at the species level, which may include both special-status and non-special-status species; therefore, the number of species with the potential to be affected may be overestimated.
- If impacts were estimated, additional information sources[1] 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 on 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 affected by transportation projects.

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

Habitats referenced in Table D-1 are mapped in Appendix C. The terrestrial species of mitigation need for this GAI include foothill yellow-legged frog (*Rana boylii*), Shasta and Samwel salamanders (*Hydromantes shastae* and *H. samweli*), and fisher (*Pekania pennanti*). Several other special-status species share habitat with these species of

[1] 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 Species of Special Concern* (Shuford and Gardali 2008). For amphibians and reptiles, this includes California Herps online, HCPs/NCCPs, and National Park Service documents.

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 foothill yellow-legged frog 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 Table D-1 and are provided in tables 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 2021/2022 Fiscal Year. In preparation. Sacramento, California. https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation.

Shuford, W. D., and T. Gardali, editors. 2008. *California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conversation Concern in California*.

Table D-1. Complete SAMNA Results for the Klamath Mountains Ecoregion Section in the GAI, by Land Cover (acres)

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Blue Oak-Foothill Pine	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Douglas-Fir	Jeffrey Pine	Juniper	Klamath Mixed Conifer	Lacustrine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Perennial Grassland	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Foothill Riparian	Valley Oak Woodland	Wet Meadow	White Fir	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	See below	See below	See below	See below	See below	See below	See below	See below
Ashland thistle	*Cirsium ciliolatum*	SE	9.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**20.05**
Baker's manzanita[a]	*Arctostaphylos bakeri*	SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.37**
Baker's meadowfoam[a]	*Limnanthes bakeri*	SR	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.47**
Bensoniella	*Bensoniella oregona*	FS, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	**6.03**
Clara Hunt's milk-vetch[a]	*Astragalus claranus*	FE, ST	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**2.14**
Contra Costa goldfields[a]	*Lasthenia conjugens*	FE	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**1.77**
Gentner's fritillary	*Fritillaria gentneri*	FE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.77	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	**2.81**
Humboldt County milk-vetch[a]	*Astragalus agnicidus*	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	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	**0.77**
Indian Valley brodiaea	*Brodiaea rosea*	FS, SE	9.56	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	5.55	0.00	1.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**25.62**
Kellogg's buckwheat[a]	*Eriogonum kelloggii*	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.97**
Loch Lomond button-celery[a]	*Eryngium constancei*	FE, SE	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.47**
McDonald's rockcress	*Arabis mcdonaldiana*	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.97**
Many-flowered navarretia[a]	*Navarretia leucocephala* ssp. *plieantha*	FE, SE	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.47**
Milo Baker's lupine[a]	*Lupinus milo-bakeri*	ST	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**1.77**
Napa blue grass[a]	*Poa napensis*	FE, SE	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.47**
Pennell's bird's-beak[a]	*Cordylanthus tenuis* ssp. *capillaris*	FE, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.37**
Pitkin marsh lily[a]	*Lilium pardalinum* ssp. *pitkinense*	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**1.30**
Roderick's fritillary[a]	*Fritillaria roderickii*	SE	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.47**

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Blue Oak-Foothill Pine	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Douglas-Fir	Jeffrey Pine	Juniper	Klamath Mixed Conifer	Lacustrine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Perennial Grassland	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Foothill Riparian	Valley Oak Woodland	Wet Meadow	White Fir	Total
Sebastopol meadowfoam[a]	*Limnanthes vinculans*	FE, SE	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.47**
Siskiyou mariposa lily	*Calochortus persistens*	FS, SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.38	0.00	0.00	0.00	0.00	0.00	**12.93**
Sonoma sunshine[a]	*Blennosperma bakeri*	FE, SE	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.47**
The Cedars manzanita[a]	*Arctostaphylos bakeri* ssp. *sublaevis*	SR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.37**
Trinity buckwheat	*Eriogonum alpinum*	FS, SE	0.00	33.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**38.74**
Two-fork clover[a]	*Trifolium amoenum*	FE	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.47**
Vine Hill clarkia[a]	*Clarkia imbricata*	FE, SE	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.84**
Vine Hill manzanita[a]	*Arctostaphylos densiflora*	SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.37**
Yreka phlox	*Phlox hirsuta*	FE, SE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**5.03**
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	See below	See below	See below	See below	See below	See below	See below	See below	See below
California red-legged frog	*Rana draytonii*	FT, SSC	0.10	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.57	0.14	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**1.18**
Cascades frog	*Rana cascadae*	FS, SCE, SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68	0.00	0.00	0.00	0.00	0.00	**2.04**
Coastal tailed frog	*Ascaphus truei*	SSC	0.00	0.00	0.00	0.00	0.00	0.00	4.62	0.08	0.00	2.00	0.00	0.00	0.00	0.00	5.83	2.53	0.00	0.00	1.51	1.44	0.00	0.00	0.00	0.00	0.00	0.04	**18.05**
Del Norte salamander	*Plethodon elongatus*	None	0.00	0.00	0.00	0.00	0.00	0.00	3.20	0.00	0.00	1.65	0.00	0.00	0.00	0.00	3.15	2.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**10.34**
Ensatina[b]	*Ensatina eschscholtzii*	FS	0.00	0.00	0.15	0.40	0.02	0.47	4.62	0.00	0.00	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.00	0.00	1.84	0.00	7.38	0.00	0.37	0.01	0.13	0.04	**44.29**
Foothill yellow-legged frog[c]	*Rana boylii*	FS, SSC	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.00	0.00	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.00	0.00	1.84	1.44	7.38	0.00	0.37	0.01	0.13	0.04	**55.76**
Long-toed salamander[d]	*Ambystoma macrodactylum*	FE, SE, SFP	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.08	0.00	0.35	0.00	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.19	0.00	0.00	0.00	**1.82**
Shasta salamander	*Hydromantes shastae*	FS, ST	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.00	2.74	0.00	0.00	0.00	0.00	0.00	**4.38**
Southern torrent salamander	*Rhyacotriton variegatus*	FS, SSC	0.00	0.00	0.00	0.00	0.00	0.00	3.16	0.00	0.00	1.65	0.00	0.00	0.00	0.00	3.21	2.09	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.04	**10.19**
Western spadefoot	*Spea hammondii*	FS, SSC	0.10	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.24**

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Blue Oak-Foothill Pine	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Douglas-Fir	Jeffrey Pine	Juniper	Klamath Mixed Conifer	Lacustrine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Perennial Grassland	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Foothill Riparian	Valley Oak Woodland	Wet Meadow	White Fir	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	See below	See below	See below	See below	See below	See below	See below	See below
California mountain kingsnake	*Lampropeltis zonata*	None	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.45	0.00	2.00	0.00	5.92	0.68	9.16	14.28	2.53	0.00	0.00	1.84	0.00	7.38	0.00	0.37	0.01	0.13	0.04	**54.77**
Common gartersnake[e]	*Thamnophis sirtalis*	FE, SE, SFP	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.39	5.92	0.68	9.16	14.28	2.53	0.11	0.12	1.84	0.00	7.38	0.00	0.37	0.01	0.13	0.04	**55.58**
Common sagebrush lizard[f]	*Sceloporus graciosus*	FS	0.00	0.00	0.00	0.00	0.00	0.00	4.62	0.45	0.19	2.00	0.00	5.92	0.68	9.16	14.28	0.00	0.00	0.00	1.84	0.00	7.38	0.00	0.00	0.00	0.00	0.04	**40.84**
Gophersnake	*Pituophis catenifer*	None	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.00	5.92	0.68	9.16	14.28	2.53	0.11	0.12	1.84	0.00	7.38	36.04	0.37	0.01	0.13	0.04	**91.23**
Northern rubber boa	*Charina bottae*	None	0.00	0.00	0.00	0.00	0.02	0.00	4.62	0.45	0.00	2.00	0.00	0.00	0.68	9.16	14.28	2.53	0.00	0.00	1.84	0.00	7.38	0.00	0.37	0.00	0.13	0.04	**37.79**
Ring-necked snake[g]	*Diadophis punctatus*	FS	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.00	0.00	2.00	0.00	5.92	0.68	9.16	14.28	2.53	0.11	0.12	1.84	0.00	7.38	36.04	0.37	0.01	0.00	0.04	**90.46**
Striped racer[h]	*Masticophis [Coluber] lateralis*	FT, ST	0.00	0.00	0.15	0.40	0.00	0.00	1.22	0.00	0.00	0.00	0.00	4.11	0.50	6.72	7.52	0.01	0.00	0.00	1.47	0.00	4.50	0.00	0.18	0.01	0.13	0.04	**22.65**
Western skink[i]	*Plestiodon skiltonianus*	FS	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.00	0.19	2.00	0.00	5.92	0.68	9.16	14.28	2.53	0.11	0.12	1.84	0.00	7.38	0.00	0.37	0.01	0.13	0.04	**54.61**
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	See below	See below	See below	See below	See below	See below	See below	See below
American white pelican	*Pelecanus erythrorhyn-chos*	SSC	0.00	17.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**17.95**
Bald eagle	*Haliaeetus leucocephalus*	FS, SE, SFP	10.03	37.08	0.15	0.40	0.00	0.47	4.62	0.45	0.19	2.00	0.39	5.92	0.68	11.79	5.93	2.53	0.00	0.12	1.84	1.44	7.38	0.00	0.37	0.01	0.13	0.04	**93.97**
Bewick's wren[j]	*Thryomanes bewickii*	SSC	0.00	0.00	0.15	0.40	0.00	0.47	4.62	0.00	0.19	2.00	0.00	2.68	0.68	11.79	5.93	2.53	0.00	0.00	1.82	0.00	0.00	36.04	0.37	0.01	0.00	0.04	**69.72**
Black swift	*Cypseloides niger*	SSC	0.03	18.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.15	0.05	0.56	0.00	0.00	0.00	0.01	0.00	1.10	1.28	0.37	0.00	0.00	0.00	**21.96**
Burrowing owl	*Athene cunicularia*	FS, SSC	1.69	28.05	0.15	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.08	0.49	0.00	0.00	0.00	0.04	0.00	1.27	0.00	0.00	5.43	0.18	0.00	0.00	0.00	**41.74**
California quail[k]	*Callipepla californica*	SSC	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.00	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.00	0.12	1.84	0.00	7.38	36.04	0.37	0.01	0.13	0.04	**90.68**
California spotted owl	*Strix occidentalis occidentalis*	FS, SSC	0.00	0.00	0.00	0.04	0.00	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00	1.82	0.08	0.00	0.00	0.00	0.08	0.00	0.01	0.00	0.00	0.00	0.00	0.00	**2.85**
California towhee[l]	*Melozone [Pipilo] crissalis*	FT, SE	0.00	0.00	0.15	0.40	0.02	0.00	0.00	0.00	0.00	0.00	0.00	1.82	0.14	7.70	2.72	1.06	0.00	0.00	1.34	0.00	0.00	21.72	0.00	0.01	0.00	0.00	**37.09**

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Blue Oak-Foothill Pine	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Douglas-Fir	Jeffrey Pine	Juniper	Klamath Mixed Conifer	Lacustrine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Perennial Grassland	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Foothill Riparian	Valley Oak Woodland	Wet Meadow	White Fir	Total
Common loon[m]	*Gavia immer*	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.39**
Common yellowthroat[n]	*Geothlypis trichas*	SSC	8.14	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	2.53	0.00	0.12	1.51	0.00	0.00	0.00	0.37	0.00	0.13	0.00	**12.80**
Golden eagle	*Aquila chrysaetos*	FS, SFP, SFS	10.03	37.08	0.15	0.40	0.00	0.47	4.62	0.45	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	0.00	7.38	36.04	0.37	0.01	0.13	0.04	**128.29**
Grasshopper sparrow	*Ammodramus savannarum*	SSC	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	**1.25**
Great blue heron	*Ardea herodias*	SFS	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.00	0.19	2.00	0.39	0.00	0.00	11.79	5.93	2.53	0.00	0.12	1.84	1.44	7.38	36.04	0.37	0.01	0.13	0.04	**85.91**
Great egret	*Ardea alba*	SFS	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.60**
Greater white-fronted goose[o]	*Anser albifrons*	SSC	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.60**
Hutton's vireo[p]	*Vireo huttoni*	SSC	0.00	0.00	0.15	0.40	0.02	0.47	4.62	0.00	0.00	0.00	0.00	4.81	0.00	10.85	5.83	2.51	0.00	0.00	1.51	0.00	7.21	33.37	0.37	0.01	0.00	0.00	**72.13**
Loggerhead shrike	*Lanius ludovicianus*	SSC	0.92	4.20	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.04	0.00	0.37	0.14	0.00	0.00	0.00	0.17	0.00	0.00	0.06	0.00	0.00	0.00	0.00	**5.98**
Long-eared owl	*Asio otus*	SSC	10.03	0.00	0.15	0.40	0.00	0.47	0.00	0.00	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	0.00	7.38	0.00	0.37	0.01	0.13	0.04	**50.09**
Marsh wren	*Cistothorus palustris*	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**1.01**
Northern goshawk	*Accipiter gentilis*	FS, SSC, SFS	0.00	0.00	0.00	0.40	0.00	0.47	4.62	0.45	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.00	0.00	1.84	0.00	7.38	0.00	0.37	0.01	0.00	0.04	**44.62**
Northern harrier	*Circus hudsonius [cyaneus]*	SSC	1.06	3.35	0.00	0.00	0.00	0.00	1.64	0.00	0.00	0.77	0.00	0.31	0.00	1.09	0.83	1.01	0.00	0.00	0.00	0.00	0.00	8.26	0.00	0.00	0.00	0.00	**18.32**
Spotted owl	*Strix occidentalis*	FS, SSC	0.00	0.00	0.00	0.19	0.00	0.47	4.62	0.45	0.00	2.00	0.00	0.00	0.00	9.34	5.44	2.51	0.00	0.00	1.00	0.00	7.27	0.00	0.37	0.00	0.00	0.04	**33.70**
Northern spotted owl	*Strix occidentalis caurina*	FT, ST, SFS	0.00	0.00	0.00	0.16	0.00	0.47	3.80	0.45	0.00	2.00	0.00	0.00	0.00	7.52	5.36	2.51	0.00	0.00	0.92	0.00	7.26	0.00	0.37	0.00	0.00	0.04	**30.85**
Olive-sided flycatcher	*Contopus cooperi*	SSC	0.00	0.00	0.00	0.40	0.00	0.00	4.62	0.45	0.00	2.00	0.00	5.92	0.00	11.79	5.93	2.53	0.00	0.00	1.84	0.00	7.38	0.00	0.00	0.00	0.00	0.04	**42.91**
Osprey	*Pandion haliaetus*	SFS	10.03	37.08	0.15	0.40	0.02	0.47	4.59	0.45	0.19	2.00	0.39	5.92	0.68	11.79	5.91	2.53	0.00	0.12	1.84	1.44	7.38	0.00	0.37	0.01	0.13	0.04	**93.93**
Peregrine falcon	*Falco peregrinus*	SFP, SFS	10.03	37.08	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.39	5.92	0.68	11.79	5.93	2.53	0.00	0.12	1.84	1.44	7.38	36.04	0.37	0.01	0.13	0.04	**130.04**
Purple martin	*Progne subis*	SSC	9.94	0.00	0.00	0.40	0.02	0.47	4.62	0.00	0.00	2.00	0.39	0.00	0.00	11.79	5.93	2.53	0.00	0.12	1.83	1.44	7.38	35.98	0.37	0.01	0.13	0.04	**85.40**
Red-winged blackbird[q]	*Agelaius phoeniceus*	SSC	9.92	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	2.22	0.00	0.12	0.00	0.00	0.00	33.94	0.37	0.00	0.13	0.00	**46.71**

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Blue Oak-Foothill Pine	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Douglas-Fir	Jeffrey Pine	Juniper	Klamath Mixed Conifer	Lacustrine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Perennial Grassland	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Foothill Riparian	Valley Oak Woodland	Wet Meadow	White Fir	Total
Sandhill crane	*Antigone [Grus] canadensis*	FS, ST, SFP	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.60**
Savannah sparrow[r]	*Passerculus sandwichensis*	SE	2.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**3.31**
Short-eared owl	*Asio flammeus*	SSC	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.60**
Song sparrow[s]	*Melospiza melodia*	SSC	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.45	0.00	2.00	0.39	5.92	0.00	11.79	5.93	2.53	0.00	0.12	1.84	1.44	7.38	36.04	0.37	0.01	0.13	0.04	**92.09**
Sooty grouse[t]	*Dendragapus fuliginosus*	SSC	10.03	0.00	0.00	0.00	0.00	0.00	4.62	0.45	0.00	2.00	0.00	0.00	0.00	11.79	5.93	2.53	0.00	0.12	1.84	0.00	7.38	0.00	0.00	0.00	0.00	0.04	**46.74**
Spotted towhee[u]	*Pipilo maculatus*	SSC	0.00	0.00	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.00	0.00	1.84	0.00	7.38	36.04	0.37	0.01	0.00	0.04	**80.84**
Swainson's hawk	*Buteo swainsoni*	FS, ST	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.05**
Vaux's swift	*Chaetura vauxi*	SSC	0.00	0.00	0.00	0.40	0.02	0.47	4.62	0.45	0.00	2.00	0.39	5.92	0.68	11.79	5.93	2.53	0.00	0.12	1.84	1.44	7.38	36.04	0.37	0.00	0.13	0.04	**82.57**
Vesper sparrow[v]	*Pooecetes gramineus*	SSC	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.60**
Yellow warbler	*Setophaga petechia*	SSC	0.00	0.00	0.15	0.40	0.02	0.47	4.62	0.45	0.00	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.00	0.00	1.84	0.00	7.38	36.04	0.37	0.01	0.00	0.04	**80.65**
Yellow-breasted chat	*Icteria virens*	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.53	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	**2.90**
Yellow-headed blackbird	*Xanthoce-phalus xantho-cephalus*	SSC	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.60**
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	See below	See below	See below	See below	See below	See below	See below	See below
American badger	*Taxidea taxus*	SSC	10.03	37.08	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	0.00	7.38	0.00	0.37	0.01	0.13	0.04	**92.27**
Black-tailed jackrabbit[w]	*Lepus californicus*	SSC	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	0.00	7.38	36.04	0.37	0.01	0.13	0.04	**91.23**
Broad-footed mole[x]	*Scapanus latimanus*	SSC	10.03	0.00	0.15	0.40	0.00	0.47	4.62	0.45	0.00	2.00	0.00	0.00	0.00	11.79	5.93	2.53	0.11	0.12	1.84	0.00	7.38	0.00	0.37	0.01	0.13	0.04	**48.38**
Brush rabbit[y]	*Sylvilagus bachmani*	FE, SE	10.03	0.00	0.15	0.40	0.00	0.47	4.62	0.00	0.00	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	0.00	7.38	36.04	0.37	0.01	0.00	0.00	**90.40**
California kangaroo rat[z]	*Dipodomys californicus*	SSC	4.46	0.00	0.15	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.97	0.00	8.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	**18.32**
California vole[aa]	*Microtus californicus*	FS	8.35	0.00	0.15	0.33	0.00	0.00	1.12	0.00	0.00	0.00	0.00	1.46	0.08	5.78	1.51	0.06	0.09	0.12	1.62	0.00	4.78	13.80	0.00	0.01	0.13	0.00	**39.38**
Deer mouse[bb]	*Peromyscus maniculatus*	SSC	10.03	37.08	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	0.00	7.38	36.04	0.37	0.01	0.13	0.04	**128.32**

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Blue Oak-Foothill Pine	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Douglas-Fir	Jeffrey Pine	Juniper	Klamath Mixed Conifer	Lacustrine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Perennial Grassland	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Foothill Riparian	Valley Oak Woodland	Wet Meadow	White Fir	Total
Dusky-footed woodrat[cc]	*Neotoma fuscipes*	FE, SSC	0.00	0.00	0.15	0.40	0.02	0.47	4.62	0.00	0.00	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.00	0.12	1.84	0.00	7.38	0.00	0.37	0.01	0.13	0.04	**44.41**
Fisher	*Pekania pennanti*	FS, SSC	0.00	0.00	0.00	0.00	0.00	0.00	4.62	0.17	0.00	2.00	0.00	0.00	0.00	0.00	5.83	2.53	0.00	0.00	1.51	0.00	7.21	0.00	0.00	0.00	0.00	0.04	**23.91**
Fringed myotis	*Myotis thysanodes*	FS	10.03	37.08	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.39	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	1.44	7.38	36.04	0.37	0.01	0.00	0.04	**130.01**
Long-eared myotis	*Myotis evotis*	FS	0.00	37.08	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.39	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	1.44	7.38	0.00	0.37	0.01	0.13	0.04	**84.07**
Marten	*Martes caurina*	FS	0.00	31.62	0.00	0.00	0.00	0.00	2.96	0.45	0.00	1.23	0.00	0.00	0.00	0.00	4.97	1.50	0.02	0.12	1.81	0.00	6.74	0.00	0.00	0.00	0.00	0.04	**51.47**
Mountain beaver[dd]	*Aplodontia rufa*	FE	0.00	0.00	0.00	0.00	0.00	0.00	3.16	0.08	0.00	2.00	0.00	0.00	0.00	3.69	3.85	2.50	0.00	0.12	0.05	0.00	3.94	0.00	0.00	0.00	0.00	0.00	**19.39**
Mountain lion[ee]	*Puma concolor*	SCT	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	0.00	7.38	0.00	0.37	0.01	0.13	0.04	**55.19**
Northern flying squirrel	*Glaucomys sabrinus*	None	0.00	0.00	0.00	0.03	0.00	0.47	3.80	0.08	0.00	2.00	0.00	0.00	0.00	4.76	4.55	2.51	0.00	0.00	0.39	0.00	6.04	0.00	0.37	0.01	0.00	0.04	**25.06**
Northern river otter[ff]	*Lontra canadensis*	SSC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	2.53	0.00	0.00	0.00	1.44	0.00	0.00	0.37	0.00	0.13	0.00	**4.86**
Pallid bat	*Antrozous pallidus*	FS, SSC	10.03	37.08	0.15	0.40	0.00	0.47	4.62	0.45	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	1.44	7.38	36.04	0.37	0.01	0.13	0.04	**129.73**
Ringtail[gg]	*Bassariscus astutus*	SFP	10.03	37.08	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	0.00	7.38	0.00	0.37	0.01	0.13	0.04	**92.27**
Red fox	*Vulpes vulpes*	FS, ST	0.64	22.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.04	0.03	0.00	0.23	0.00	0.00	0.00	0.20	0.00	1.94	0.00	0.00	0.00	0.13	0.00	**26.29**
Sacramento Valley red fox	*Vulpes vulpes patwin*	None	0.64	4.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.19	0.00	0.00	0.00	0.20	0.00	1.71	0.00	0.00	0.00	0.13	0.00	**7.80**
Sierra Nevada red fox	*Vulpes vulpes necator*	FS, ST	0.00	18.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00	**18.49**
Small-footed myotis	*Myotis ciliolabrum*	FS	1.27	23.57	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.10	4.10	0.28	4.74	2.62	0.28	0.00	0.00	1.27	0.00	2.95	6.57	0.37	0.00	0.00	0.00	**48.50**
Snowshoe hare	*Lepus americanus*	SSC	0.00	0.00	0.00	0.00	0.00	0.00	2.31	0.45	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00	7.34	0.00	0.00	0.00	0.00	0.00	**11.21**
Sonoma red tree vole	*Arborimus pomo*	SSC	0.00	0.00	0.00	0.00	0.00	0.00	2.37	0.00	0.00	1.65	0.00	0.00	0.00	0.00	2.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**6.66**
Spotted bat	*Euderma maculatum*	FS, SSC	0.29	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	1.60	0.00	0.00	0.00	0.42	0.00	2.17	2.06	0.37	0.00	0.00	0.00	**7.10**
Townsend's big-eared bat	*Corynorhinus townsendii*	FS, SSC	10.03	37.08	0.15	0.40	0.00	0.47	4.62	0.45	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	1.44	7.38	36.04	0.37	0.01	0.13	0.04	**129.73**
Vagrant shrew[hh]	*Sorex vagrans*	SSC	8.77	0.00	0.00	0.03	0.00	0.47	3.59	0.45	0.00	2.00	0.00	2.45	0.34	5.14	4.46	2.53	0.00	0.12	0.62	0.00	4.65	0.00	0.37	0.00	0.00	0.04	**36.01**
Western mastiff bat	*Eumops perotis*	FS, SSC	0.29	22.72	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.10	0.15	3.64	1.21	0.00	0.00	0.00	0.23	0.00	0.00	2.02	0.37	0.00	0.00	0.00	**34.78**
Western red bat	*Lasiurus blossevillii*	SSC	0.91	0.00	0.15	0.37	0.00	0.00	0.82	0.00	0.00	0.00	0.39	1.00	0.49	6.81	2.40	0.00	0.04	0.00	1.27	0.00	2.95	5.79	0.37	0.00	0.00	0.00	**23.76**

Common Name	Scientific Name	Status	Annual Grassland	Barren	Blue Oak Woodland	Blue Oak-Foothill Pine	Closed-Cone Pine-Cypress	Coastal Oak Woodland	Douglas-Fir	Jeffrey Pine	Juniper	Klamath Mixed Conifer	Lacustrine	Mixed Chaparral	Montane Chaparral	Montane Hardwood	Montane Hard-wood-Conifer	Montane Riparian	Pasture	Perennial Grassland	Ponderosa Pine	Riverine	Sierran Mixed Conifer	Urban	Valley Foothill Riparian	Valley Oak Woodland	Wet Meadow	White Fir	Total
Western spotted skunk[ii]	*Spilogale gracilis*	SSC	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.00	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	0.00	7.38	36.04	0.37	0.01	0.13	0.04	**91.23**
Wolverine	*Gulo gulo*	FS, ST, SFP	0.00	25.13	0.00	0.00	0.00	0.00	3.12	0.00	0.00	1.65	0.00	0.00	0.49	0.00	4.32	2.32	0.00	0.00	0.00	0.00	2.28	0.00	0.00	0.00	0.00	0.04	**39.34**
Yuma myotis	*Myotis yumanensis*	FS	10.03	0.00	0.15	0.40	0.02	0.47	4.62	0.45	0.19	2.00	0.39	5.92	0.68	11.79	5.93	2.53	0.11	0.12	1.84	1.44	7.38	36.04	0.37	0.01	0.13	0.04	**93.06**
Not applicable	Not applicable	**Total**	**10.03**	**37.08**	**0.15**	**0.40**	**0.02**	**0.47**	**4.62**	**0.45**	**0.19**	**2.00**	**0.39**	**5.92**	**0.68**	**11.79**	**5.93**	**2.53**	**0.11**	**0.12**	**1.84**	**1.44**	**7.38**	**36.04**	**0.37**	**0.01**	**0.13**	**0.04**	**130.04**

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

[a] This plant species does not occur in the GAI.

[b] Ensatina: Only the yellow-blotched (*Ensatina eschscholtzii croceater*) and large-blotched (*E. e. klauberi*) subspecies are special status, and they do not occur in the GAI (neither occurs further north than Kern County).

[c] Foothill yellow-legged frog: There are six distinct population segments (DPS) of foothill yellow-legged frog, all of which are FS and SSC, but have differing federal and state listing statuses. Only the North Coast DPS occurs in the GAI and it is not proposed listed under FESA or listed under CESA.

[d] Long-toed salamander: Only the Santa Cruz (*Ambystoma macrodactylum croceum*) and the southern (*A. m. sigillatum*) subspecies are special status, and they do not occur in the GAI. Only the Santa Cruz subspecies is federally and state endangered.

[e] Common garter snake: Only the south coast (*Thamnophis sirtalis* pop. 1) distinct population segment and San Francisco (*Thamnophis sirtalis tetrataenia*) subspecies are special status, and they do not occur in the GAI. Only the San Francisco subspecies is federally endangered, and it does not occur north of San Francisco County.

[f] Common sagebrush lizard: Only the northern (*Sceloporus graciosus graciosus*) subspecies is special status, and it does not occur in the GAI (occurs in the Great Basin, including in Modoc and Lassen County east of the GAI).

[g] Ring-necked snake: Only the San Bernadino (*Diadophis punctatus modestus*), regal (*D. p. regalis*), and San Diego (*D. p. similis*) subspecies are special status, and they do not occur in the GAI (regal only occurs in the Great Basin, the other two do not occur north of Kern County).

[h] Striped racer: Only the Alameda (*Masticophis [Coluber] lateralis euryxanthus*) subspecies is special status, and it does not occur in the GAI (restricted to Alameda and Contra Costa Counties).

[i] Western skink: Only the Coronado (*Plestiodon skiltonianus interparietalis*) subspecies is special status, and it does not occur in the GAI (does not occur further north than San Diego County).

[j] Bewick's wren: Only the San Clemente (*Thryomanes bewickii leucophrys*) subspecies is special status, and it does not occur in the GAI (endemic to Channel Islands).

[k] California quail: Only the Catalina (*Callipepla californica catalinensis)* subspecies is special status, and it does not occur in the GAI (endemic to Channel Islands).

[l] California towhee: Only the Inyo (*Melozone crissalis eremophilus*) subspecies is special status, and it does not occur in the GAI (only occurs in Inyo County).

[m] Common loon: Only considered special status in its nesting range and the species does not nest in the GAI (not known to nest west of Mount Lassen).

[n] Common yellowthroat: Only the saltmarsh (*Geothlypis trichas sinuosa*) subspecies is special status, and it does not occur in the GAI (only occurs in counties which border San Francisco Bay).

[o] Greater white-fronted goose: Only the Tule (*Anser albifrons elgasi*) subspecies is special status, and it does not occur in the GAI.

[p] Hutton's vireo: Only the Catalina (*Vireo huttoni unitti*) subspecies is special status, and it does not occur in the GAI (endemic to Channel Islands).

[q] Red-winged blackbird: Only the Kern (*Agelaius phoeniceus aciculatus*) subspecies is special status, and it does not occur in the GAI (restricted to Lake Isabella and Walker Basin).

[r] Savannah sparrow: Only the Bryant's (*Passerculus sandwichensis alaudinus*), Belding's (*P. s. beldingi*), and large-billed (*P. s. rostratus*) subspecies are special status, and they do not occur in the GAI. Only the Belding's subspecies is state endangered, and it does not occur north of Santa Barbara County.

[s] Song sparrow: Only the Modesto population and Channel Island (*Melospiza melodia graminea),* Suisun (*M. m. maxillaris*), Alameda (*M. m. pusilluila*), and San Pablo (*M. m. samuelis*) subspecies are special status, and they do not occur in the GAI.

[t] Sooty grouse: Only the Mount Pinos (*Dendragapus fuliginosus howardi*) subspecies is special status, and it does not occur in the GAI.

[u] Spotted towhee: Only the San Clemente (*Pipilo macukatus clementae*) subspecies is special status, and it does not occur in the GAI (endemic to Channel Islands).

[v] Vesper sparrow: Only the Oregon (*Pooecetes gramineus affinis*) subspecies is special status, and it does not occur in the GAI.

[w] Black-tailed jackrabbit: Only the San Diego (*Lepus californicus bennettii*) subspecies is special status, and it does not occur in the GAI (does not occur north of Santa Barbara County).

[x] Broad-footed mole: Only the Alameda Island (*S. l. parvus*) subspecies is special status, and it does not occur in the GAI (endemic to Alameda Island).

[y] Brush rabbit: Only the riparian (*Sylvilagus bachmani riparius*) subspecies is special status, and it does not occur in the GAI.

[z] California kangaroo rat: Only the Marysville (*Dipodomys californicus eximius*) subspecies is special status, and it does not occur in the GAI.

[aa] California vole: Only the Mohave river (*Microtus californicus mohavensis*), San Pablo (*M. c. sanpabloensis*), Amargosa (*M. c. scirpensis*), south coast marsh (*M. c. stephensi*), and Owens Valley (*M. c. vallicola*) subspecies are special status, and they do not occur in the GAI.

[bb] Deer mouse: Only the Anacapa (*Peromyscus maniculatus anacapae*) and San Clemente Island (*P. m. clementis*) subspecies are special status, and they do not occur in the GAI (endemic to Channel Islands).

[cc] Dusky-footed woodrat: Only the San Francisco (*N. f. annectens*) and riparian (*N. f. riparia*) subspecies are special status, and they do not occur in the GAI (neither subspecies occur north of the San Francisco Bay Area). Only the riparian subspecies is federally endangered.

[dd] Mountain Beaver: Only Sierra Nevada (*Aplodontia rufa californica*), Point Arena (A. r. nigra), and Point Reyes (A. r. phaea) subspecies are special status, and they do not occur in the GAI. Only the Point Arena subspecies is federally endangered.

[ee] Mountain lion: Only the Yuma (*Puma concolor browni*) subspecies is currently special status and only the Southern California/Central Coast evolutionarily significant unit is a candidate for state listing, and they do not occur in the GAI.

[ff] Northern river otter: Only the southwestern river otter (*Lontra canadensis sonora*) subspecies is special status, and it does not occur in the GAI (only occurs in the Lower Colorado River Valley).

[gg] Ringtail: Only the southern California ringtail, Palo Verde Mountains ringtail, and Yuma ringtail are special status, and they do not occur in the GAI.
[hh] Vagrant shrew: Only the salt-marsh wandering shrew (*Sorex vagrans halicoestes*) subspecies is special status, and they do not occur in the GAI (endemic to Channel Islands).
[ii] Spotted skunk: Only the Channel Islands spotted skunk (*Spilogale gracilis amphiala*) subspecies is special status, and it does not occur in the GAI.

APPENDIX E: HYDROLOGIC UNITS

Sub-basin Descriptions

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

Applegate Sub-basin

The Applegate sub-basin drains an area of 58,247 acres (91 square miles) and includes 63 rivers and streams that traverse 91 miles. As noted in Table E-1, the Applegate sub-basin includes portions of the Klamath River and Rogue River HUs. Descriptions of these HUs are provided below and may include features that occur outside of the Applegate sub-basin or GAI.

The Klamath River HU is associated with the Klamath River watershed. The HU is also divided into seven hydrologic areas, including the Lower Klamath River, Salmon River, Middle Klamath River, Scott River, Shasta Valley, Butte Valley, and Lost River (North Coast RWQCB 2018). The part of the Klamath River HU that lies within the Applegate sub-basin includes a portion of the Middle Klamath River hydrologic area.

The Rogue River HU is associated with the Rogue River watershed. The Rogue River itself lies in Oregon. The headwaters of two of its major tributaries, the Illinois River and the Applegate River, extend into California in Del Norte and Siskiyou Counties. Most of the HU is located within National Forest lands (North Coast RWQCB 2018). The part of the Rogue River HU that lies within the Applegate sub-basin includes a portion of the Applegate River hydrologic area.

Clear Creek – Sacramento River Sub-basin

The Clear Creek – Sacramento River sub-basin drains an area of 219,785 acres (343 square miles) and includes 249 rivers and streams that traverse 378 miles. As noted in Table E-1, the Clear Creek – Sacramento River sub-basin includes portions of the Mountain Gate, Redding, Shasta Bally, Shasta Dam, Trinity River, Upper Sacramento, and Whitmore HUs.

No description was found for the Mountain Gate HU. The part of the Mountain Gate HU that lies within the Clear Creek – Sacramento River sub-basin includes portions of the Churn Creek and Stillwater Creek hydrologic areas.

The Redding HU is associated with the Enterprise Flat and Lower Cottonwood watersheds. The Enterprise Flat watershed includes Anderson, Ash, Battle, Churn, Clear, Cow, Olney, Paynes, and Stillwater Creeks, which outlet to the Sacramento River. The Lower Cottonwood watershed includes Cottonwood Creek, which has Middle Fork and South Fork Cottonwood Creeks as tributaries (EPA n.d.). The Cottonwood Creek watershed originates on the east slope of the Coast Ranges and Klamath Mountains and the southern slopes of the Trinity Mountains. The creek flows east toward the Sacramento River (Sacramento River Watershed Program 2021). The part of the Redding HU that lies

within the Clear Creek – Sacramento River sub-basin includes a portion of the Enterprise Flat hydrologic area.

The Shasta Bally HU is associated with the South Fork, Platina, Spring Creek, and Kanaka Peak watersheds, which outlet to South Fork Cottonwood Creek, Middle Fork Cottonwood Creek, Sacramento River, and Clear Creek, respectively. South Fork Cottonwood Creek includes the Cold Fork Cottonwood Creek tributary. Middle Fork Cottonwood Creek includes the Beegum Creek tributary (EPA n.d.). The part of the Shasta Bally HU that lies within the Clear Creek – Sacramento River sub-basin includes portions of the Centerville, Clear Creek, Cottonwood Creek, and Spring Creek hydrologic areas.

The Shasta Dam HU is associated with Shasta Lake formed from the Shasta Dam. The Lake is large enough to hold 4.5 million acre-feet of water. It is located 12 miles north of Redding and collects the waters from the Pit and McCloud Rivers and the headwaters of the Sacramento River (Water Education Foundation n.d.). The part of the Shasta Dam HU that lies within the Clear Creek – Sacramento River sub-basin includes portions of the Lake Shasta Drainage and Shasta Lake hydrologic areas.

The Trinity River HU is associated with the Trinity River watershed. The headwaters of the Trinity River are in the Trinity Alps within the Klamath and Coast Ranges. The river flows 172 miles southwest until it joins with the Klamath River at Weitchpec, about 43 miles upstream from the Pacific Ocean (North Coast RWQCB 2018). The part of the Trinity River HU that lies within the Clear Creek – Sacramento River sub-basin includes portions of the Middle Trinity River and Upper Trinity River hydrologic areas.

The Upper Sacramento HU is associated with the Upper Sacramento River watershed. The headwaters of the Upper Sacramento River begin from the top of Mount Shasta to the north and the Klamath Mountains to the west. The waters flow approximately 40 miles and empty into Lake Shasta above Shasta Dam (Water Education Foundation n.d.). The part of the Upper Sacramento HU that lies within the Clear Creek – Sacramento River sub-basin includes a portion of the Lamoine hydrologic area.

The Whitmore HU is associated with the Inks Creek, Battle Creek, and Inwood watersheds. Battle Creek includes two tributaries: North Fork and South Fork Battle Creek. The Inwood watershed includes both Bear and Dry Creeks (EPA n.d.). Battle Creek flows for 50 miles from Lassen Volcanic National Park to the Sacramento River (Sacramento River Watershed Program 2021). The part of the Whitmore HU that lies within the Clear Creek – Sacramento River sub-basin includes a portion of the Cow Creek hydrologic area.

Cottonwood Creek Sub-basin

The Cottonwood Creek sub-basin drains an area of 164,711 acres (257 square miles) and includes 225 rivers and streams that traverse 276 miles. As noted in Table E-1, the Cottonwood Creek sub-basin includes portions of the Redding, Shasta Bally, and Trinity River HUs. Descriptions of these HUs are provided in the Clear Creek – Sacramento

River sub-basin section. The part of the Redding HU that lies within the Cottonwood Creek sub-basin includes a portion of the Lower Cottonwood hydrologic area. The part of the Shasta Bally HU that lies within the Cottonwood Creek sub-basin includes portions of the Clear Creek and Cottonwood Creek hydrologic areas. The part of the Trinity River HU that lies within the Cottonwood Creek sub-basin includes portions of the Middle Trinity River and South Fork Trinity River hydrologic areas.

Cow Creek Sub-basin

The Cow Creek sub-basin drains an area of 33,352 acres (52 square miles) and includes 42 rivers and streams that traverse 59 miles. As noted in Table E-1, the Cow Creek sub-basin includes portions of the Mountain Gate, Pit River, Shasta Dam, and Whitmore HUs. Descriptions of the Mountain Gate, Shasta Dam, and Whitmore HUs are provided in the Clear Creek – Sacramento River sub-basin section. The part of the Mountain Gate HU that lies within the Cow Creek sub-basin includes a portion of the Stillwater Creek hydrologic area. The part of the Shasta Dam HU that lies within the Cow Creek sub-basin includes a portion of the Lake Shasta Drainage hydrologic area. The part of the Whitmore HU that lies within the Cow Creek sub-basin includes a portion of the Cow Creek hydrologic area.

The Pit River HU is associated with the Pit River watershed, including the Goose Lake, Upper Pit River, Fall River, Hat Creek, Burney Creek, and Lower Pit River subwatersheds. Headwaters originate in northeastern California near the Oregon and Nevada border and flow to the confluence of Lake Shasta (Sacramento River Watershed Program 2022a). The part of the Pit River HU that lies within the Cow Creek sub-basin includes a portion of the Lower Pit River hydrologic area.

Illinois Sub-basin

The Illinois sub-basin drains an area of 37,552 acres (59 square miles) and includes 53 rivers and streams that traverse 70 miles. As noted in Table E-1, the Illinois sub-basin includes portions of the Klamath River, Rogue River, and Smith River HUs. Descriptions of the Klamath River and Rogue River HUs are provided in the Applegate sub-basin section. The part of the Klamath River HU that lies within the Illinois sub-basin includes a portion of the Middle Klamath River hydrologic area. The part of the Rogue River HU that lies within the Illinois sub-basin includes a portion of the Illinois River hydrologic area.

The Smith River HU is associated with the Smith River watershed, including Lake Earle and the Crescent City Harbor (North Coast RWQCB 2019). The part of the Smith River HU that lies within the Illinois sub-basin includes a portion of the Middle Fork Smith River hydrologic area.

Lower Klamath Sub-basin

The Lower Klamath sub-basin drains an area of 723,875 acres (1,131 square miles) and includes 1,040 rivers and streams that traverse 1,260 miles. As noted in Table E-1, the Lower Klamath sub-basin includes portions of the Klamath River, Rogue River, Smith River, and Trinity River HUs. Descriptions of the Klamath River and Rogue River HUs are

provided in the Applegate sub-basin section. The part of the Klamath River HU that lies within the Lower Klamath sub-basin includes portions of the Lower Klamath River, Middle Klamath River, Salmon River, and Scott River hydrologic areas. The part of the Rogue River HU that lies within the Lower Klamath sub-basin includes portions of the Applegate River and Illinois River hydrologic areas.

A description of the Smith River HU is provided in the Illinois sub-basin section. The part of the Smith River HU that lies within the Lower Klamath sub-basin includes portions of the Middle Fork Smith River and South Fork Smith River hydrologic areas. A description of the Trinity River HU is provided in the Clear Creek – Sacramento River sub-basin section. The part of the Trinity River HU that lies within the Lower Klamath sub-basin includes a portion of the Lower Trinity River hydrologic area.

Lower Pit Sub-basin

The Lower Pit sub-basin drains an area of 214,395 acres (335 square miles) and includes 314 rivers and streams that traverse 330 miles. As noted in Table E-1, the Lower Pit sub-basin includes portions of the McCloud River, Mountain Gate, Pit River, Shasta Dam, and Whitmore HUs. Descriptions of the Mountain Gate, Shasta Dam, and Whitmore HUs are provided in the Clear Creek – Sacramento River sub-basin section. The part of the Mountain Gate HU that lies within the Lower Pit sub-basin includes a portion of the Stillwater Creek hydrologic area. The part of the Shasta Dam HU that lies within the Lower Pit sub-basin includes portions of the Lake Shasta Drainage and Shasta Lake hydrologic areas. The part of the Whitmore HU that lies within the Lower Pit sub-basin includes a portion of the Cow Creek hydrologic area. A description of the Pit River HU is provided in the Cow Creek sub-basin section. The part of the Pit River HU that lies within the Lower Pit sub-basin includes a portion of the Lower Pit River hydrologic area.

The McCloud River HU is associated with the McCloud River watershed that drains an area of approximately 800 square miles. Headwaters originate within Colby Meadows, approximately 85 miles northeast of Redding. The river flows into Lake McCloud before traveling 12 miles into Lake Shasta (Sacramento River Watershed Program 2022b). The part of the McCloud River HU that lies within the Lower Pit sub-basin includes portions of the Squaw Creek and Wyntoon hydrologic areas.

Mad-Redwood Sub-basin

The Mad-Redwood sub-basin drains an area of 281 acres (0.4 square mile) and includes 1 river that traverses 0.1 mile. As noted in Table E-1, the Mad-Redwood sub-basin includes portions of the Redwood Creek and Trinity River HUs. A description of the Trinity River HU is provided in the Clear Creek – Sacramento River sub-basin section. The part of the Trinity River HU that lies within the Mad-Redwood sub-basin includes a portion of the Lower Trinity River hydrologic area.

The Redwood Creek HU is associated with the Redwood Creek watershed. The headwaters of Redwood Creek are located at an elevation of 5,200 feet and flow northwest before discharging into the Pacific Ocean about 35 miles north of the city of Eureka at Orick, California (North Coast RWQCB 2020). The part of the Redwood Creek

HU that lies within the Mad-Redwood sub-basin includes a portion of the Lake Prairie hydrologic area.

McCloud Sub-basin

The McCloud sub-basin drains an area of 181,936 acres (284 square miles) and includes 251 rivers and streams that traverse 291 miles. As noted in Table E-1, the McCloud sub-basin includes portions of the McCloud River, Pit River, Shasta Dam, and Upper Sacramento HUs. A description of the McCloud River HU is provided in the Lower Pit sub-basin section. The part of the McCloud River HU that lies within the McCloud sub-basin includes portions of the Squaw Creek and Wyntoon hydrologic areas. A description of the Pit River HU is provided in the Cow Creek sub-basin section. The part of the Pit River HU that lies within the McCloud sub-basin includes a portion of the Lower Pit River hydrologic area.

Descriptions of the Shasta Dam and Upper Sacramento HUs are provided in the Clear Creek – Sacramento River sub-basin section. The part of the Shasta Dam HU that lies within the McCloud sub-basin includes portions of the Lake Shasta Drainage and Shasta Lake hydrologic areas. The part of the Upper Sacramento HU that lies within the McCloud sub-basin includes portions of the Lamoine and Mount Shasta hydrologic areas.

Sacramento Headwaters Sub-basin

The Sacramento Headwaters sub-basin drains an area of 339,355 acres (530 square miles) and includes 344 rivers and streams that traverse 463 miles. As noted in Table E-1, the Sacramento Headwaters sub-basin includes portions of the Klamath River, McCloud River, Mountain Gate, Shasta Bally, Shasta Dam, Trinity River, and Upper Sacramento HUs. A description of the Klamath River HU is provided in the Applegate sub-basin section. The part of the Klamath River HU that lies within the Sacramento Headwaters sub-basin includes a portion of the Shasta Valley hydrologic area. A description of the McCloud River HU is provided in the Lower Pit sub-basin section. The part of the McCloud River HU that lies within the Sacramento Headwaters sub-basin includes a portion of the Wyntoon hydrologic area.

Descriptions of the Mountain Gate, Shasta Bally, Shasta Dam, Trinity River, and Upper Sacramento HUs are provided in the Clear Creek – Sacramento River sub-basin section. The part of the Mountain Gate HU that lies within the Sacramento Headwaters sub-basin includes portions of the Churn Creek and Stillwater Creek hydrologic areas. The part of the Shasta Bally HU that lies within the Sacramento Headwaters sub-basin includes portions of the Clear Creek and Spring Creek hydrologic areas. The part of the Shasta Dam HU that lies within the Sacramento Headwaters sub-basin includes portions of the Lake Shasta Drainage and Shasta Lake hydrologic areas. The part of the Trinity River HU that lies within the Sacramento Headwaters sub-basin includes a portion of the Upper Trinity River hydrologic area. The part of the Upper Sacramento HU that lies within the Sacramento Headwaters sub-basin includes portions of the Lamoine and Mount Shasta hydrologic areas.

Salmon Sub-basin

The Salmon sub-basin drains an area of 480,830 acres (751 square miles) and includes 744 rivers and streams that traverse 868 miles. As noted in Table E-1, the Salmon sub-basin includes portions of the Klamath River and Trinity River HUs. A description of the Klamath River HU is provided in the Applegate sub-basin section. The part of the Klamath River HU that lies within the Salmon sub-basin includes portions of the Lower Klamath River, Middle Klamath River, Salmon River, and Scott River hydrologic areas. A description of the Trinity River HU is provided in the Clear Creek – Sacramento River sub-basin section. The part of the Trinity River HU that lies within the Salmon sub-basin includes portions of the Lower Trinity River and Upper Trinity River hydrologic areas.

Scott Sub-basin

The Scott sub-basin drains an area of 521,067 acres (814 square miles) and includes 637 rivers and streams that traverse 850 miles. As noted in Table E-1, the Scott sub-basin includes portions of the Klamath River and Trinity River HUs. A description of the Klamath River HU is provided in the Applegate sub-basin section. The part of the Klamath River HU that lies within the Scott sub-basin includes portions of the Middle Klamath River, Salmon River, Scott River, and Shasta Valley hydrologic areas. A description of the Trinity River HU is provided in the Clear Creek – Sacramento River sub-basin section. The part of the Trinity River HU that lies within the Scott sub-basin includes a portion of the Upper Trinity River hydrologic area.

Shasta Sub-basin

The Shasta sub-basin drains an area of 149,036 acres (233 square miles) and includes 160 rivers and streams that traverse 199 miles. As noted in Table E-1, the Shasta sub-basin includes portions of the Klamath River, Trinity River, and Upper Sacramento HUs. A description of the Klamath River HU is provided in the Applegate sub-basin section. The part of the Klamath River HU that lies within the Shasta sub-basin includes portions of the Middle Klamath River, Scott River, and Shasta Valley hydrologic areas.

Descriptions of the Trinity River and Upper Sacramento HUs are provided in the Clear Creek – Sacramento River sub-basin section. The part of the Trinity River HU that lies within the Shasta sub-basin includes a portion of the Upper Trinity River hydrologic area. The part of the Upper Sacramento HU that lies within the Shasta sub-basin includes a portion of the Mount Shasta hydrologic area.

Smith Sub-basin

The Smith sub-basin drains an area of 331,922 acres (519 square miles) and includes 511 rivers and streams that traverse 650 miles. As noted in Table E-1, the Smith sub-basin includes portions of the Klamath River, Rogue River, and Smith River HUs. Descriptions of the Klamath River and Rogue River HUs are provided in the Applegate sub-basin section. The part of the Klamath River HU that lies within the Smith sub-basin includes portions of the Lower Klamath River and Middle Klamath River hydrologic areas. The part of the Rogue River HU that lies within the Smith sub-basin includes a portion of the Illinois River hydrologic area.

A description of the Smith River HU is provided in the Illinois sub-basin section. The part of the Smith River HU that lies within the Smith sub-basin includes portions of the Lower Smith River, Middle Fork Smith River, North Fork Smith River, and South Fork Smith River hydrologic areas.

South Fork Trinity Sub-basin

The South Fork Trinity sub-basin drains an area of 479,099 acres (749 square miles) and includes 832 rivers and streams that traverse 951 miles. As noted in Table E-1, the South Fork Trinity sub-basin includes portions of the Shasta Bally and Trinity River HUs. Descriptions of the Shasta Bally Trinity River HUs are provided in the Clear Creek – Sacramento River sub-basin section. The part of the Shasta Bally HU that lies within the South Fork Trinity sub-basin includes a portion of the Cottonwood Creek hydrologic area. The part of the Trinity River HU that lies within the South Fork Trinity sub-basin includes portions of the Lower Trinity River, Middle Trinity River, and South Fork Trinity River hydrologic areas.

Trinity Sub-basin

The Trinity sub-basin drains an area of 1,287,109 acres (2,011 square miles) and includes 1,775 rivers and streams that traverse 2,199 miles. As noted in Table E-1, the Trinity sub-basin includes portions of the Klamath River, Redwood Creek, Shasta Bally, Trinity River, and Upper Sacramento HUs. A description of the Klamath River HU is provided in the Applegate sub-basin section. The part of the Klamath River HU that lies within the Trinity sub-basin includes portions of the Lower Klamath River, Salmon River, Scott River, and Shasta Valley hydrologic areas. A description of the Redwood Creek HU is provided in the Mad-Redwood sub-basin section. The part of the Redwood Creek HU that lies within the Trinity sub-basin includes a portion of the Lake Prairie hydrologic area.

Descriptions of the Shasta Bally, Trinity River, and Upper Sacramento HUs are provided in the Clear Creek – Sacramento River sub-basin section. The part of the Shasta Bally HU that lies within the Trinity sub-basin includes portions of the Clear Creek and Cottonwood Creek hydrologic areas. The part of the Trinity River HU that lies within the Trinity sub-basin includes portions of the Lower Trinity River, Middle Trinity River, South Fork Trinity River, and Upper Trinity River hydrologic areas. The part of the Upper Sacramento HU that lies within the Trinity sub-basin includes portions of the Lamoine and Mount Shasta hydrologic areas.

Upper Klamath Sub-basin

The Upper Klamath sub-basin drains an area of 354,428 acres (554 square miles) and includes 523 rivers and streams that traverse 609 miles. As noted in Table E-1, the Upper Klamath sub-basin includes portions of the Klamath River and Rogue River HUs. Descriptions of the Klamath River and Rogue River HUs are provided in the Applegate sub-basin section. The part of the Klamath River HU that lies within the Upper Klamath sub-basin includes portions of the Middle Klamath River, Scott River, and Shasta Valley hydrologic areas. The part of the Rogue River HU that lies within the Smith sub-basin includes a portion of the Applegate River hydrologic area.

Crosswalk: HUC-8s to HUs

The SAMNA Reporting Tool expresses the landscape in terms of USGS HUC-8 sub-basins (Caltrans 2021; USGS 2014). However, SWRCB considers beneficial uses in terms of HUs (California Department of Water Resources 2016). Table E-1 provides a crosswalk between the HUC-8 and HU classification systems for the GAI.

Table E-1. Crosswalk Table of HUC-8 Sub-basins with HUs in the GAI

HUC-8 #	HUC-8 Name	HUC-8 Acreage[a]	HU #	HU Name	HU Acreage[a]
17100309	Applegate	493,048	105	Klamath River	2,528,958
17100309	Applegate	493,048	102	Rogue River	96,167
18020154	Clear Creek-Sacramento River	438,804	562	Mountain Gate	94,411
18020154	Clear Creek-Sacramento River	438,804	508	Redding	407,880
18020154	Clear Creek-Sacramento River	438,804	524	Shasta Bally	481,511
18020154	Clear Creek-Sacramento River	438,804	506	Shasta Dam	238,980
18020154	Clear Creek-Sacramento River	438,804	106	Trinity River	3,877,046
18020154	Clear Creek-Sacramento River	438,804	525	Upper Sacramento	430,842
18020154	Clear Creek-Sacramento River	438,804	507	Whitmore	528,985
18020152	Cottonwood Creek	603,931	508	Redding	407,880
18020152	Cottonwood Creek	603,931	524	Shasta Bally	481,511
18020152	Cottonwood Creek	603,931	525	Shasta Bally	430,842
18020152	Cottonwood Creek	603,931	106	Trinity River	3,877,046
18020151	Cow Creek	273,588	562	Mountain Gate	94,411
18020151	Cow Creek	273,588	526	Pit River	1,573,315
18020151	Cow Creek	273,588	506	Shasta Dam	238,980
18020151	Cow Creek	273,588	507	Whitmore	528,985
17100311	Illinois	633,551	105	Klamath River	2,528,958
17100311	Illinois	633,551	102	Rogue River	96,167
17100311	Illinois	633,551	103	Smith River	437,883
18010209	Lower Klamath	980,127	105	Klamath River	2,528,958
18010209	Lower Klamath	980,127	102	Rogue River	96,167
18010209	Lower Klamath	980,127	103	Smith River	437,883
18010209	Lower Klamath	980,127	106	Trinity River	3,877,046
18020003	Lower Pit	1,688,221	505	McCloud River	437,921
18020003	Lower Pit	1,688,221	562	Mountain Gate	94,411

HUC-8 #	HUC-8 Name	HUC-8 Acreage[a]	HU #	HU Name	HU Acreage[a]
18020003	Lower Pit	1,688,221	526	Pit River	1,573,315
18020003	Lower Pit	1,688,221	506	Shasta Dam	238,980
18020003	Lower Pit	1,688,221	507	Whitmore	528,985
18010102	Mad-Redwood	910,413	107	Redwood Creek	187,853
18010102	Mad-Redwood	910,413	106	Trinity River	3,877,046
18020004	McCloud	435,728	505	McCloud River	437,921
18020004	McCloud	435,728	526	Pit River	1,573,315
18020004	McCloud	435,728	506	Shasta Dam	238,980
18020004	McCloud	435,728	525	Upper Sacramento	430,842
18020005	Sacramento Headwaters	378,904	106	Klamath River	3,877,046
18020005	Sacramento Headwaters	378,904	505	McCloud River	437,921
18020005	Sacramento Headwaters	378,904	562	Mountain Gate	94,411
18020005	Sacramento Headwaters	378,904	524	Shasta Bally	481,511
18020005	Sacramento Headwaters	378,904	525	Shasta Bally	430,842
18020005	Sacramento Headwaters	378,904	506	Shasta Dam	238,980
18020005	Sacramento Headwaters	378,904	106	Trinity River	3,877,046
18020005	Sacramento Headwaters	378,904	525	Upper Sacramento	430,842
18010210	Salmon	480,830	105	Klamath River	2,528,958
18010210	Salmon	480,830	106	Trinity River	3,877,046
18010208	Scott	521,067	105	Klamath River	2,528,958
18010208	Scott	521,067	106	Klamath River	3,877,046
18010208	Scott	521,067	106	Trinity River	3,877,046
18010207	Shasta	508,177	105	Klamath River	2,528,958
18010207	Shasta	508,177	106	Klamath River	3,877,046
18010207	Shasta	508,177	106	Trinity River	3,877,046
18010207	Shasta	508,177	525	Upper Sacramento	430,842
18010101	Smith	627,601	105	Klamath River	2,528,958
18010101	Smith	627,601	102	Rogue River	96,167
18010101	Smith	627,601	103	Smith River	437,883
18010212	South Fork Trinity	596,558	524	Shasta Bally	481,511
18010212	South Fork Trinity	596,558	106	Trinity River	3,877,046

HUC-8 #	HUC-8 Name	HUC-8 Acreage[a]	HU #	HU Name	HU Acreage[a]
18010211	Trinity	1,304,132	105	Klamath River	2,528,958
18010211	Trinity	1,304,132	106	Klamath River	3,877,046
18010211	Trinity	1,304,132	107	Redwood Creek	187,853
18010211	Trinity	1,304,132	524	Shasta Bally	481,511
18010211	Trinity	1,304,132	525	Shasta Bally	430,842
18010211	Trinity	1,304,132	106	Trinity River	3,877,046
18010211	Trinity	1,304,132	525	Upper Sacramento	430,842
18010206	Upper Klamath	910,996	105	Klamath River	2,528,958
18010206	Upper Klamath	910,996	106	Klamath River	3,877,046
18010206	Upper Klamath	910,996	102	Rogue River	96,167

Source: Caltrans (2021)
[a] Numbers were rounded to the nearest whole number.

References

California Department of Water Resources. 2016. "CalWater Hydrologic Areas." Accessed March 1, 2022. https://catalog.data.gov/dataset/calwater-2-233fac.

Caltrans (California Department of Transportation). 2021. "Waters_ D2/D1 in Caltrans District 2 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.

EPA (U.S. Environmental Protection Agency). n.d. "Waters of the United States in California with Salmon and/or Steelhead Identified as NMFS Listed Resources of Concern for EPA's PGP." Accessed March 1, 2022. https://www.epa.gov/sites/production/files/2015-09/documents/pgp_california_waters.pdf.

North Coast RWQCB (Regional Water Quality Control Board). 2018. "Water Quality Control Plan for the North Coast Region". Accessed March 2, 2022. https://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/.

———. 2019. "Smith River Watershed – Hydrologic Unit 103." Accessed March 1, 2022. https://www.waterboards.ca.gov/northcoast/water_issues/programs/watershed_info/smith_river/.

———. 2020. "Redwood Creek Watershed - Hydrologic Unit 107." Accessed March 1, 2022. https://www.waterboards.ca.gov/northcoast/water_issues/programs/watershed_info/redwood_creek/.

Sacramento River Watershed Program. 2021. "Explore the Watershed." Accessed June 7, 2021. https://sacriver.org/.

———. 2022a. "Pit River Watershed." Accessed March 1, 2022. https://sacriver.org/explore-watersheds/northeast-subregion/pit-river-watershed/.

———. 2022b. "McCloud River Watershed." Accessed March 1, 2022. https://sacriver.org/explore-watersheds/northeast-subregion/mccloud-river-watershed/.

USGS (U.S. Geological Survey). 2014. "National Hydrology Dataset & National Watershed Boundary Dataset." Accessed April 29, 2021. https://www.usgs.gov/core-science-systems/ngp/national-hydrography.

Water Education Foundation. n.d. "Shasta Dam." Accessed March 1, 2022. https://www.watereducation.org/aquapedia/shasta-dam.

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 TMDLs have been established are provided in Table E-1 (SWRCB 2021).

Table F-1. Impaired Waters in the GAI

Sub-basin	Impaired Water[a]	Impairment	TMDL Status	Relevant to RAMNA?[b]
Clear Creek-Sacramento River	Clear Creek (below Whiskeytown Lake, Shasta County)	Metals/Metalloids (mercury)	Required, not established yet	Yes
Lower Pit	Horse Creek (Rising Star Mine to Shasta Lake)	Metals/Metalloids (cadmium, copper, lead, pH, zinc)	Required, not established yet	Yes
Lower Klamath	Klamath River HU, Lower HA, Klamath Glen HSA	Nutrients, organic enrichment/low dissolved oxygen, water temperature	Being addressed with EPA-approved TMDL	Yes
Lower Klamath	Klamath River HU, Lower HA, Klamath Glen HSA	Sedimentation/Siltation	Required, not established yet	Yes
Lower Klamath, Salmon, Upper Klamath	Klamath River HU, Middle HA and Lower HA, Scott River to Trinity River	Cyanobacteria hepatotoxic microcystins, nutrients, organic enrichment/low dissolved oxygen, water temperature	Being addressed with EPA-approved TMDL	Yes
Lower Klamath, Salmon, Upper Klamath	Klamath River HU, Middle HA and Lower HA, Scott River to Trinity River	Sediment	Required, not established yet	Yes
Upper Klamath	Klamath River HU, Middle HA, Iron Gate Dam to Scott River	Metals/Metalloids (aluminum)	Required, not established yet	Yes
Upper Klamath	Klamath River HU, Middle HA, Iron Gate Dam to Scott River	Cyanobacteria hepatotoxic microcystins, nutrients, organic enrichment/low dissolved oxygen, water temperature	Being addressed with EPA-approved TMDL	Yes
Upper Klamath	Klamath River HU, Middle HA, Iron Gate Dam to Scott River	Sediment	Required, not established yet	Yes

Sub-basin	Impaired Water[a]	Impairment	TMDL Status	Relevant to RAMNA?[b]
Salmon	Klamath River HU, Salmon River HA	Water temperature	Being addressed with EPA-approved TMDL	Yes
Salmon	Klamath River HU, Salmon River HA, Wooley Creek HSA	Water temperature	Being addressed with EPA-approved TMDL	Yes
Scott	Klamath River HU, Scott River HA	Biostimulatory conditions, dissolved oxygen, metals/metalloids (aluminum), pH	Required, not established yet	Yes
Scott	Klamath River HU, Scott River HA	Sedimentation/Siltation, water temperature	Being addressed with EPA-approved TMDL	Yes
Upper Klamath	Klamath River HU, Scott River HA	Biostimulatory conditions, dissolved oxygen, metals/metalloids (aluminum), pH	Required, not established yet	Yes
Upper Klamath	Klamath River HU, Scott River HA	Sedimentation/Siltation, water temperature	Being addressed with EPA-approved TMDL	Yes
Shasta, Upper Klamath	Klamath River HU, Shasta River HA	Metals/Metalloids (aluminum)	Required, not established yet	Yes
Shasta, Upper Klamath	Klamath River HU, Shasta River HA	Organic enrichment/low dissolved oxygen, water temperature	Being addressed with EPA-approved TMDL	Yes
Sacramento Headwaters	Lower Little Backbone Creek	Metals/Metalloids (acid mine drainage, cadmium, copper, zinc)	Required, not established yet	Yes
Cow Creek	Little Cow Creek (downstream from Afterthought Mine)	Metals/Metalloids (cadmium, copper, zinc)	Required, not established yet	Yes
Cow Creek	Oak Run Creek	Indicator bacteria	Required, not established yet	No
Lower Pit	Pit River (from confluence of North and South forks to Shasta Lake)	Nutrients, organic enrichment/low dissolved oxygen, water temperature	Required, not established yet	Yes

Sub-basin	Impaired Water[a]	Impairment	TMDL Status	Relevant to RAMNA?[b]
Mad-Redwood	Redwood Creek HU, Redwood Creek	Sedimentation/Siltation	Being addressed with EPA-approved TMDL	Yes
Mad-Redwood	Redwood Creek HU, Redwood Creek	Water temperature	Required, not established yet	Yes
Clear Creek-Sacramento River	Sacramento River (Keswick Dam to Cottonwood Creek)	Toxicity[c]	Required, not established yet	Yes
Clear Creek-Sacramento River	Spring Creek, Lower (Iron Mountain Mine to Keswick Reservoir)	Metals/Metalloids (acid mine drainage, cadmium, copper, zinc)	Required, not established yet	Yes
Lower Pit	Town Creek	Metals/Metalloids (cadmium, copper, lead, zinc)	Required, not established yet	Yes
South Fork Trinity, Trinity	Trinity River HU, Lower Trinity HA	Sedimentation/Siltation	Being addressed with EPA-approved TMDL	Yes
Trinity	Trinity River HU, Middle HA	Sedimentation/Siltation	Being addressed with EPA-approved TMDL	Yes
South Fork Trinity, Trinity	Trinity River HU, South Fork HA	Sedimentation/Siltation	Being addressed with EPA-approved TMDL	Yes
South Fork Trinity, Trinity	Trinity River HU, South Fork HA	Water temperature	Required, not established yet	Yes
Trinity	Trinity River HU, Upper HA	Sedimentation/Siltation	Being addressed with EPA-approved TMDL	Yes
Trinity	Trinity River HU, Upper HA, Trinity River, East Fork	Metals/Metalloids (mercury)	Required, not established yet	Yes
Trinity	Trinity River HU, Upper HA, Trinity River, East Fork	Sedimentation/Siltation	Being addressed with EPA-approved TMDL	Yes

Sub-basin	Impaired Water[a]	Impairment	TMDL Status	Relevant to RAMNA?[b]
Sacramento Headwaters	West Squaw Creek (below Balaklala Mine)	Metals/Metalloids (cadmium, copper, lead, zinc)	Required, not established yet	Yes
Clear Creek-Sacramento River	Willow Creek (Shasta County, below Greenhorn Mine to Clear Creek)	Metals/Metalloids (acid mine drainage, copper, zinc)	Required, not established yet	Yes

Source: SWRCB (2021)
[a] HU = hydrologic unit, HA = hydrologic area, HAS = hydrologic subarea
[b] TMDLs relevant to the RAMNA reflect impaired aquatic resource-related beneficial uses.
[c] Refers to toxicity to aquatic organisms

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.

APPENDIX G: AQUATIC RESOURCE LOCATIONS

Aquatic resource locations are shown by HUC-8 sub-basin and HU in the following maps, which also include major landmarks for perspective. These locations were excerpted from the SAMNA Reporting Tool's water and wetland layers (Caltrans 2021a, 2021b). Hydrologic units are described in Appendix E, which includes a crosswalk table of HUC-8 subbasins and HUs. These 41 maps correspond with the land cover maps in Appendix C.

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 2021a, 2021b).

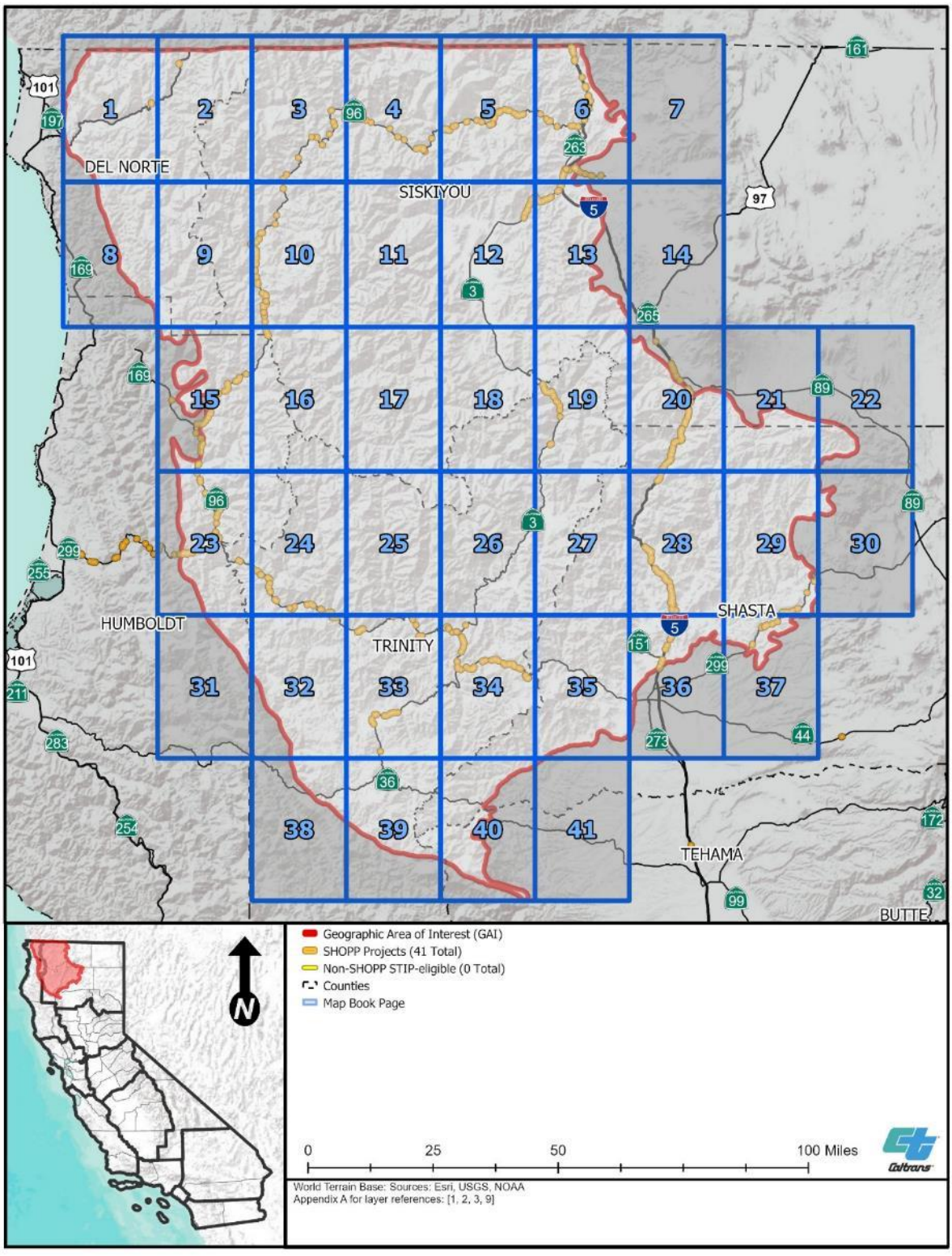
References

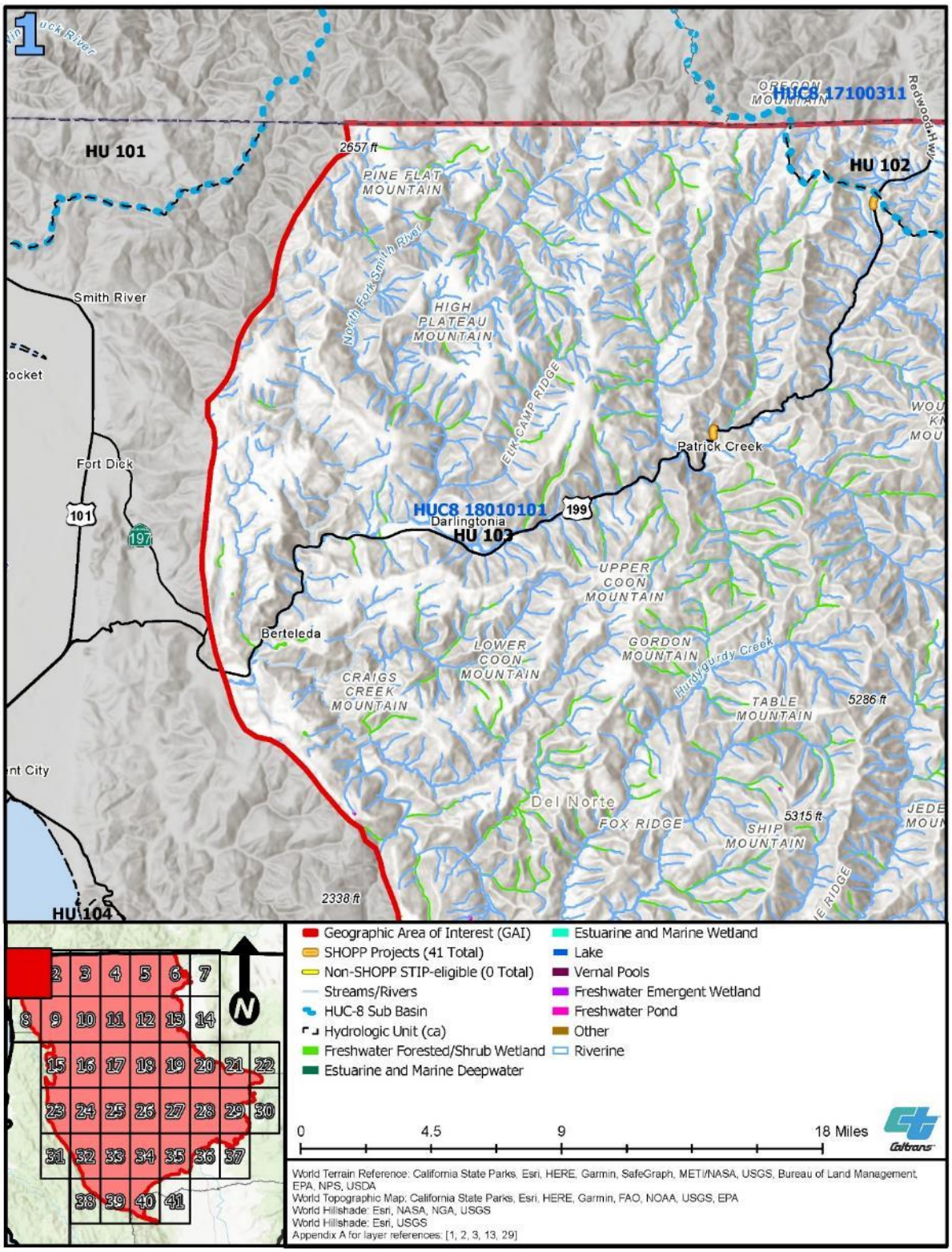
Caltrans (California Department of Transportation). 2021a. "Waters_ D2/D1 in Caltrans District 2 Geospatial Data for the Advance Mitigation Needs Assessment for the First Quarter of FY 2021/2022" (data file). Accessed June 15, 2022. https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation.

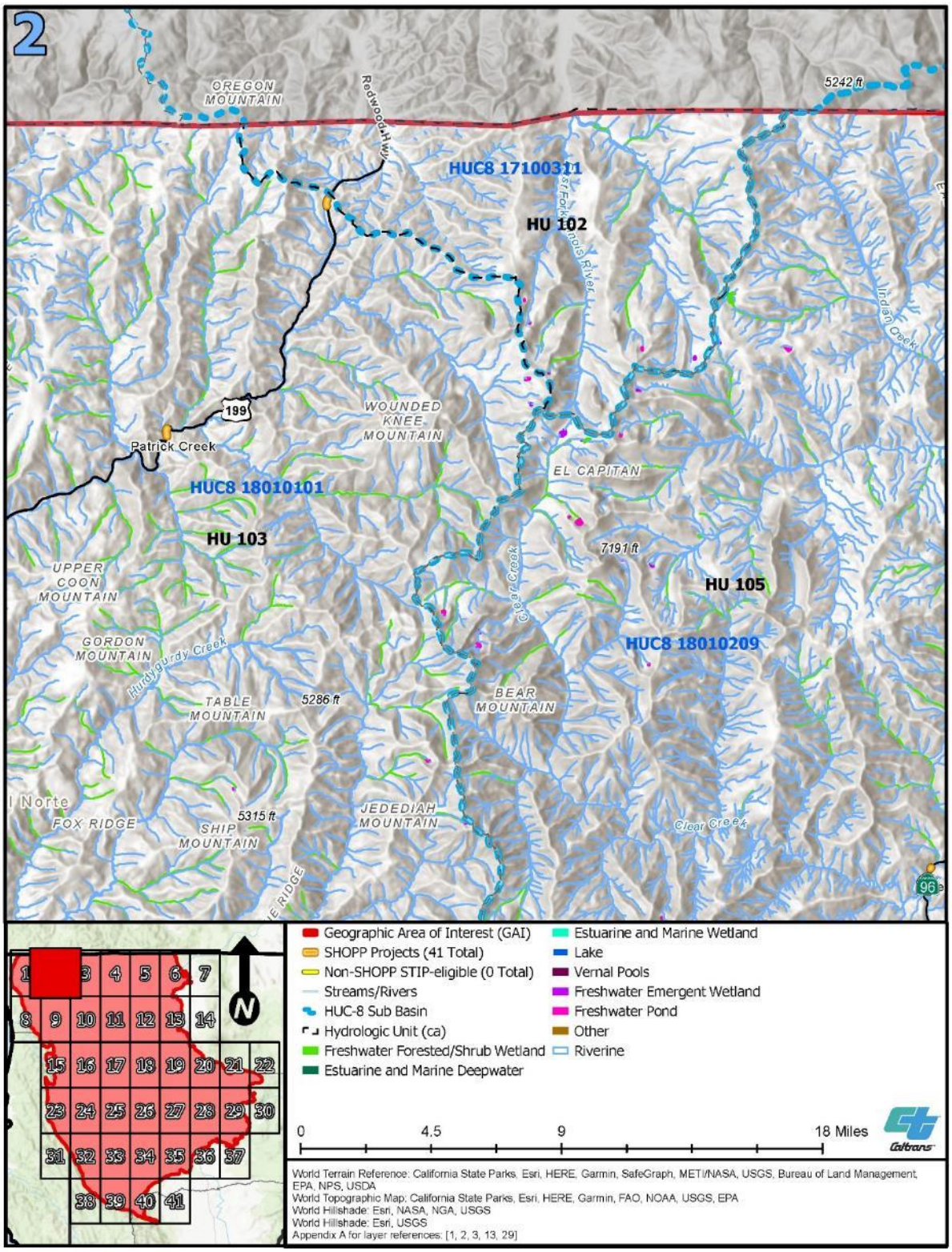
———. 2021b. "Wetlands_ D2/D1 in Caltrans District 2 Geospatial Data for the Advance Mitigation Needs Assessment for the First Quarter of FY 2021/2022" (data file). Accessed June 15, 2022. https://dot.ca.gov/programs/environmental-analysis/biology/advancemitigation.

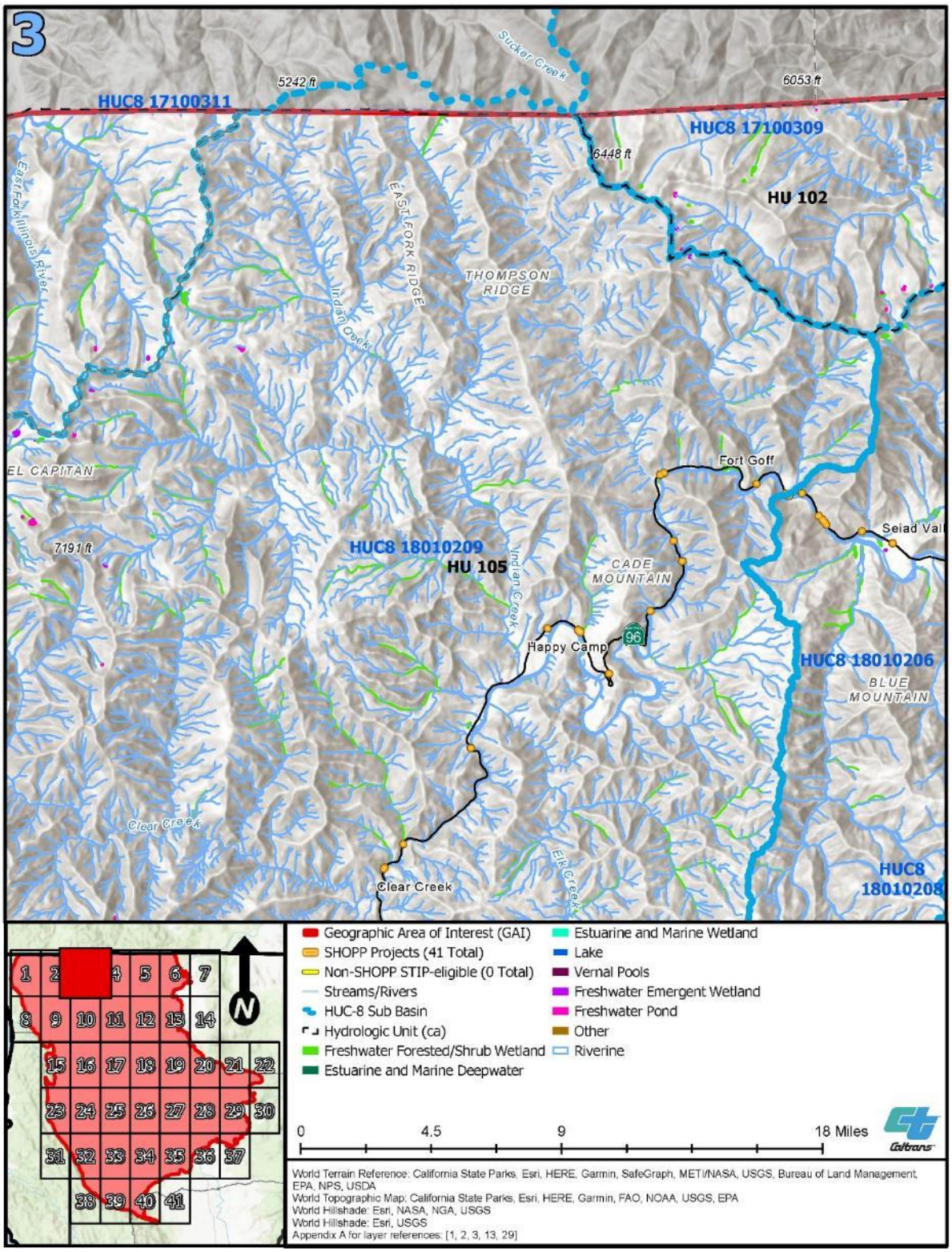
FWS (U.S. Fish and Wildlife Service). 2017. "National Wetlands Inventory. Wetlands Mapper." Accessed April 1, 2021. https://www.fws.gov/wetlands/data/mapper.html.

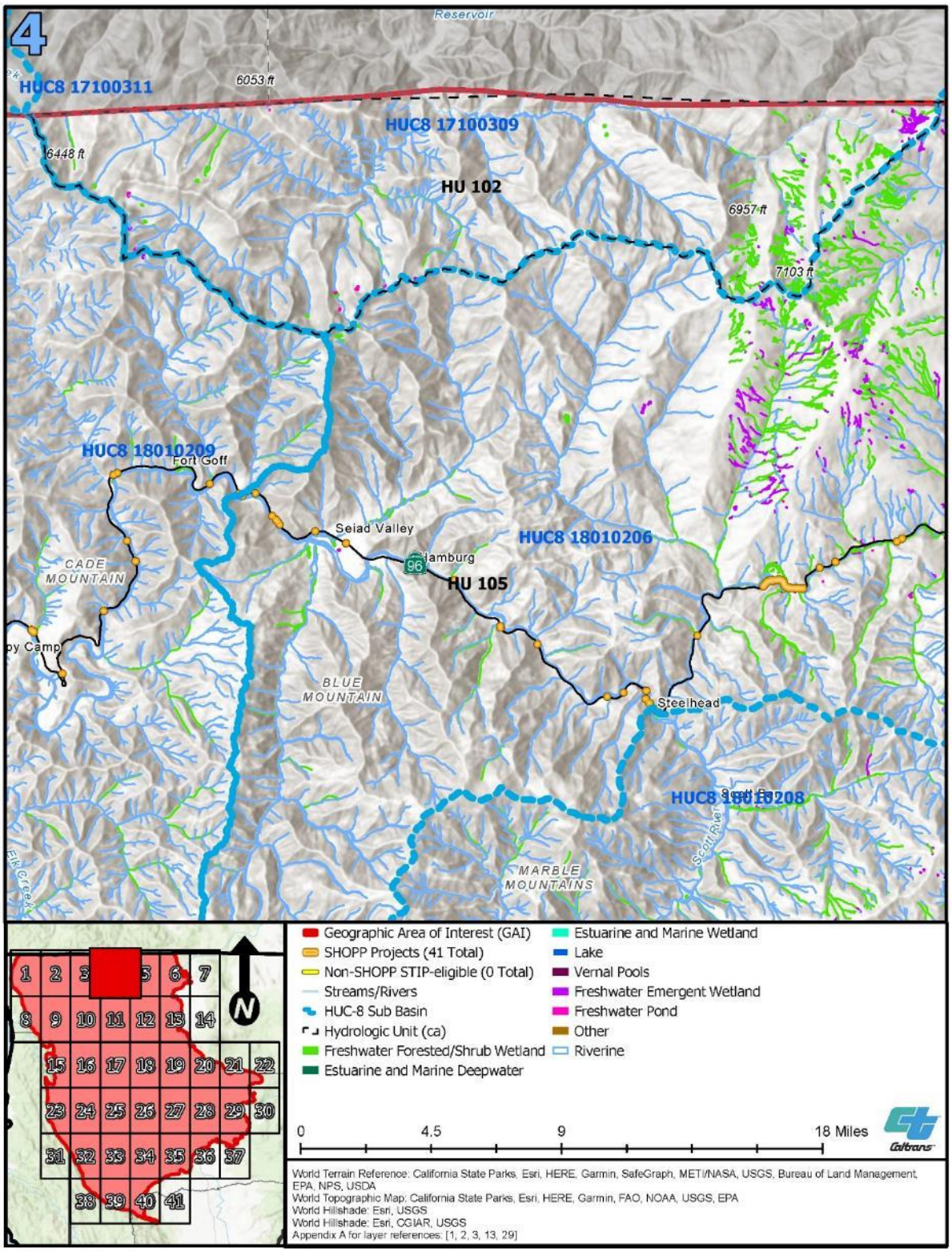
San Francisco Estuary Institute. 2018. "California Aquatic Resource Inventory (CARI)." Accessed February 28, 2019. https://www.sfei.org/cari#sthash.SnPvzyAU.dpbs.

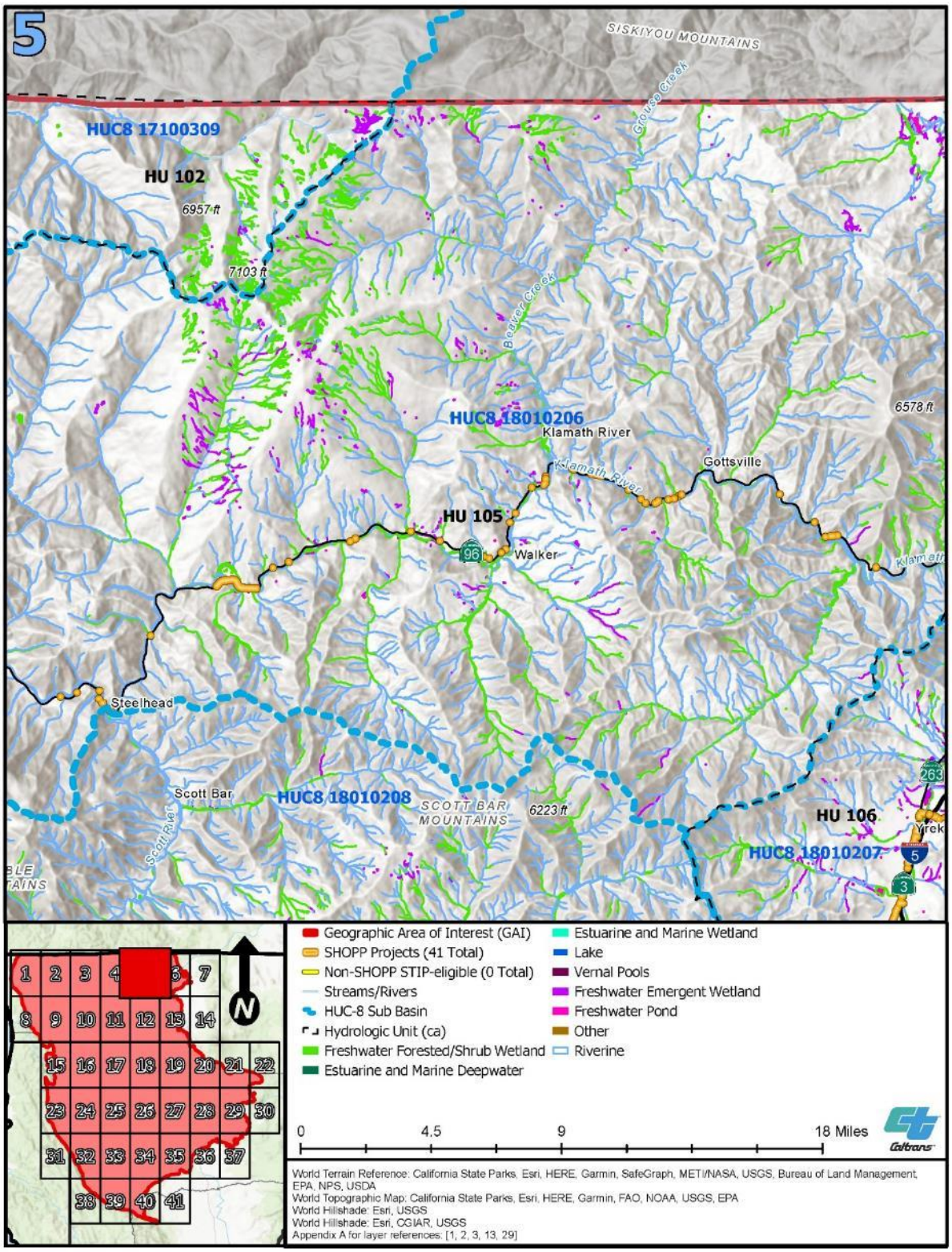

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
DEL NORTE
SISKIYOU
HUMBOLDT
TRINITY
SHASTA
TEHAMA
BUTTE
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Counties
Map Book Page
N
0
25
50
100 Miles
Caltrans
World Terrain Base: Sources: Esri, USGS, NOAA
Appendix A for layer references: [1, 2, 3, 9]

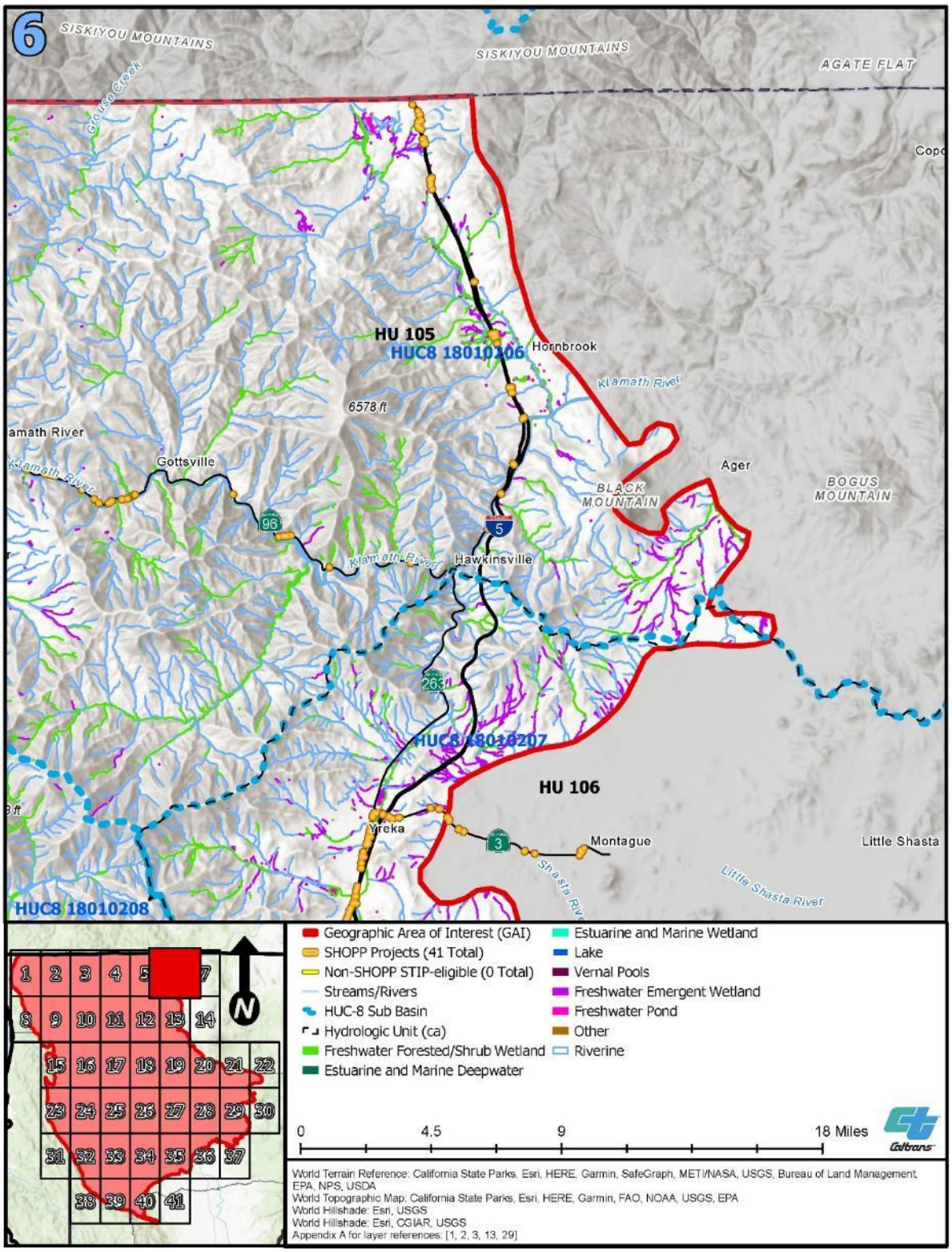

1
HUC8 17100311
HU 101
HU 102
2657 ft
PINE FLAT MOUNTAIN
Redwood Hwy
North Fork Smith River
HIGH PLATEAU MOUNTAIN
Smith River
ELK CAMP RIDGE
Patrick Creek
Fort Dick
101
197
199
HUC8 18010101
Darlingtonia
HU 103
UPPER COON MOUNTAIN
Berteleda
LOWER COON MOUNTAIN
GORDON MOUNTAIN
Hurdygurdy Creek
CRAIGS CREEK MOUNTAIN
TABLE MOUNTAIN
5286 ft
Del Norte
FOX RIDGE
5315 ft
SHIP MOUNTAIN
2338 ft
HU 104
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, NASA, NGA, USGS
World Hillshade: Esri, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

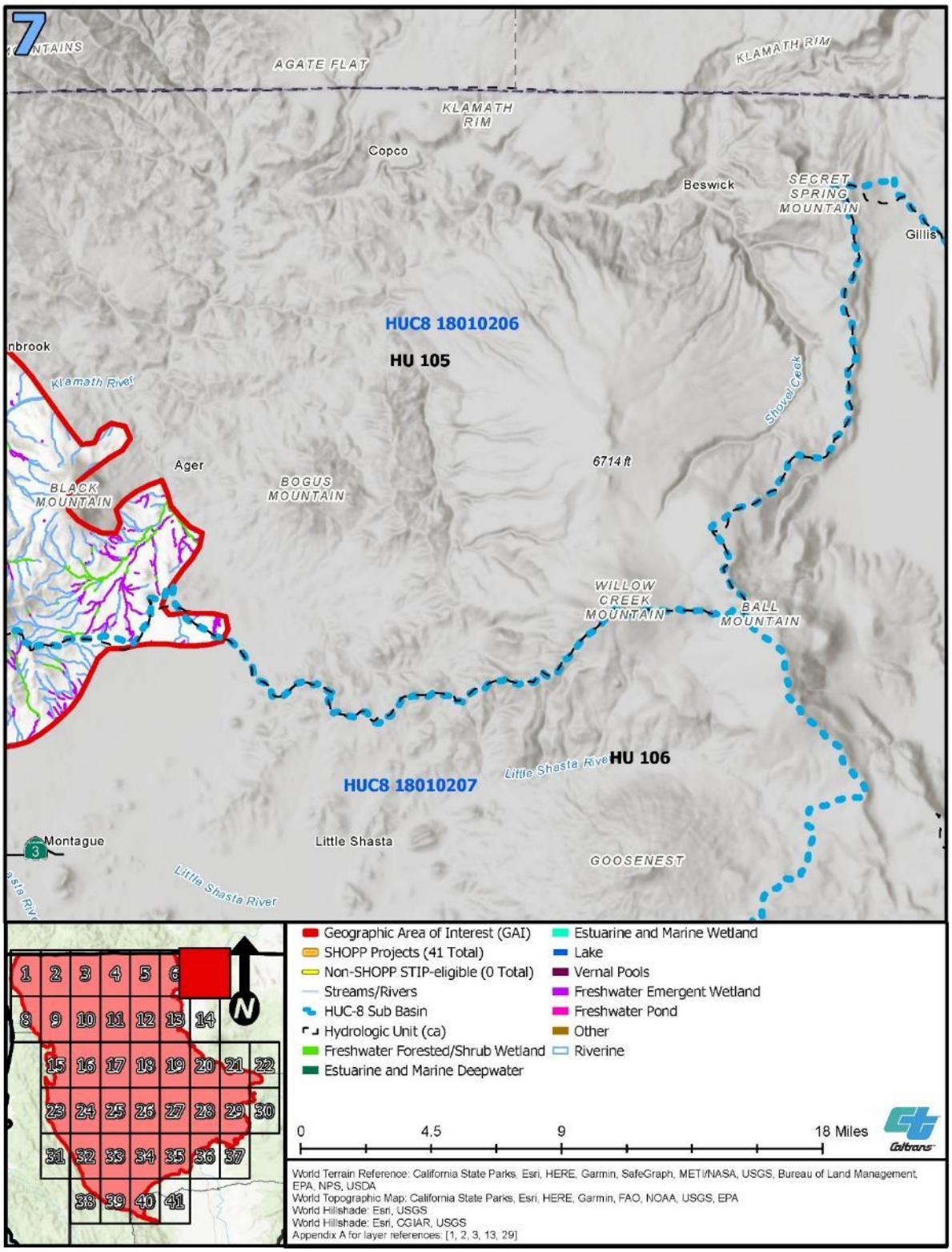

2
OREGON MOUNTAIN
Redwood Hwy
5242 ft
HUC8 17100311
HU 102
S. Fork Illinois River
Indian Creek
199
Patrick Creek
WOUNDED KNEE MOUNTAIN
EL CAPITAN
HUC8 18010101
HU 103
7191 ft
HU 105
UPPER COON MOUNTAIN
Clear Creek
GORDON MOUNTAIN
Hurdygurdy Creek
HUC8 18010209
TABLE MOUNTAIN
5286 ft
BEAR MOUNTAIN
I Norte
FOX RIDGE
5315 ft
SHIP MOUNTAIN
JEDEDIAH MOUNTAIN
Clear Creek
96
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, NASA, NGA, USGS
World Hillshade: Esri, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

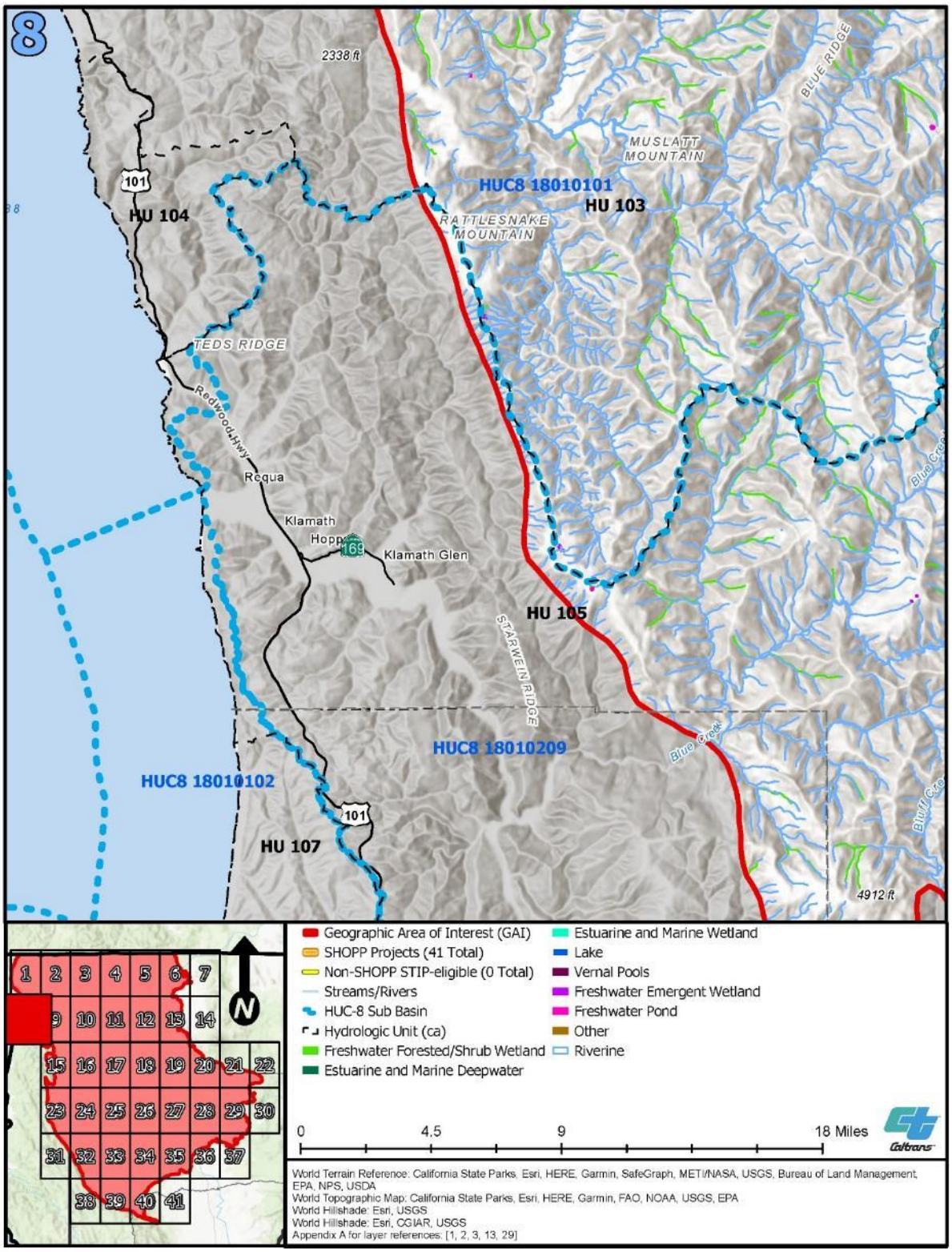

3
HUC8 17100311
HUC8 17100309
HU 102
HUC8 18010209
HU 105
HUC8 18010206
HUC8 18010208
5242 ft
6053 ft
6448 ft
7191 ft
Sucker Creek
East Fork Illinois River
EAST FORK RIDGE
THOMPSON RIDGE
Indian Creek
EL CAPITAN
Fort Goff
Seiad Val
CADE MOUNTAIN
Happy Camp
96
BLUE MOUNTAIN
Clear Creek
Elk Creek
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, NASA, NGA, USGS
World Hillshade: Esri, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

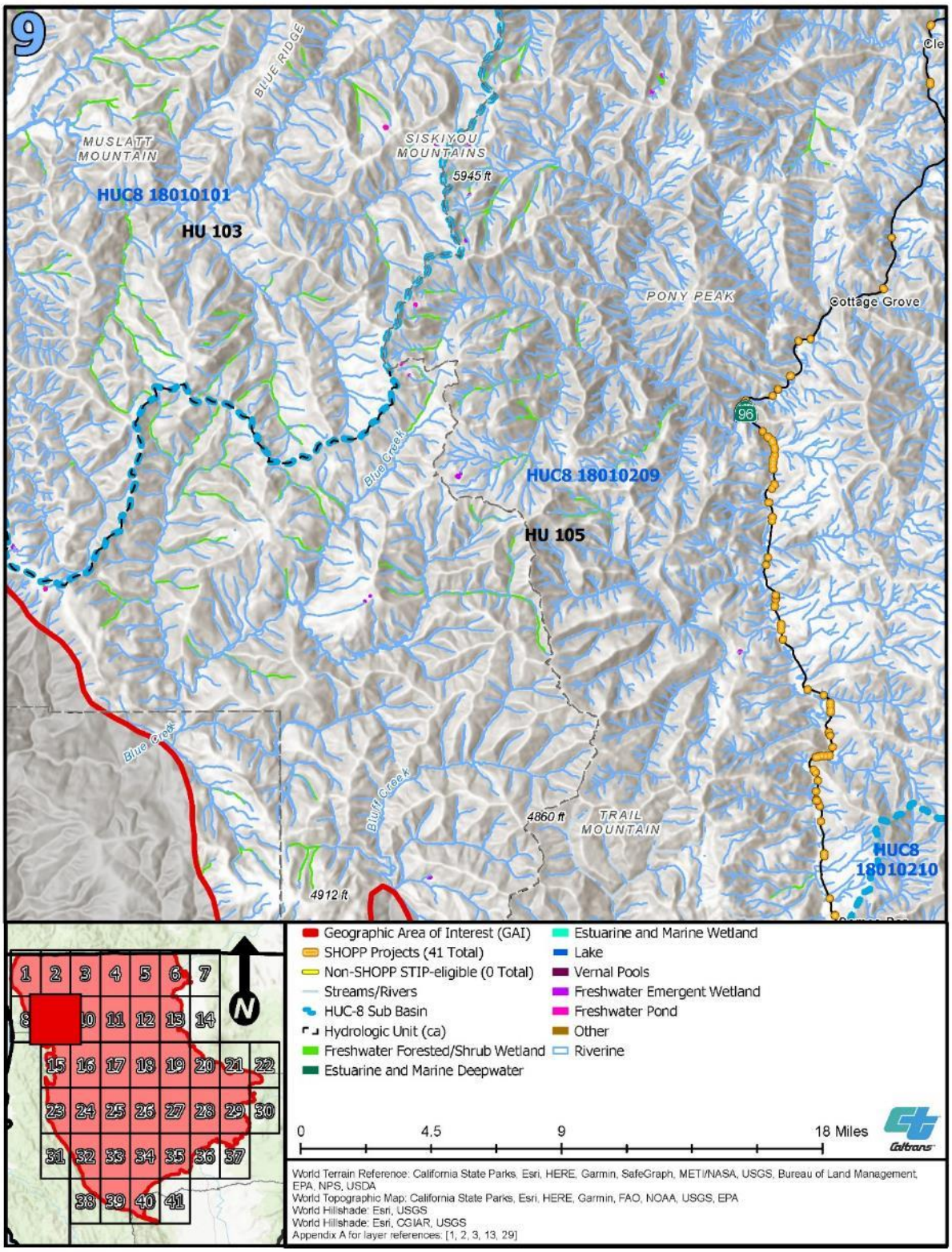

4
Reservoir
HUC8 17100311
6053 ft
HUC8 17100309
6448 ft
HU 102
6957 ft
7103 ft
HUC8 18010209
Fort Goff
Seiad Valley
HUC8 18010206
CADE MOUNTAIN
96
HU 105
BLUE MOUNTAIN
Steelhead
HUC8 18010208
MARBLE MOUNTAINS
Scott River
Elk Creek
1 2 3 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0 4.5 9 18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

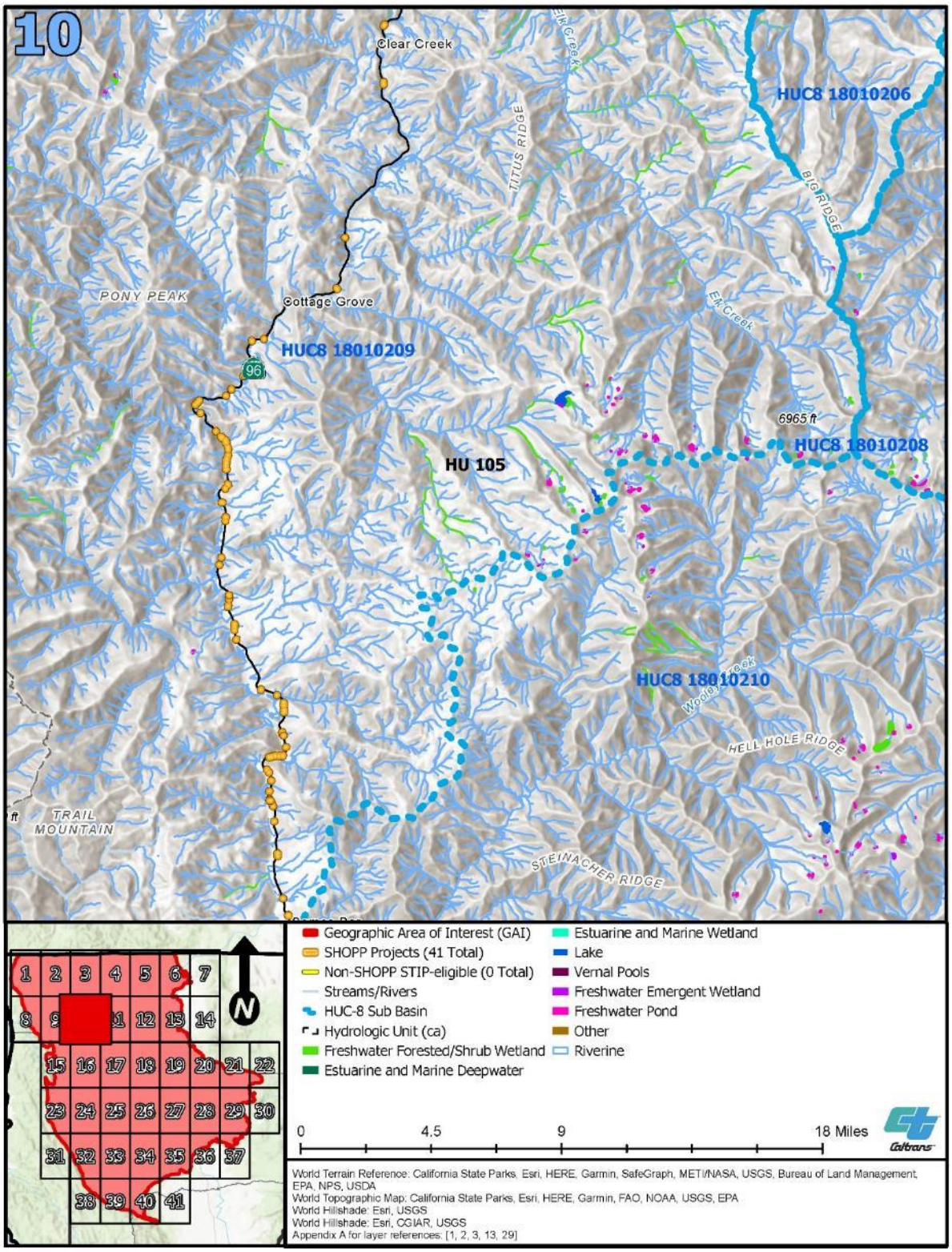

5
SISKIYOU MOUNTAINS
Grouse Creek
HUC8 17100309
HU 102
6957 ft
7103 ft
Beaver Creek
HUC8 18010206
Klamath River
6578 ft
Gottsville
Klamath River
HU 105
96
Walker
Steelhead
Scott Bar
HUC8 18010208
SCOTT BAR MOUNTAINS
6223 ft
Scott River
HU 106
Yrek
HUC8 18010207
263
5
3
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

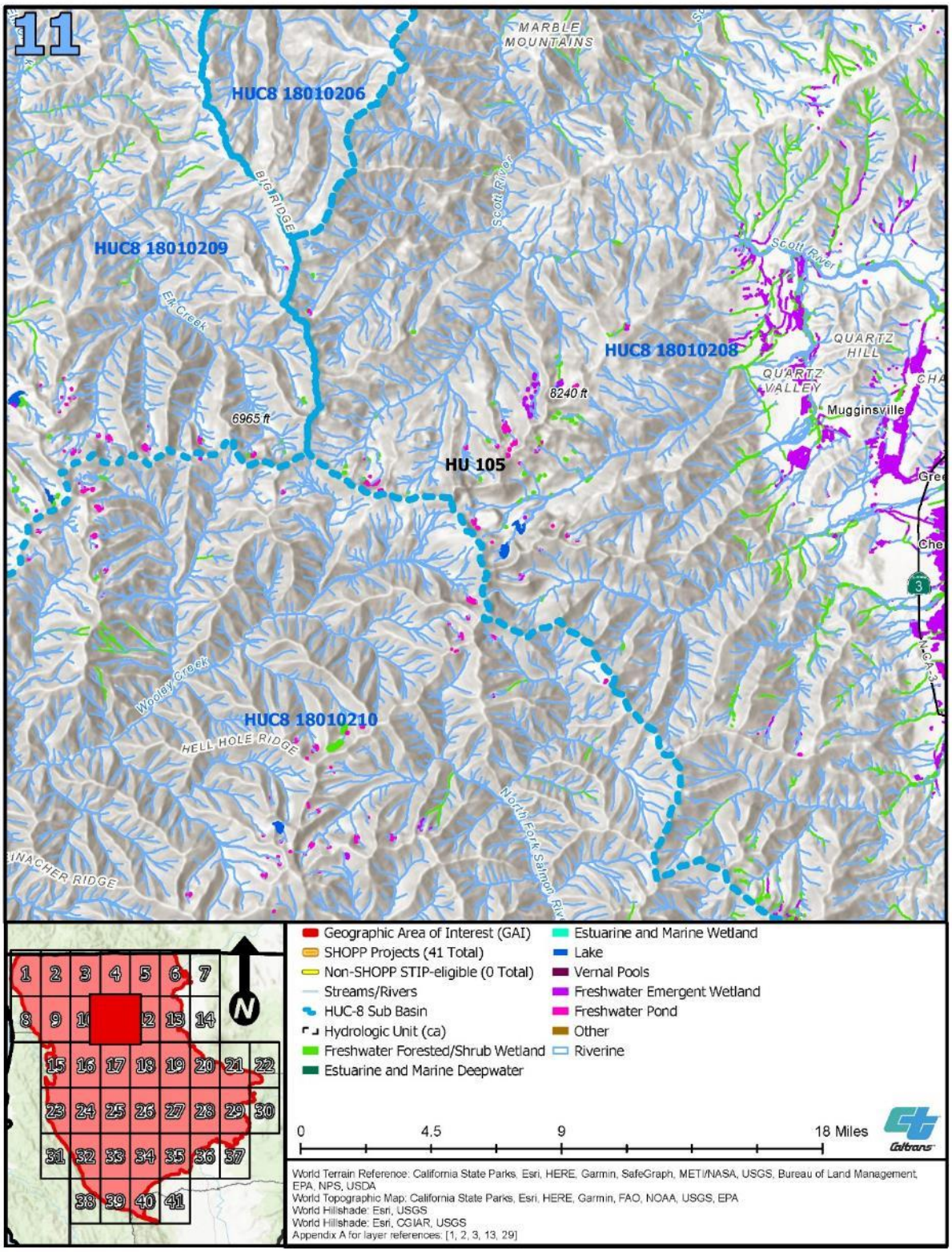

6
SISKIYOU MOUNTAINS
SISKIYOU MOUNTAINS
AGATE FLAT
Grouse Creek
HU 105
HUC8 18010206
Hornbrook
Klamath River
6578 ft
amath River
Klamath River
Gottsville
Ager
BLACK MOUNTAIN
BOGUS MOUNTAIN
96
5
Klamath River
Hawkinsville
263
HUC8 18010207
HU 106
Yreka
Montague
3
Little Shasta
Shasta River
Little Shasta River
HUC8 18010208
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

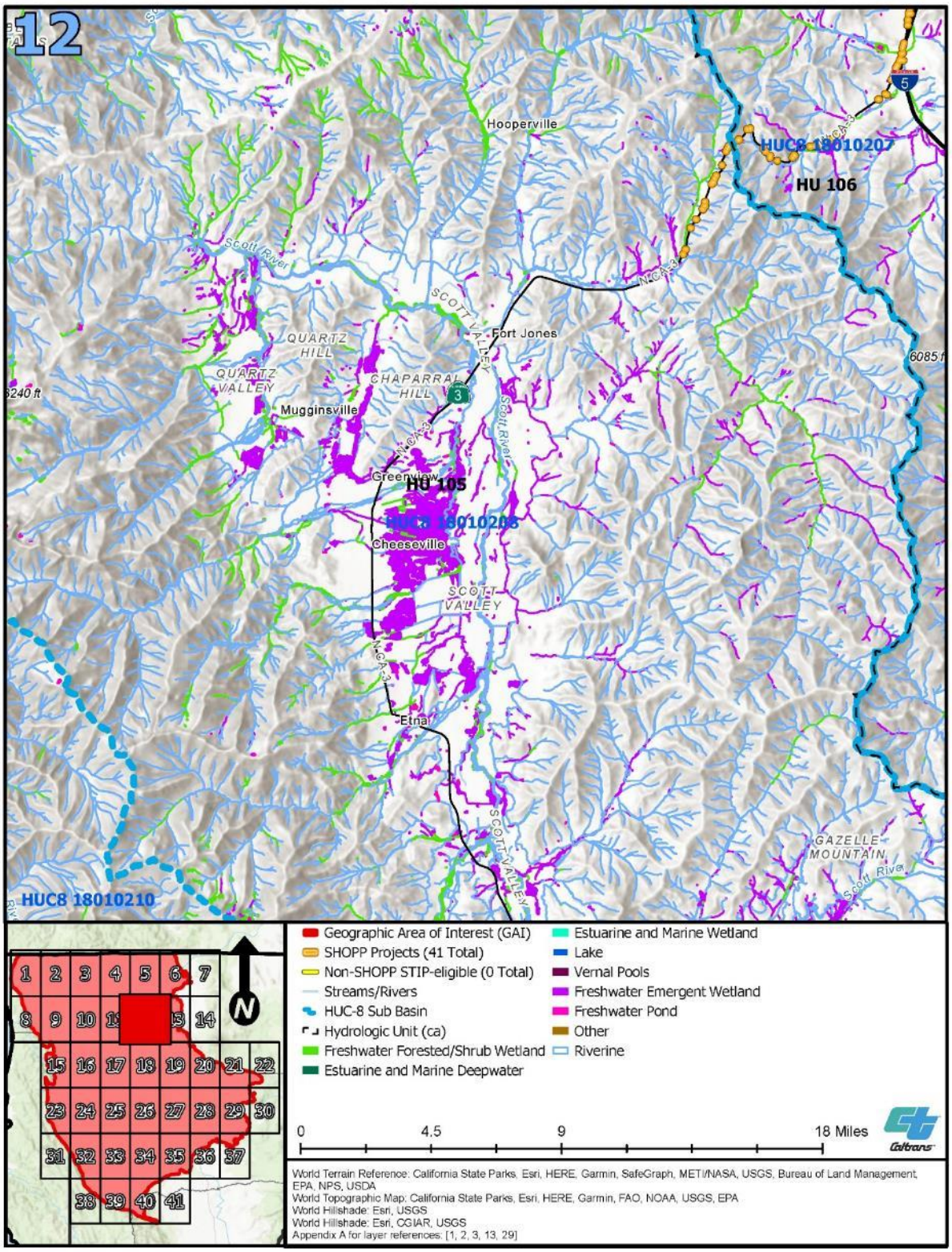

AGATE FLAT
KLAMATH RIM
KLAMATH RIM
Copco
Beswick
SECRET SPRING MOUNTAIN
Gillis
HUC8 18010206
HU 105
Klamath River
Shovel Creek
Ager
6714 ft
BLACK MOUNTAIN
BOGUS MOUNTAIN
WILLOW CREEK MOUNTAIN
BALL MOUNTAIN
HU 106
Little Shasta River
HUC8 18010207
Montague
Little Shasta
GOOSENEST
Little Shasta River
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

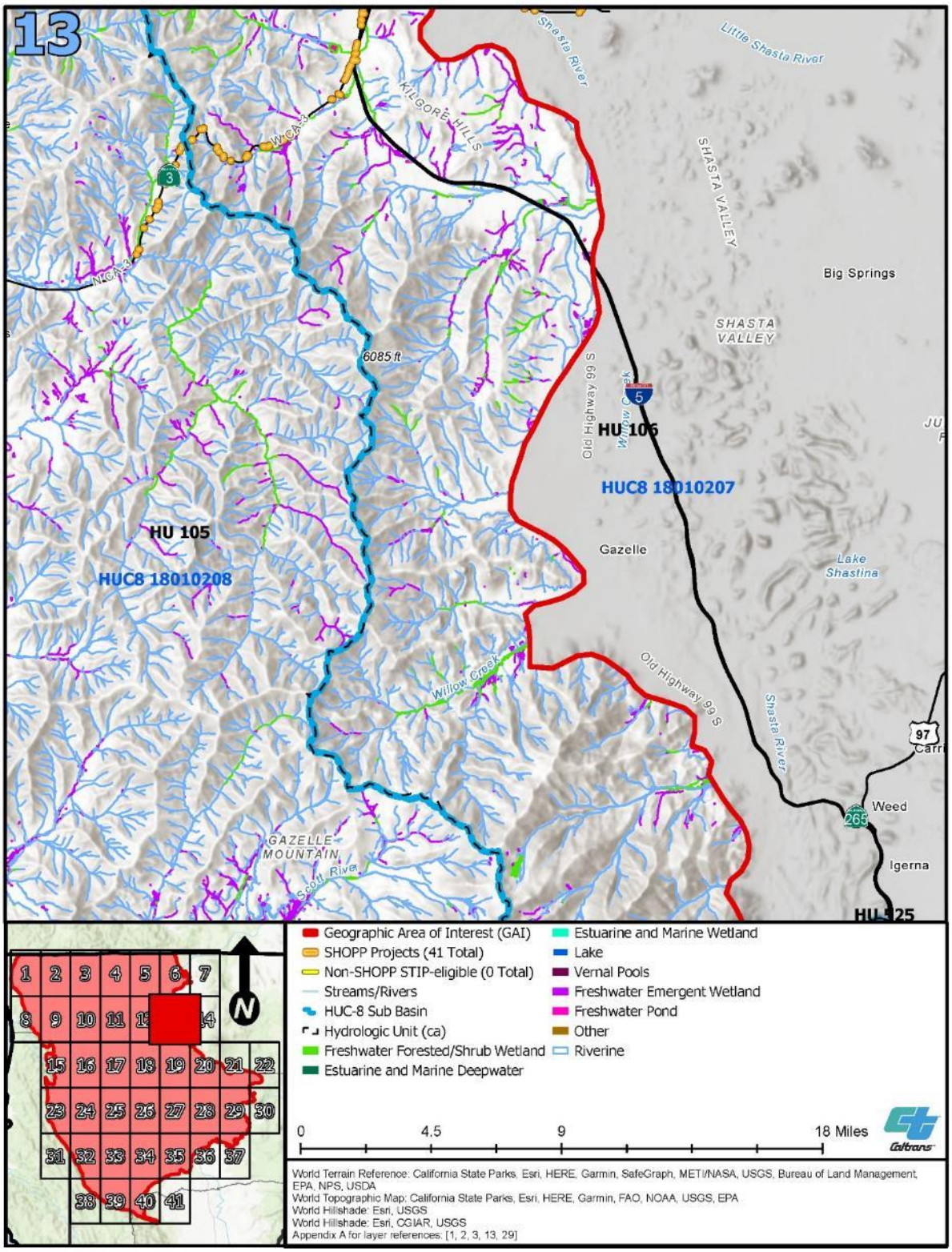

8
2338 ft
101
HU 104
HUC8 18010101
HU 103
MUSLATT MOUNTAIN
BLUE RIDGE
RATTLESNAKE MOUNTAIN
TEDS RIDGE
Redwood Hwy
Requa
Klamath
Klamath Glen
HU 105
STARWEIN RIDGE
HUC8 18010209
Blue Creek
HUC8 18010102
101
HU 107
4912 ft
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

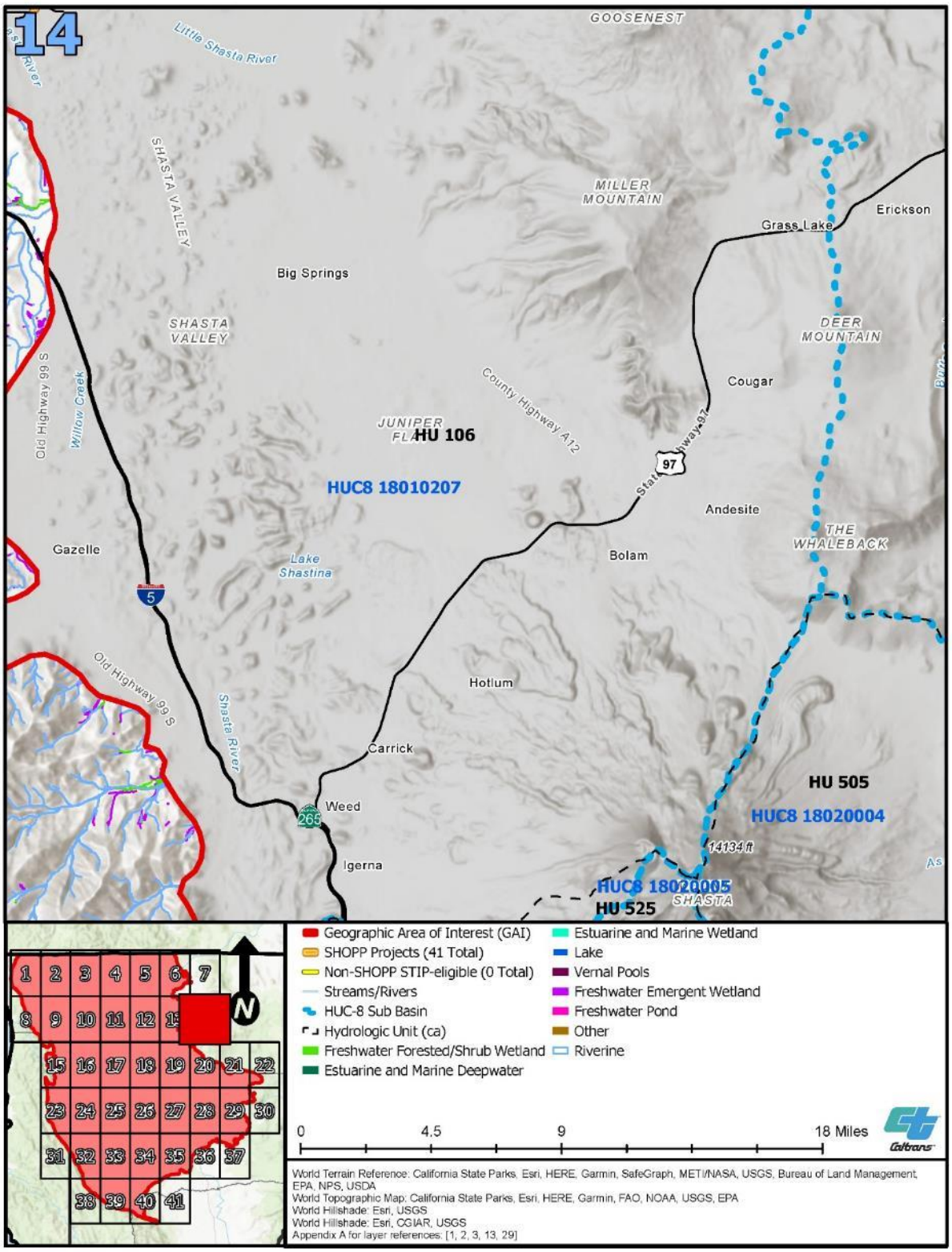

9
BLUE RIDGE
MUSLATT MOUNTAIN
SISKIYOU MOUNTAINS
5945 ft
HUC8 18010101
HU 103
PONY PEAK
Cottage Grove
96
Blue Creek
HUC8 18010209
HU 105
Blue Creek
Bluff Creek
4860 ft
TRAIL MOUNTAIN
HUC8 18010210
4912 ft
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0 4.5 9 18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

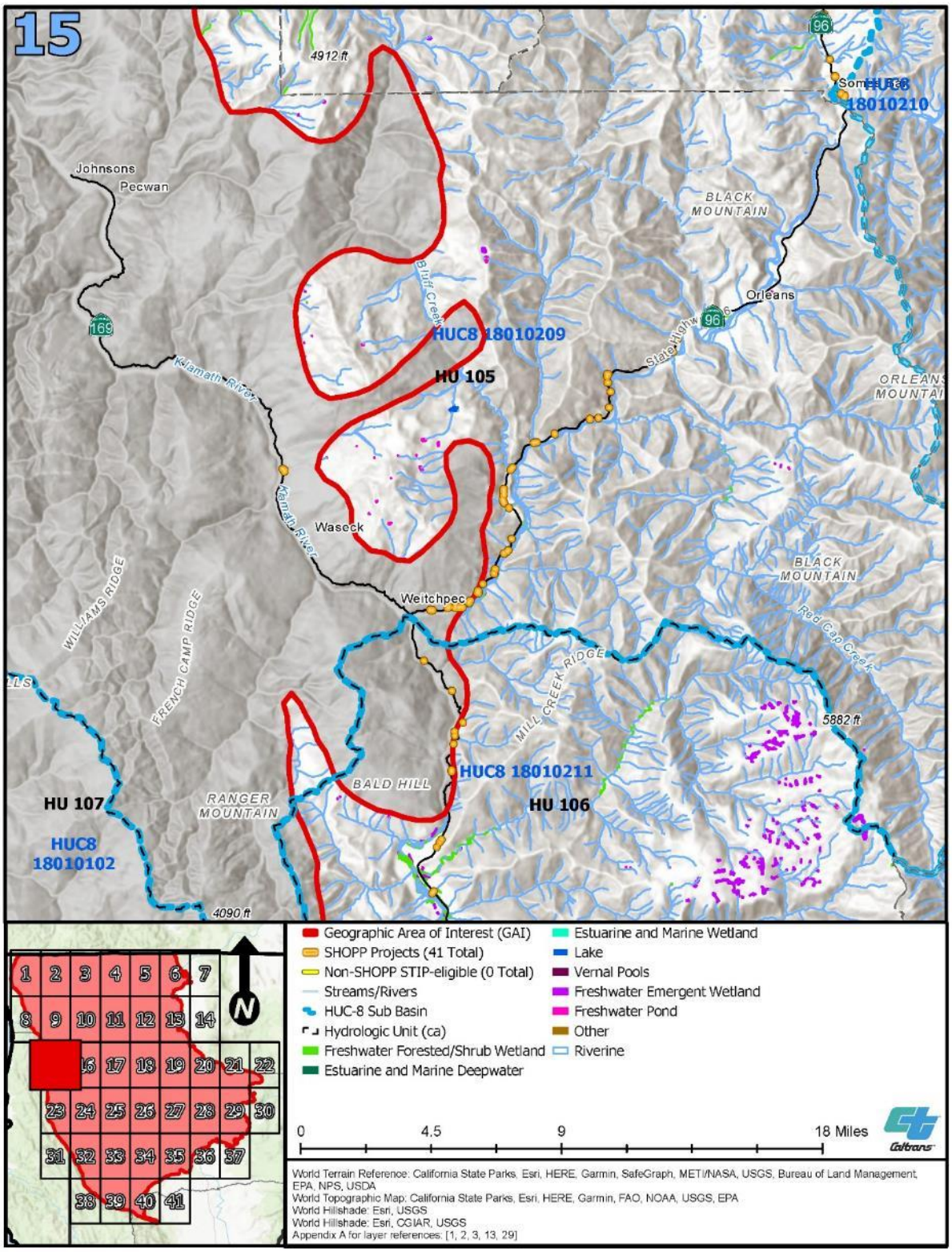

10
Clear Creek
HUC8 18010206
TITUS RIDGE
BIG RIDGE
PONY PEAK
Cottage Grove
HUC8 18010209
96
6965 ft
HUC8 18010208
HU 105
HUC8 18010210
HELL HOLE RIDGE
TRAIL MOUNTAIN
STEINACHER RIDGE
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

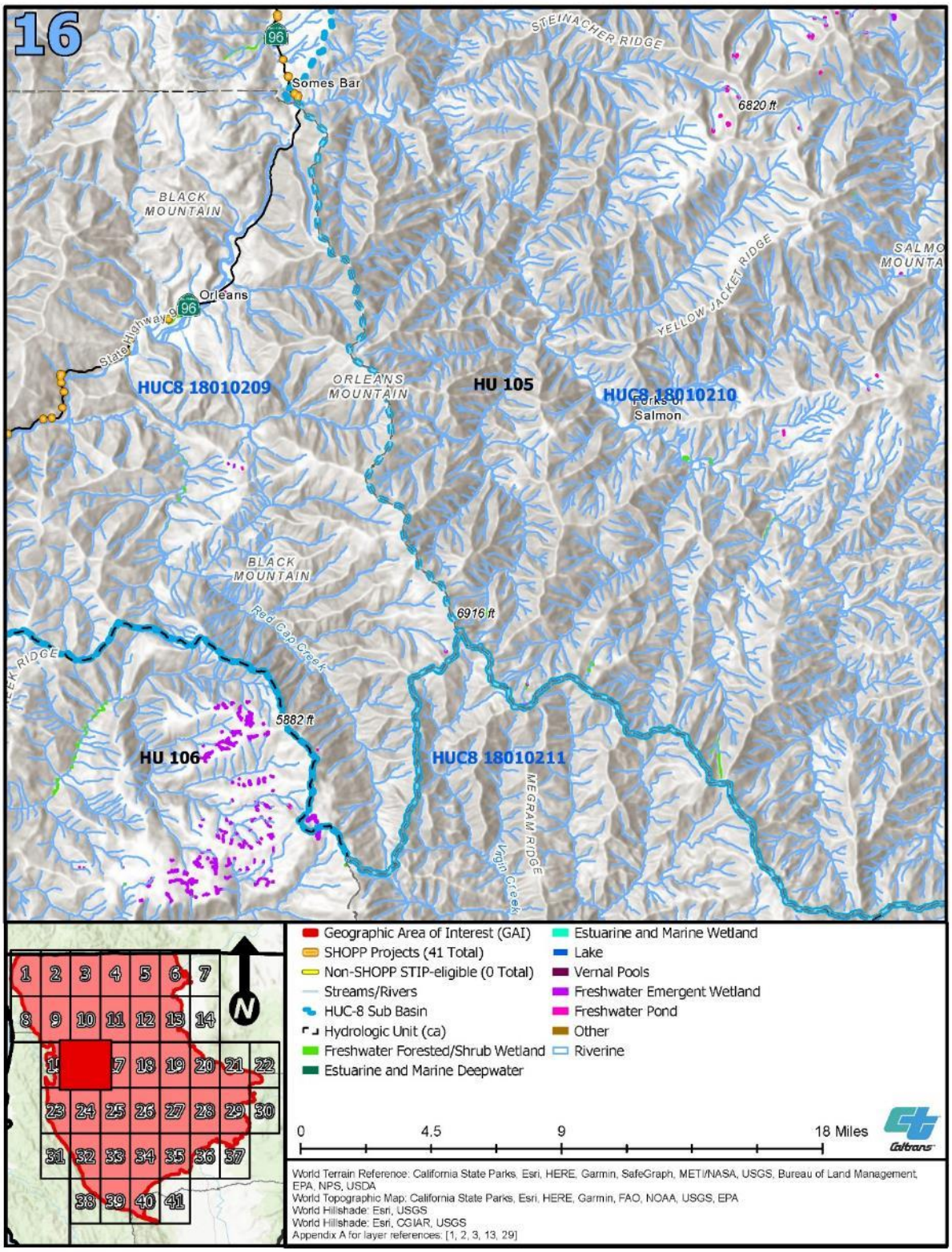

11
MARBLE MOUNTAINS
HUC8 18010206
BIG RIDGE
Scott River
HUC8 18010209
Elk Creek
HUC8 18010208
QUARTZ HILL
QUARTZ VALLEY
8240 ft
6965 ft
Muggins ville
HU 105
Wooley Creek
HUC8 18010210
HELL HOLE RIDGE
North Fork Salmon River
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

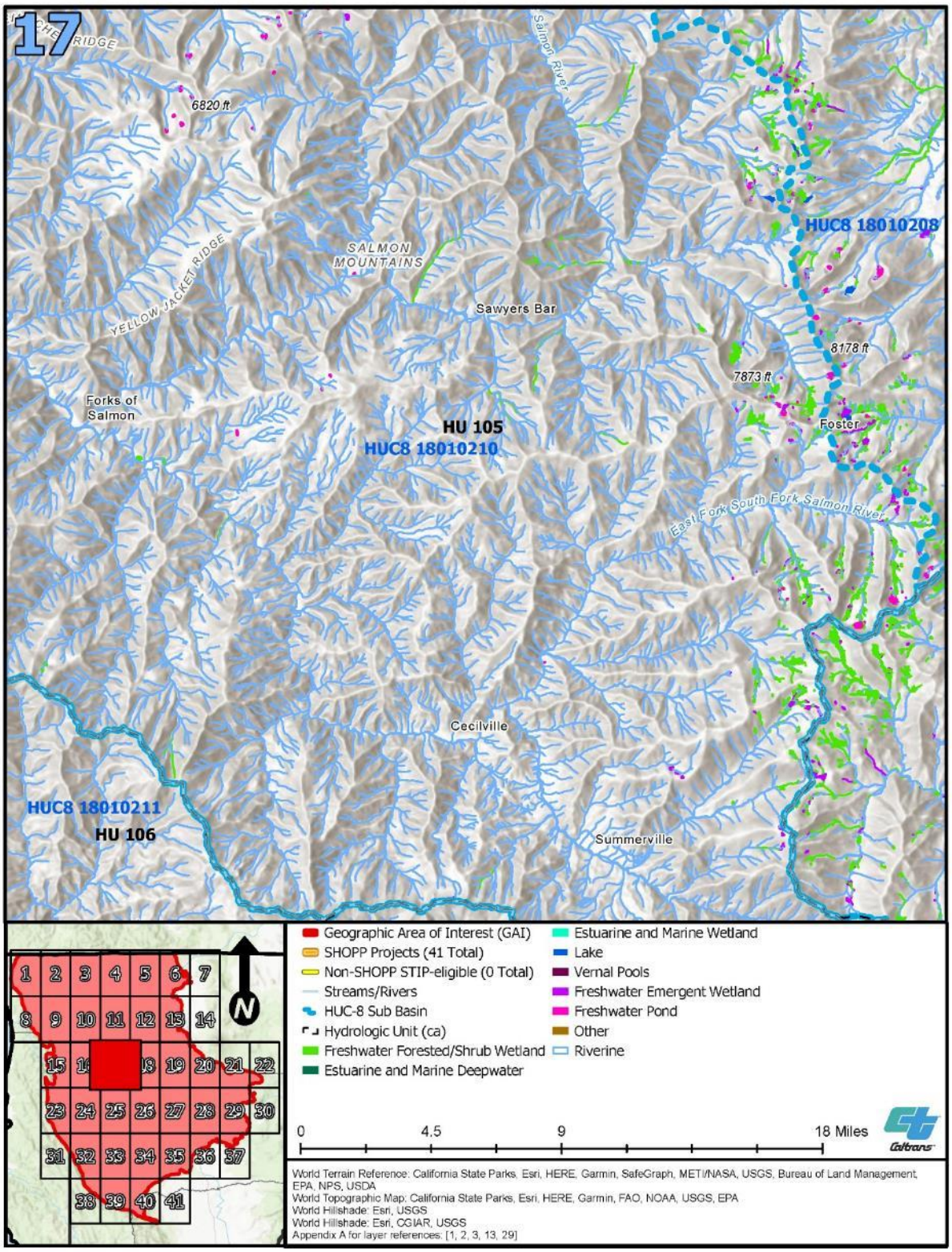

12
Hooperville
HUC8 18010207
HU 106
Scott River
SCOTT VALLEY
Fort Jones
QUARTZ HILL
QUARTZ VALLEY
CHAPARRAL HILL
Muggins ville
Greenview
HU 105
HUC8 18010208
Cheeseville
SCOTT VALLEY
Etna
GAZELLE MOUNTAIN
HUC8 18010210
6085 ft
3240 ft
1 2 3 4 5 6 7
8 9 10 11 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0 4.5 9 18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

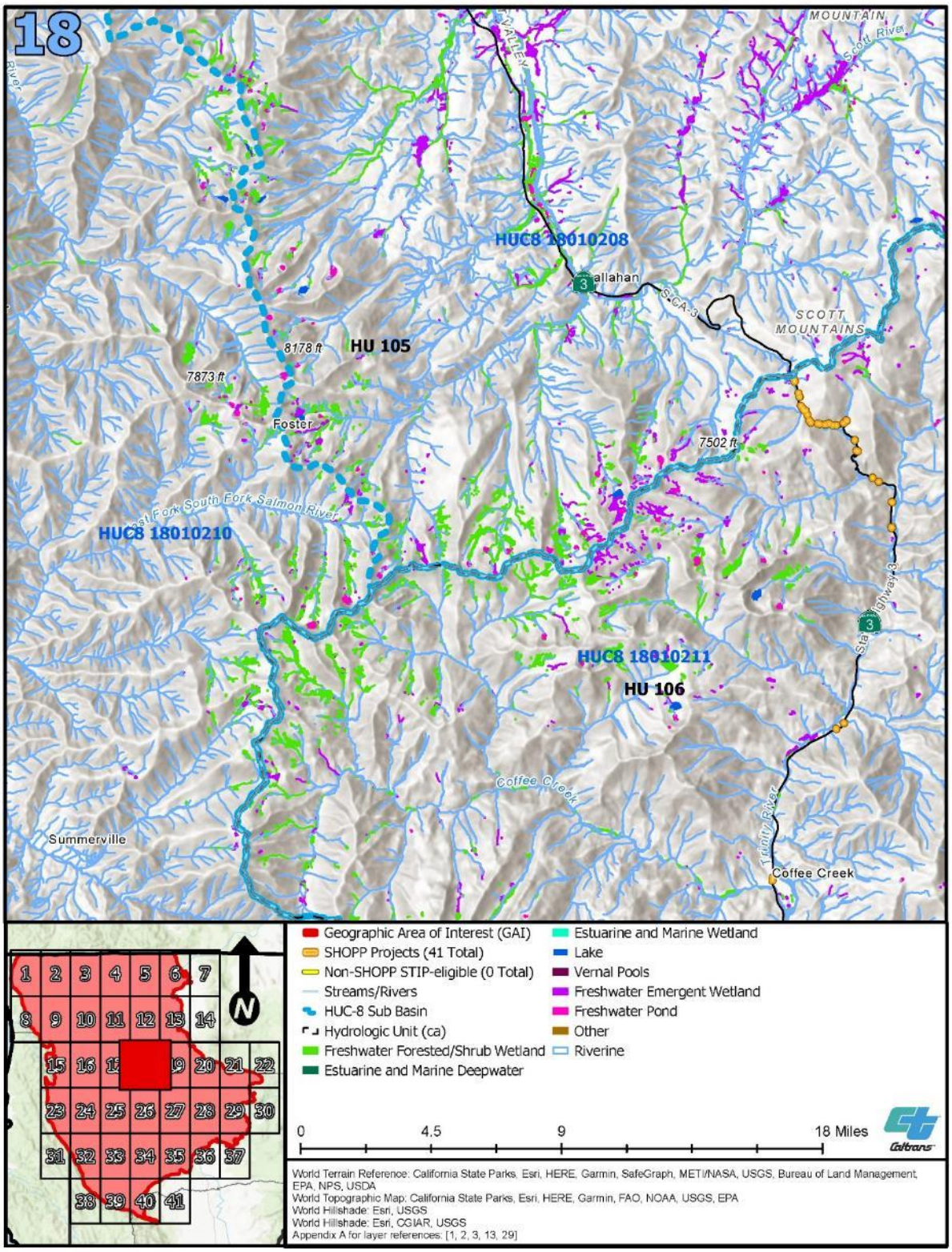

13
Shasta River
Little Shasta River
KILGORE HILLS
SHASTA VALLEY
Big Springs
SHASTA VALLEY
6085 ft
Old Highway 99 S
Willow Creek
HU 106
HUC8 18010207
HU 105
HUC8 18010208
Gazelle
Lake Shastina
Willow Creek
Old Highway 99 S
Shasta River
Weed
Igerna
GAZELLE MOUNTAIN
Scott River
HU 125
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

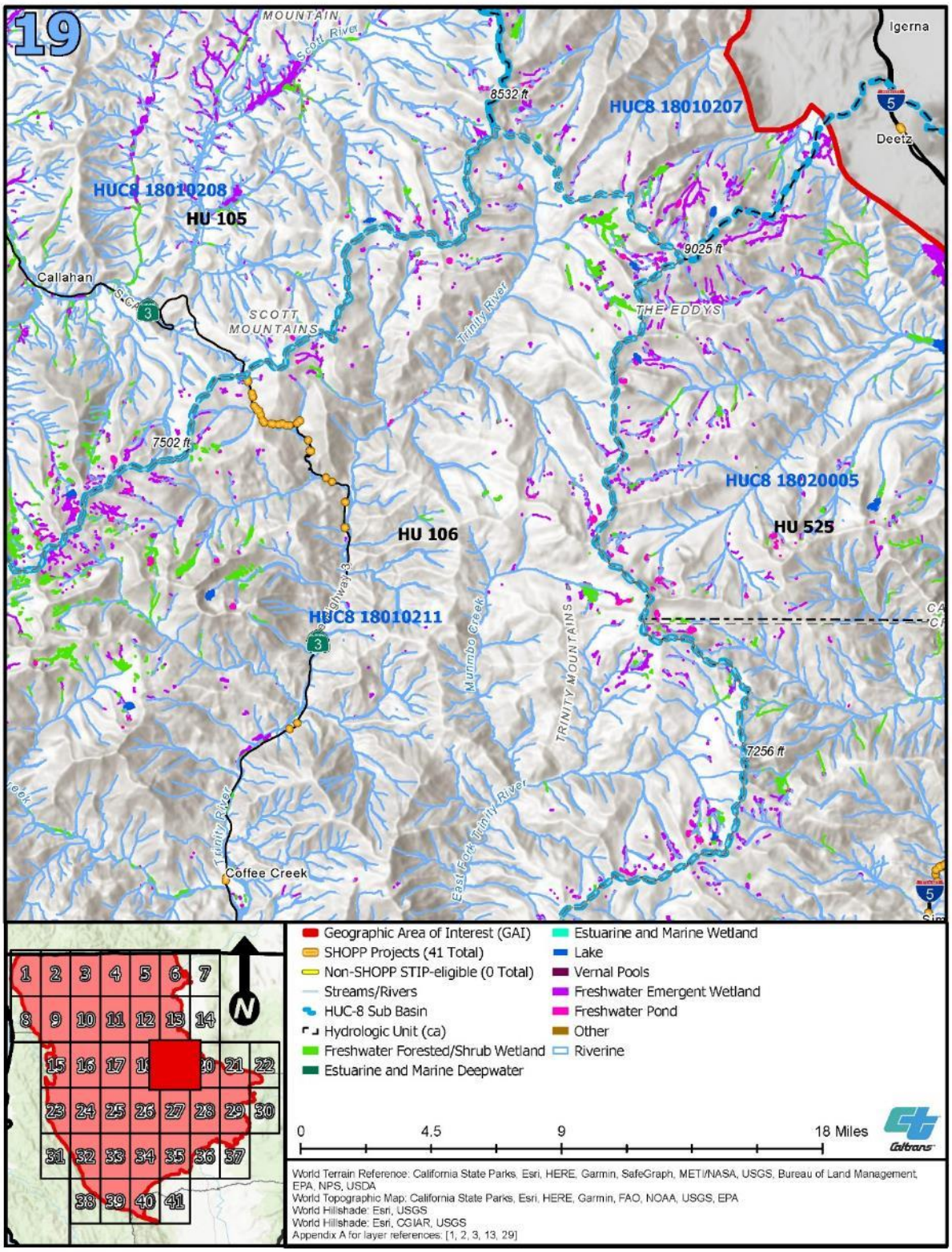

14
Little Shasta River
GOOSENEST
SHASTA VALLEY
MILLER MOUNTAIN
Erickson
Grass Lake
Big Springs
SHASTA VALLEY
DEER MOUNTAIN
Old Highway 99 S
Willow Creek
County Highway A12
Cougar
JUNIPER FLAT
HU 106
HUC8 18010207
97
Andesite
THE WHALEBACK
Gazelle
Lake Shastina
Bolam
5
Old Highway 99 S
Hotlum
Shasta River
Carrick
Weed
265
HU 505
HUC8 18020004
14134 ft
Igerna
HUC8 18020005
HU 525
SHASTA
1 2 3 4 5 6 7
8 9 10 11 12 13
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

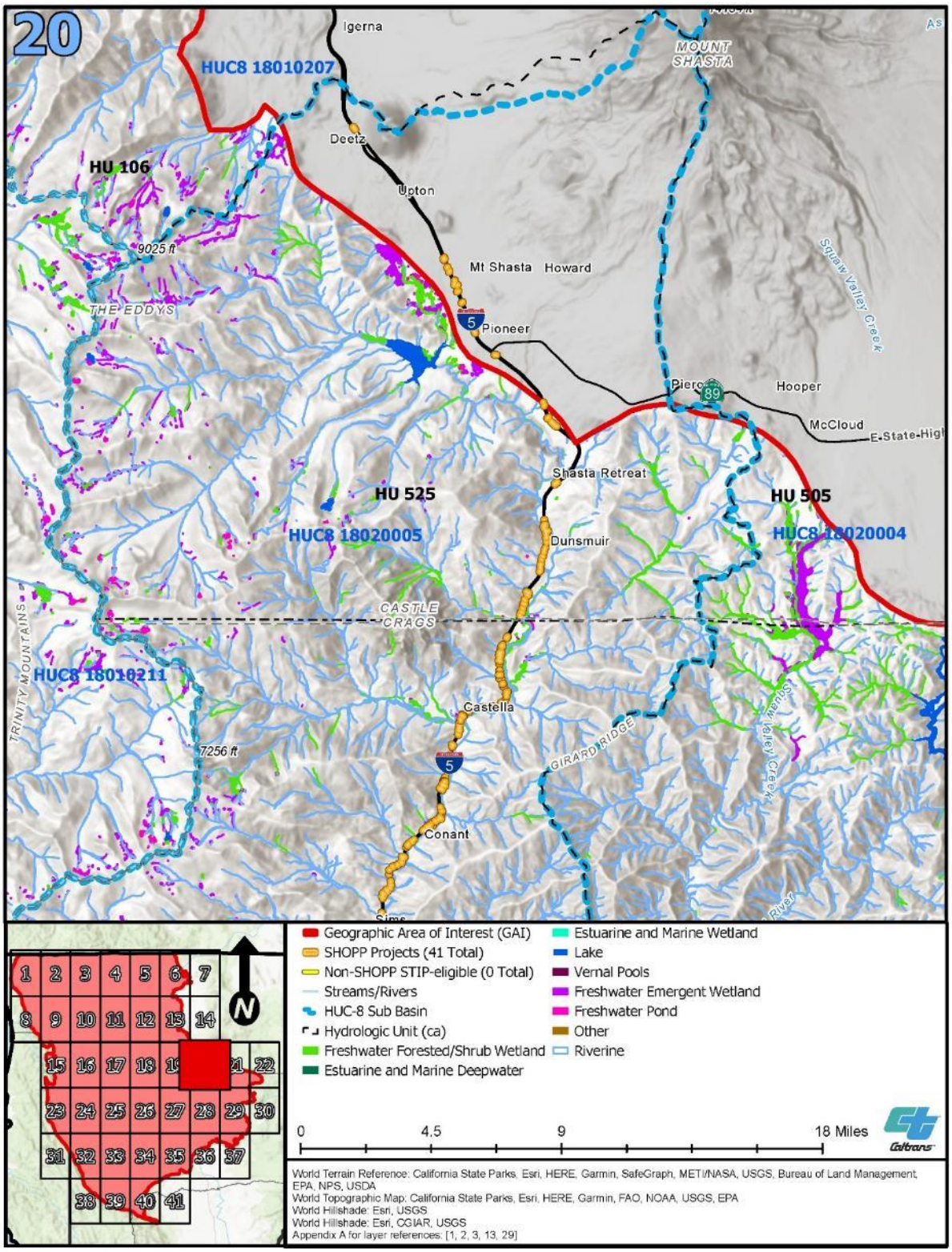

15
4912 ft
Johnsons
Pecwan
Bluff Creek
HUC8 18010209
HU 105
Klamath River
Orleans
BLACK MOUNTAIN
ORLEANS MOUNTAIN
Waseck
Weitchpec
WILLIAMS RIDGE
FRENCH CAMP RIDGE
MILL CREEK RIDGE
Red Cap Creek
5882 ft
HUC8 18010211
HU 106
HU 107
BALD HILL
RANGER MOUNTAIN
HUC8 18010102
4090 ft
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

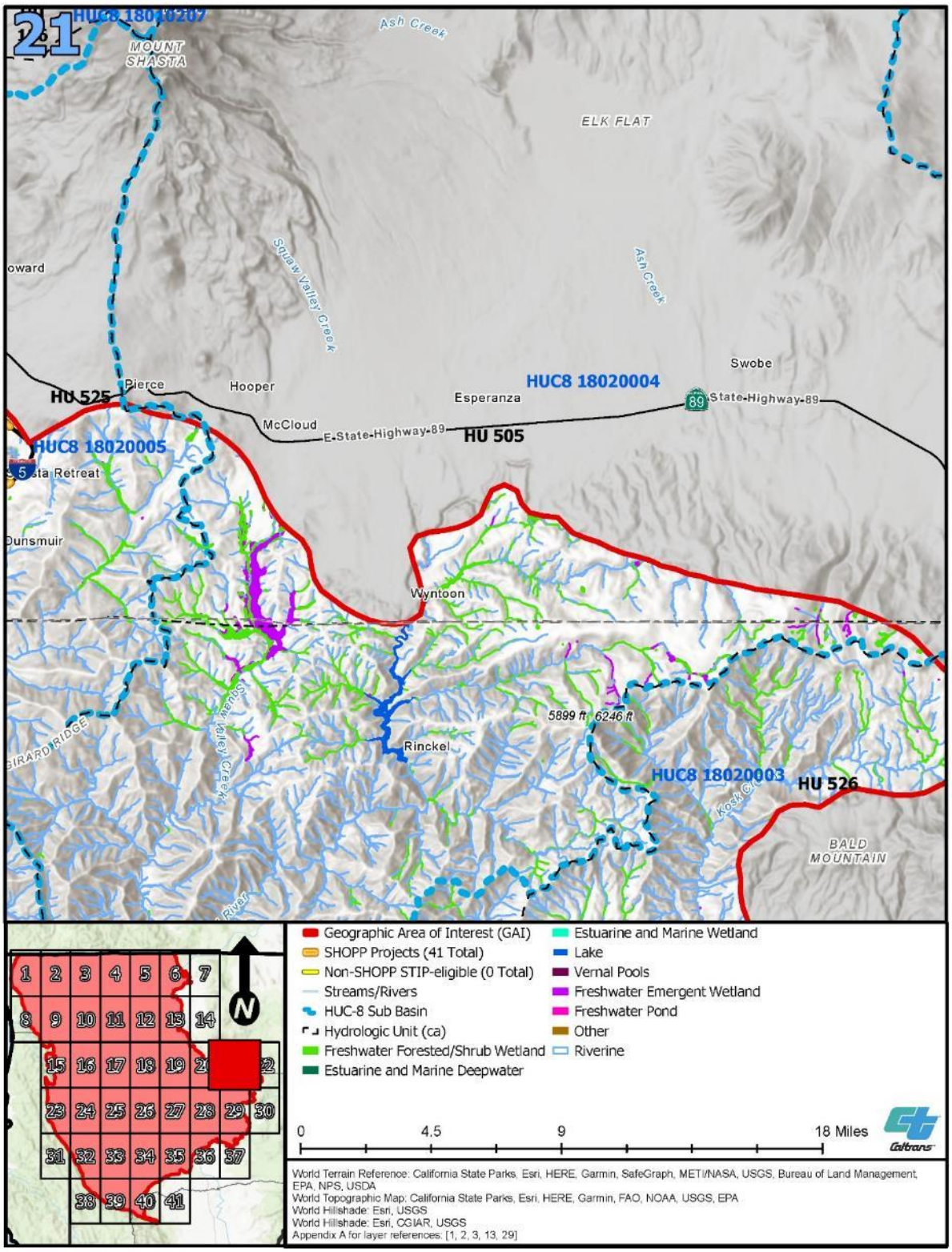

16
Somes Bar
STEINACHER RIDGE
6820 ft
BLACK MOUNTAIN
Orleans
State Highway 96
HUC8 18010209
ORLEANS MOUNTAIN
HU 105
HUC8 18010210
Forks of Salmon
YELLOW JACKET RIDGE
SALMO MOUNTA
BLACK MOUNTAIN
Red Cap Creek
6916 ft
5882 ft
HU 106
HUC8 18010211
MEGRAM RIDGE
Virgin Creek
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

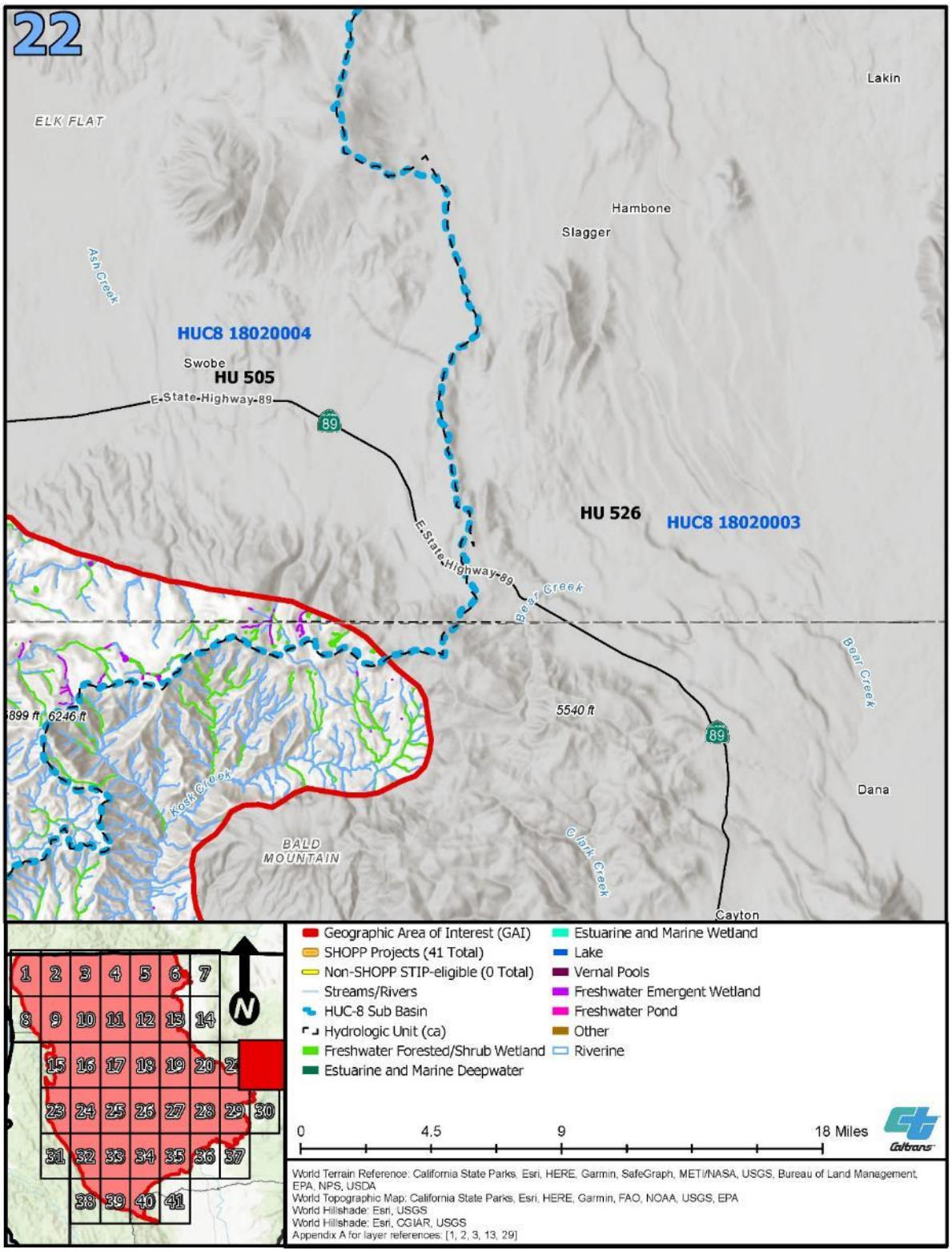

17
6820 ft
Salmon River
HUC8 18010208
SALMON MOUNTAINS
YELLOW JACKET RIDGE
Sawyers Bar
8178 ft
7873 ft
Forks of Salmon
HU 105
HUC8 18010210
Foster
East Fork South Fork Salmon River
Cecilville
HUC8 18010211
HU 106
Summerville
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

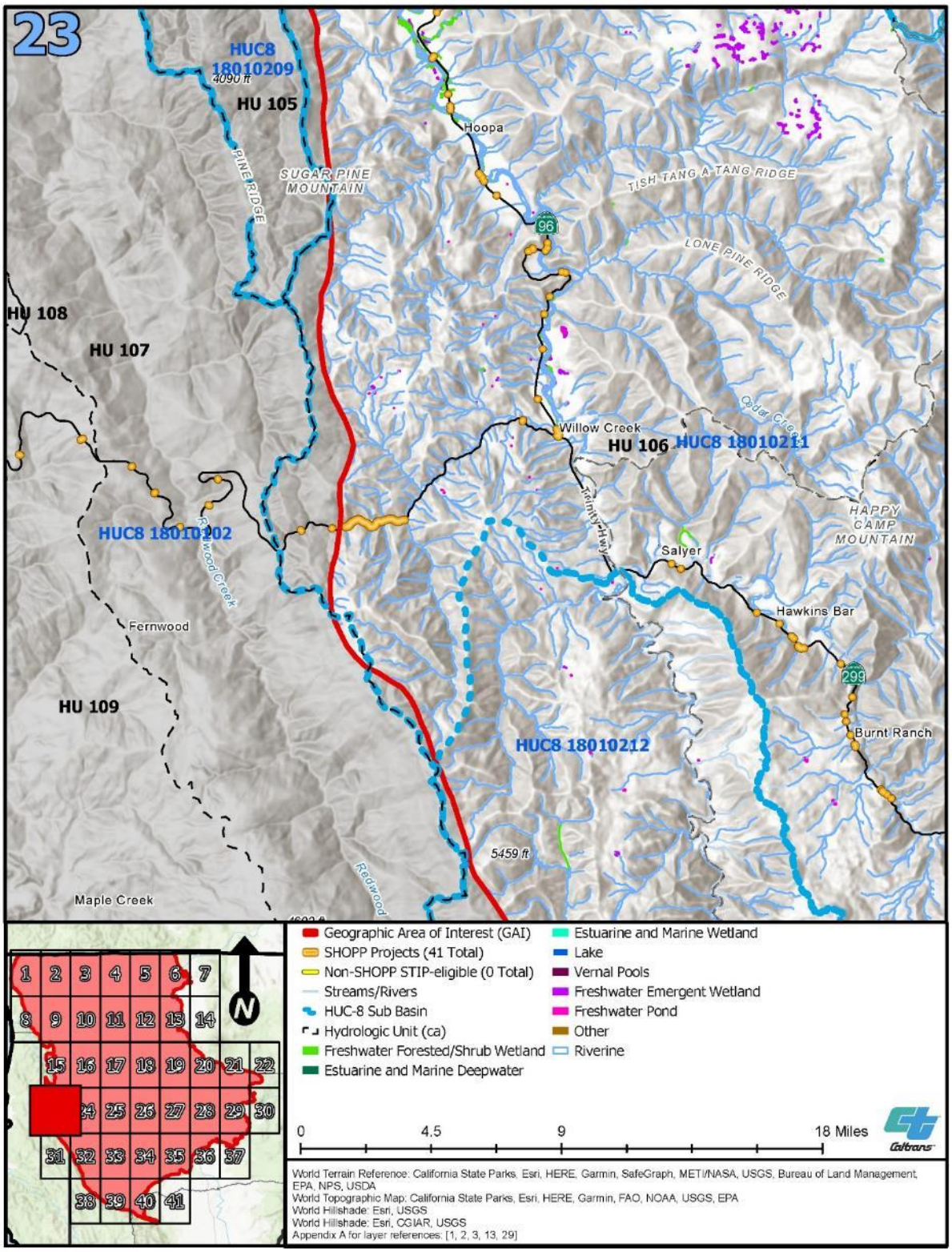

18
HUC8 18010208
HU 105
8178 ft
7873 ft
Foster
SCOTT MOUNTAINS
7502 ft
HUC8 18010210
HUC8 18010211
HU 106
Coffee Creek
Summerville
Coffee Creek
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

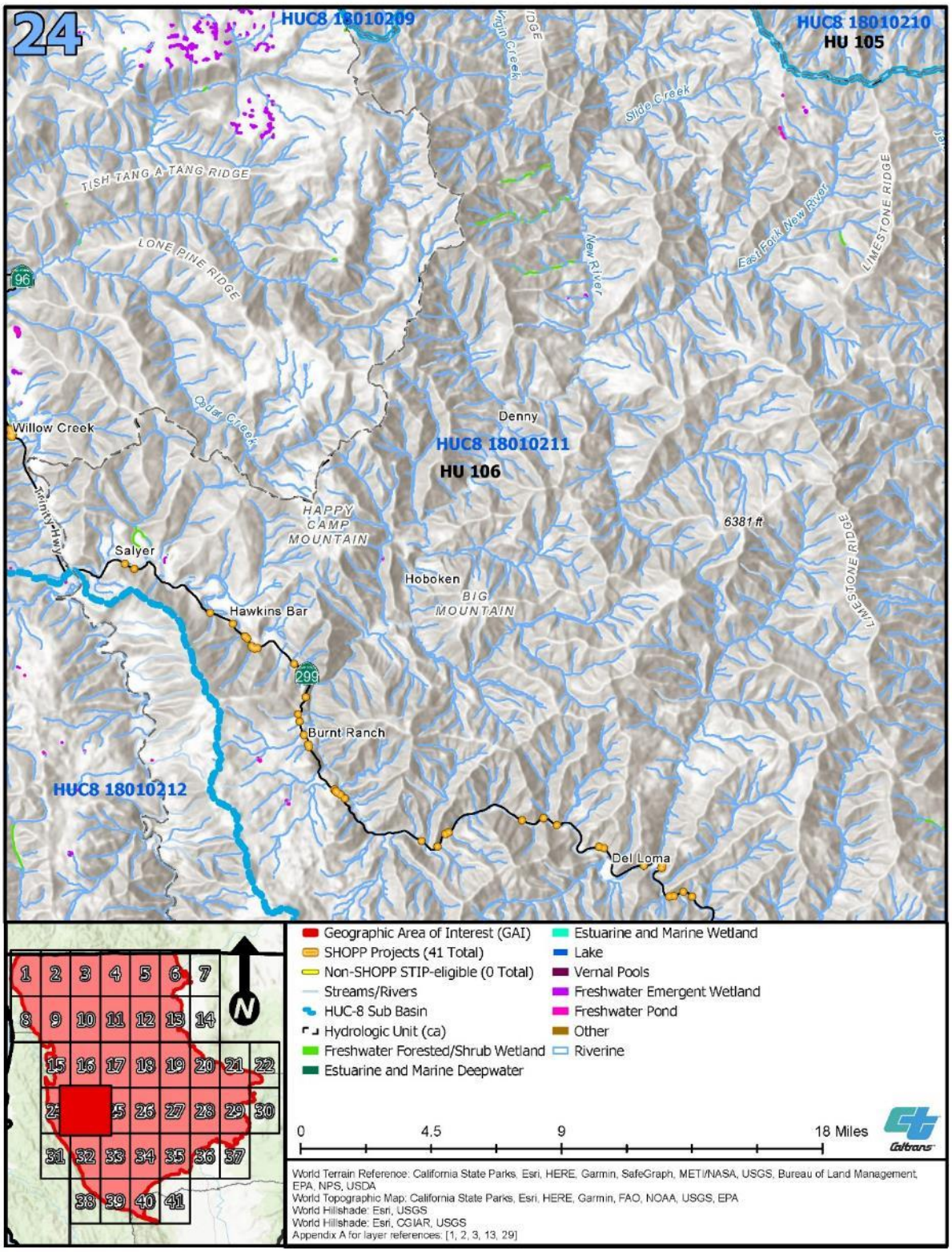

19
MOUNTAIN
Scott River
8532 ft
HUC8 18010207
Igerna
Deetz
HUC8 18010208
HU 105
Callahan
SCOTT MOUNTAINS
Trinity River
9025 ft
THE EDDYS
7502 ft
HUC8 18020005
HU 525
HU 106
HUC8 18010211
Mumbo Creek
TRINITY MOUNTAINS
7256 ft
East Fork Trinity River
Coffee Creek
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

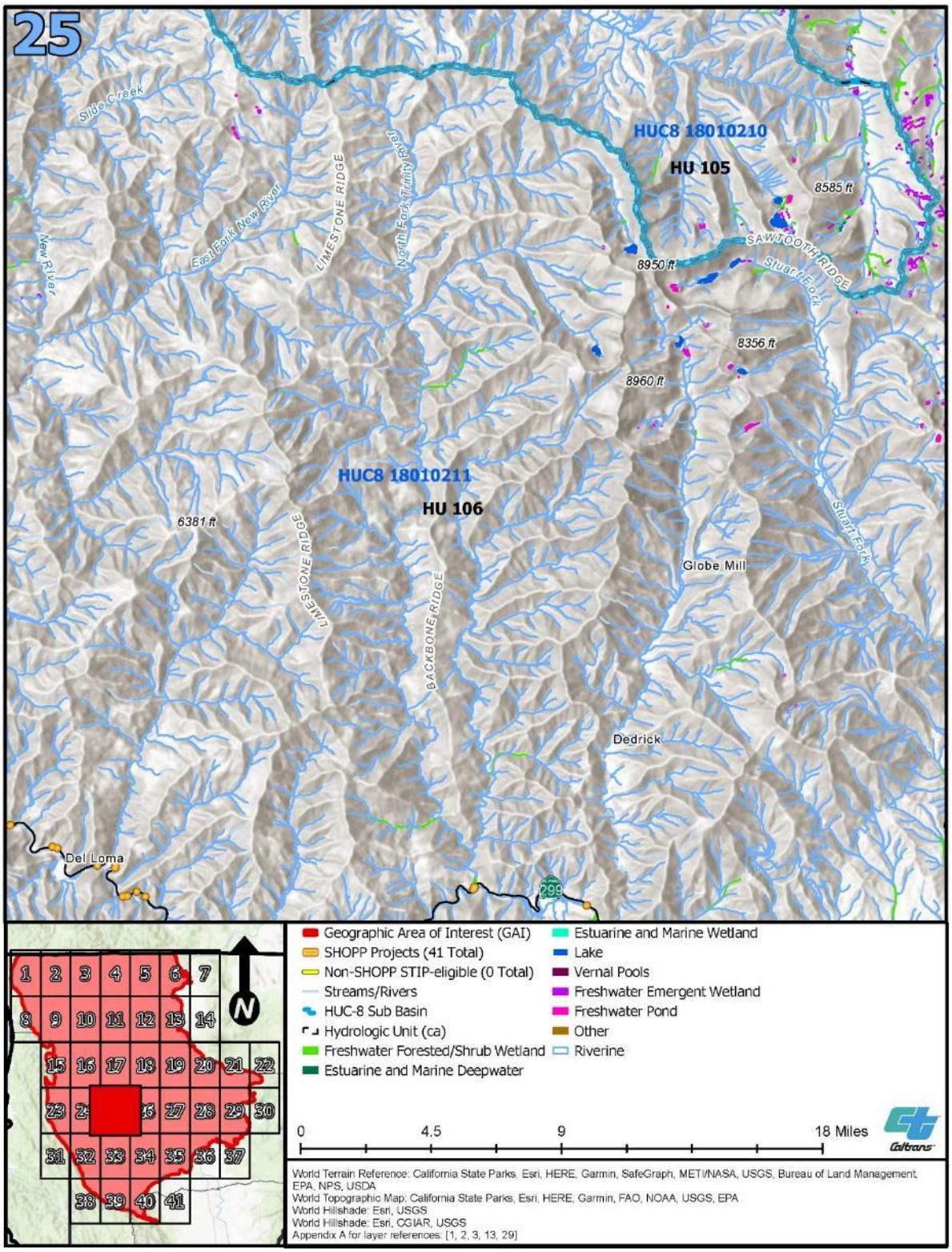

20
HUC8 18010207
HU 106
Igerna
Deetz
Upton
MOUNT SHASTA
9025 ft
THE EDDYS
Mt Shasta
Howard
Pioneer
Squaw Valley Creek
Hooper
McCloud
Shasta Retreat
HU 525
HUC8 18020005
HU 505
HUC8 18020004
Dunsmuir
CASTLE CRAGS
TRINITY MOUNTAINS
HUC8 18010211
Castella
7256 ft
GIRARD RIDGE
Conant
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

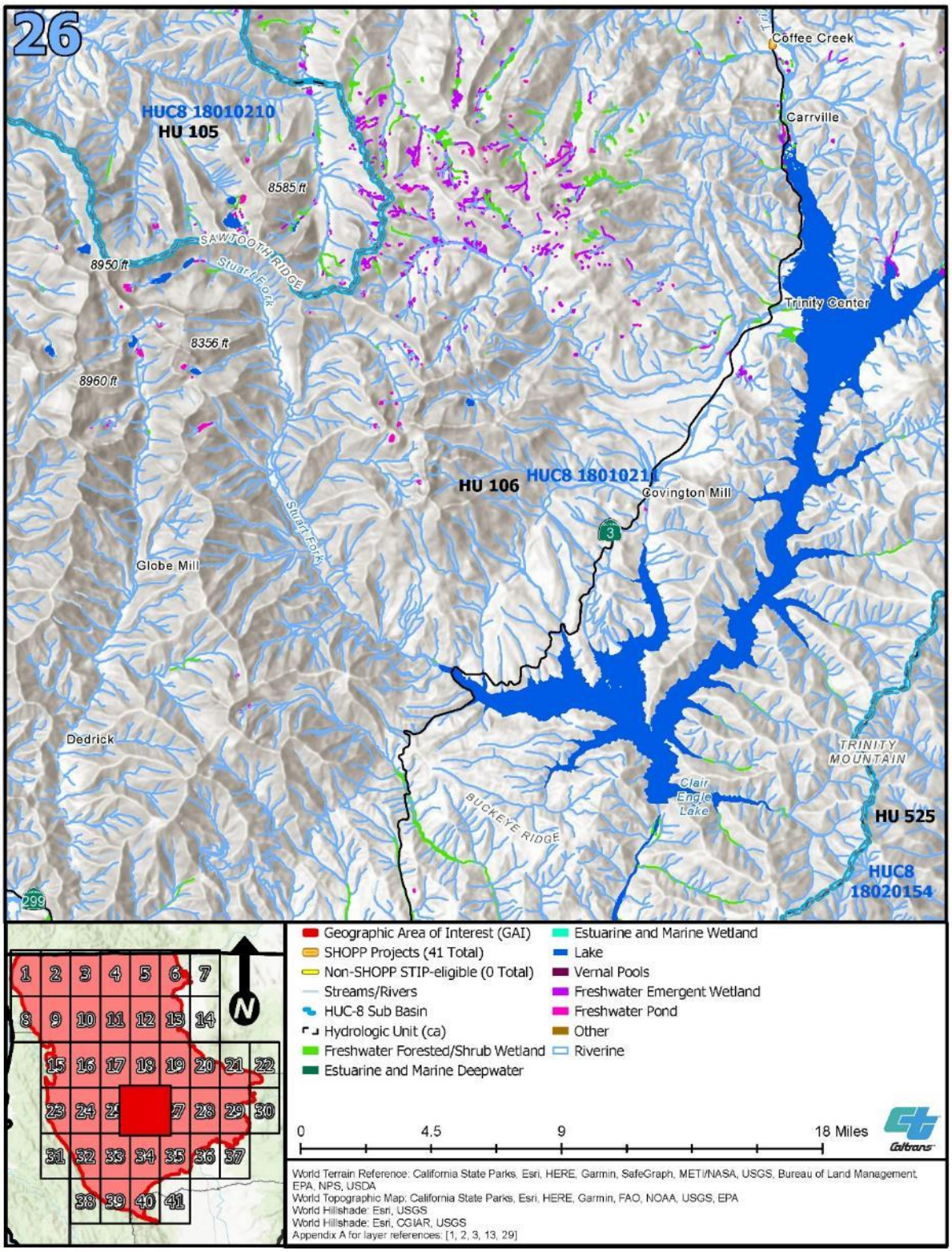

21
HUC8 18010207
MOUNT SHASTA
Ash Creek
ELK FLAT
Squaw Valley Creek
Ash Creek
Swobe
Pierce
Hooper
HU 525
HUC8 18020004
Esperanza
State-Highway-89
McCloud
E-State-Highway-89
HU 505
HUC8 18020005
Dunsmuir
Wyntoon
5899 ft
6246 ft
Rinckel
HUC8 18020003
HU 526
BALD MOUNTAIN
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

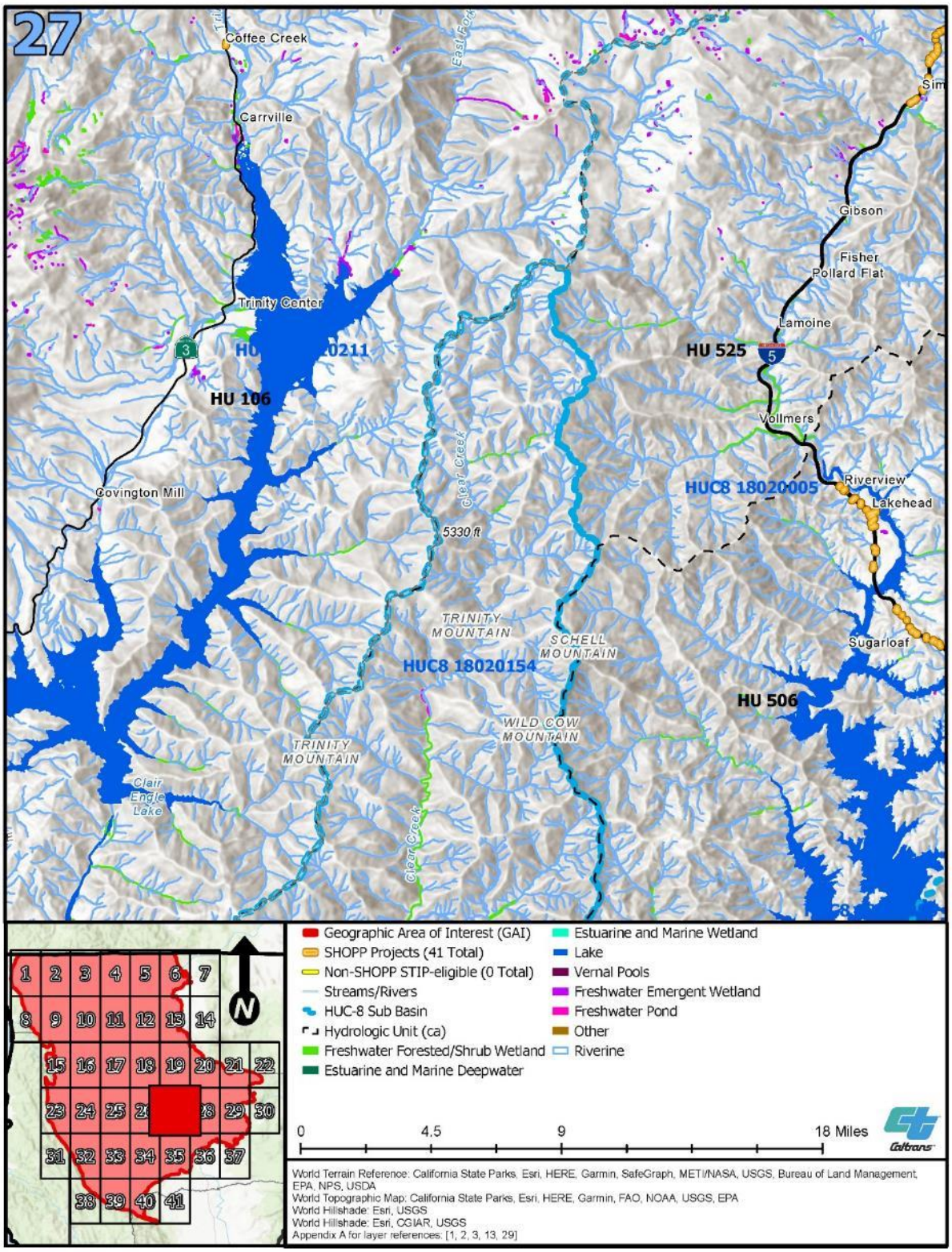

22
Lakin
ELK FLAT
Hambone
Slagger
Ash Creek
HUC8 18020004
Swobe
HU 505
E State Highway 89
89
HU 526
HUC8 18020003
E State Highway 89
Bear Creek
Bear Creek
5540 ft
6246 ft
Kosk Creek
Dana
BALD MOUNTAIN
Clark Creek
Cayton
N
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

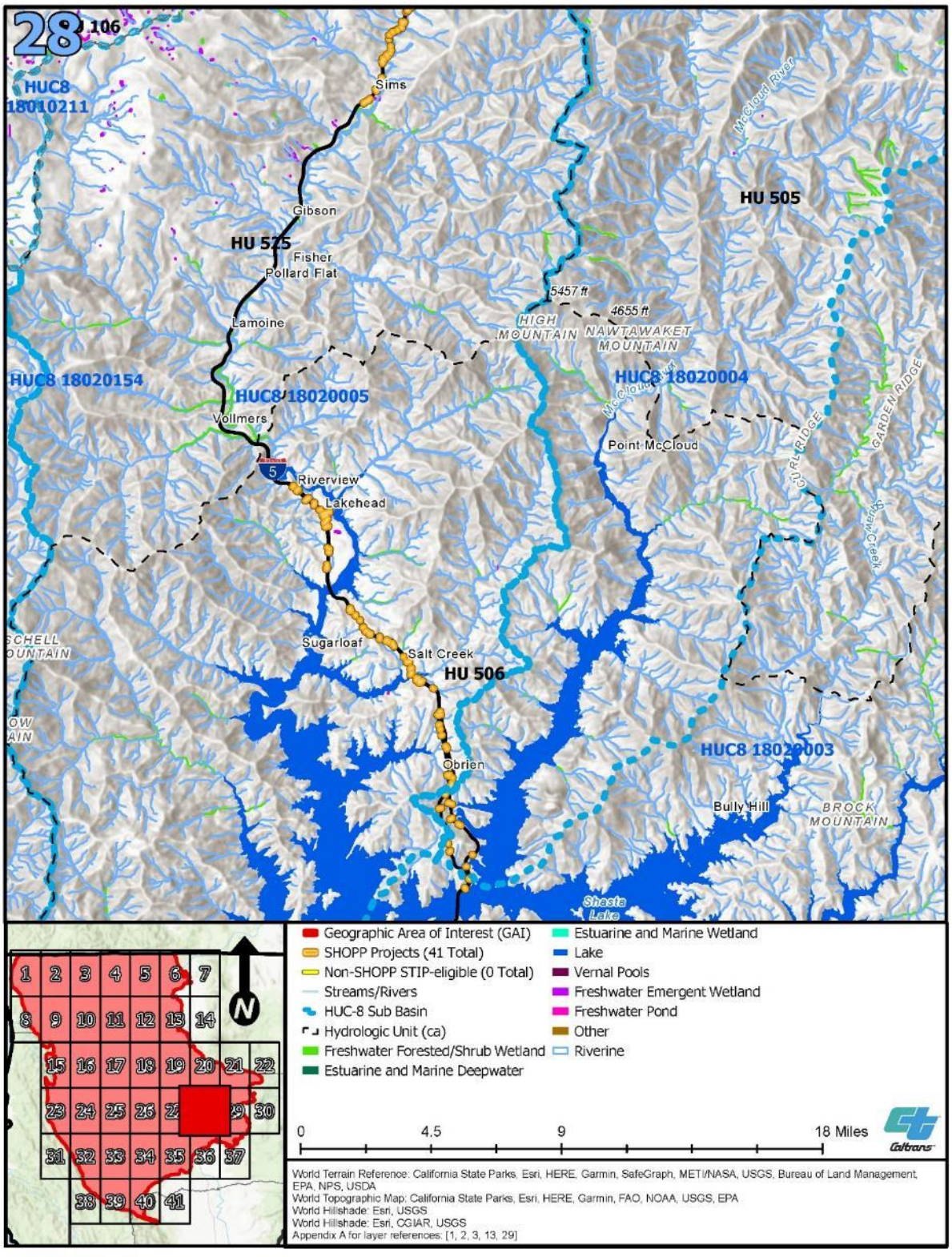

23
HUC8 18010209
HU 105
HU 108
HU 107
HU 109
HU 106
HUC8 18010211
HUC8 18010212
HUC8 18010202
SUGAR PINE MOUNTAIN
PINE RIDGE
TISH TANG A TANG RIDGE
LONE PINE RIDGE
HAPPY CAMP MOUNTAIN
Hoopa
Willow Creek
Salyer
Hawkins Bar
Burnt Ranch
Fernwood
Maple Creek
Redwood Creek
Trinity Hwy
96
299
5459 ft
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

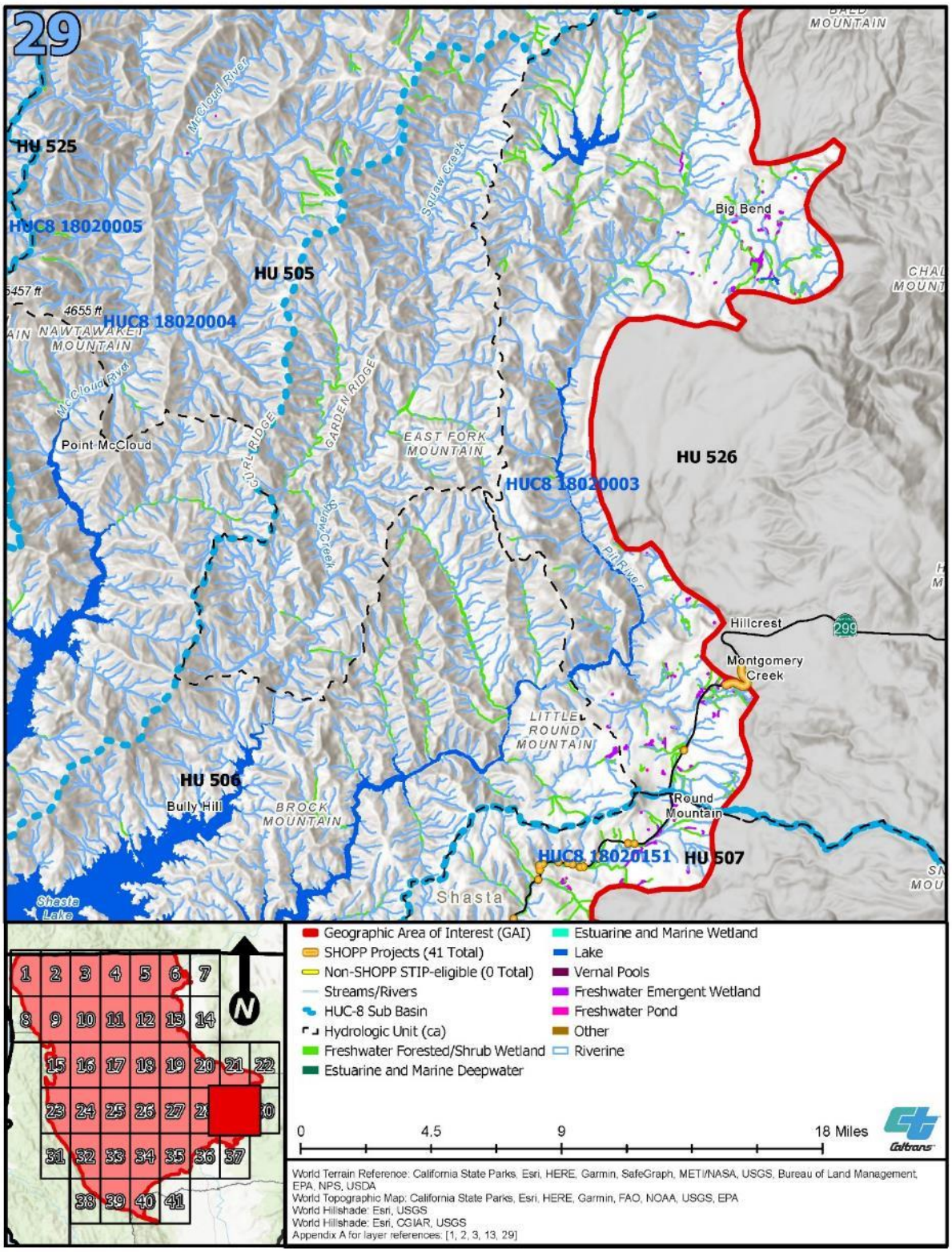

24
HUC8 18010209
HUC8 18010210
HU 105
TISH TANG A TANG RIDGE
LONE PINE RIDGE
Slide Creek
New River
East Fork New River
LIMESTONE RIDGE
Cedar Creek
Willow Creek
Denny
HUC8 18010211
HU 106
HAPPY CAMP MOUNTAIN
6381 ft
Salyer
Hoboken
BIG MOUNTAIN
Hawkins Bar
Burnt Ranch
HUC8 18010212
Del Loma
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

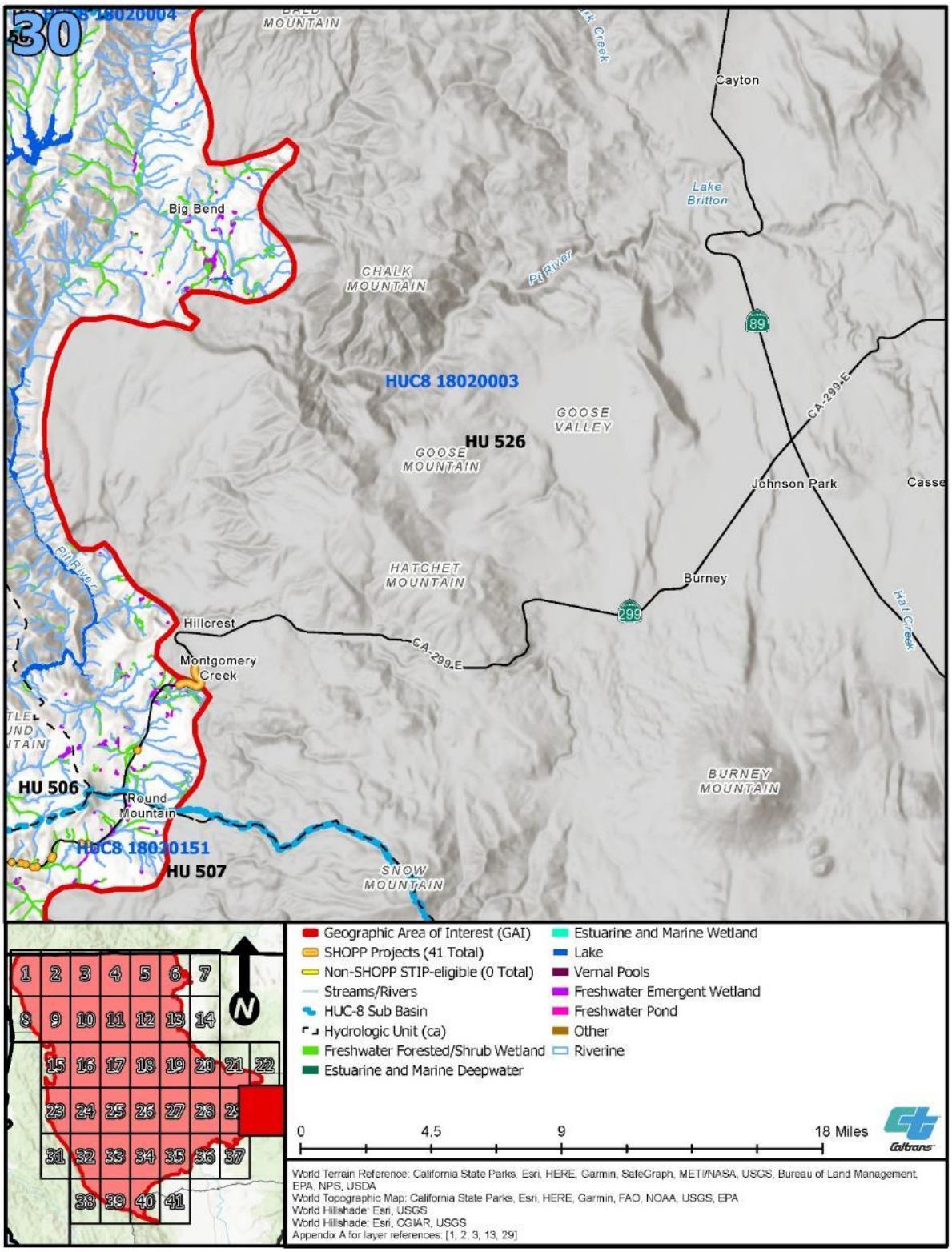

25
Slide Creek
New River
East Fork New River
LIMESTONE RIDGE
North Fork Trinity River
HUC8 18010210
HU 105
8585 ft
SAWTOOTH RIDGE
Stuart Fork
8950 ft
8356 ft
8960 ft
HUC8 18010211
HU 106
6381 ft
LIMESTONE RIDGE
BACKBONE RIDGE
Stuart Fork
Globe Mill
Dedrick
Del Loma
299
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 26 27 28 29 30
31 32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

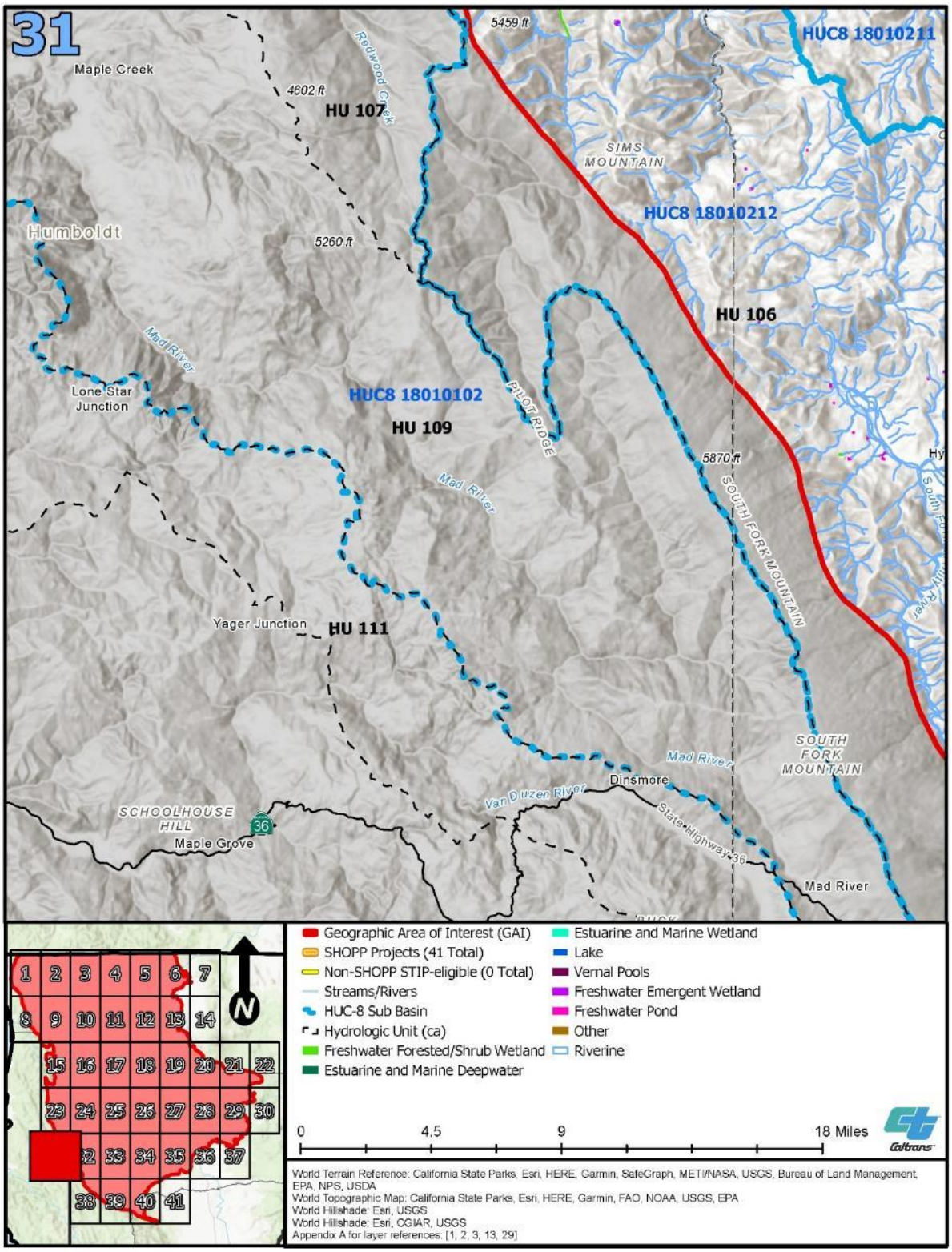

26
HUC8 18010210
HU 105
HU 106
HUC8 18010211
HU 525
HUC8 18020154
Coffee Creek
Carrville
Trinity Center
Covington Mill
Globe Mill
Dedrick
Clair Engle Lake
TRINITY MOUNTAIN
BUCKEYE RIDGE
SAWTOOTH RIDGE
Stuart Fork
8585 ft
8950 ft
8356 ft
8960 ft
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

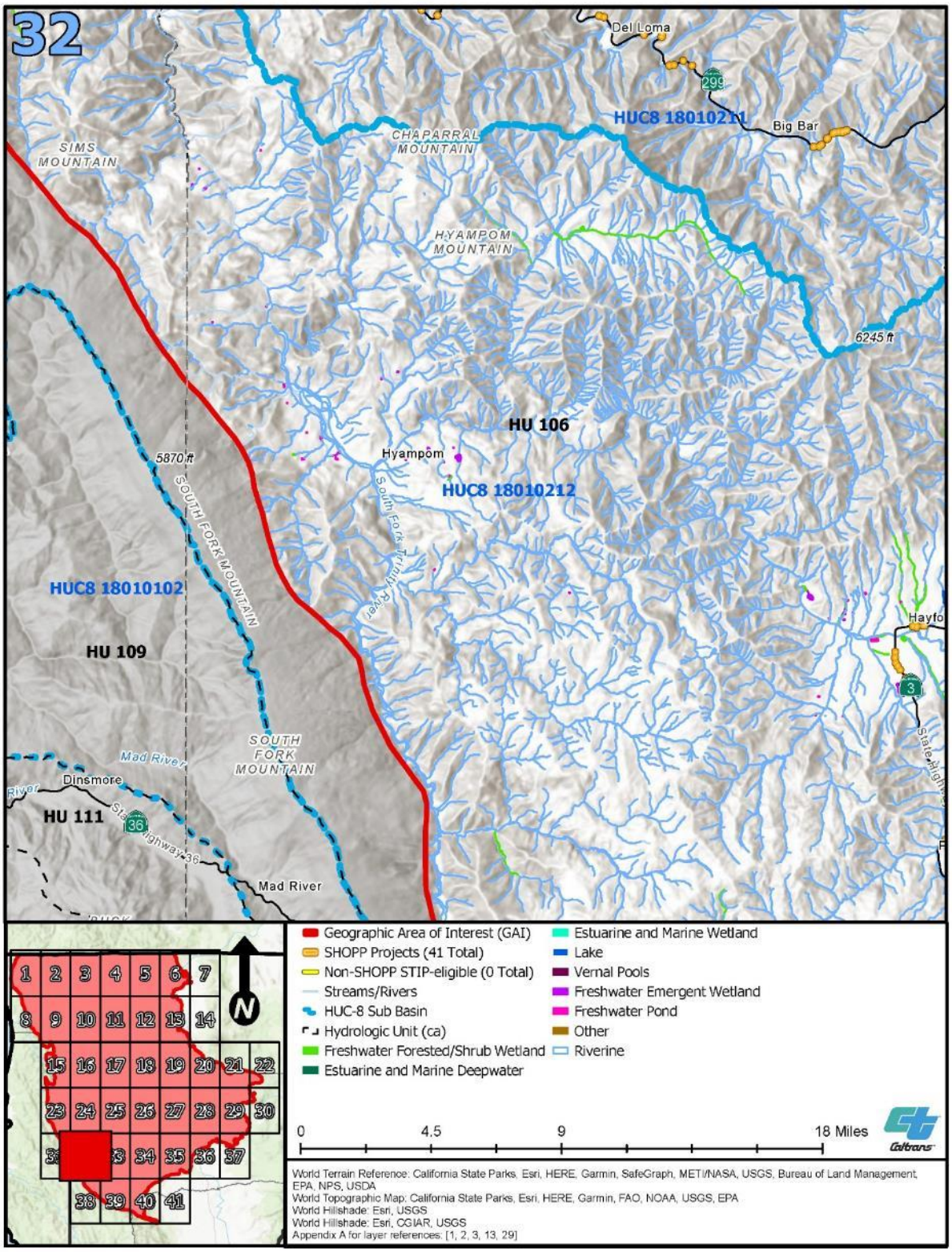

27
Coffee Creek
Carrville
Trinity Center
HU 106
HU 525
Lamoine
Gibson
Fisher
Pollard Flat
Vollmers
Riverview
Lakehead
HUC8 18020005
Covington Mill
5330 ft
TRINITY MOUNTAIN
SCHELL MOUNTAIN
HUC8 18020154
HU 506
WILD COW MOUNTAIN
TRINITY MOUNTAIN
Clair Engle Lake
Sugarloaf
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

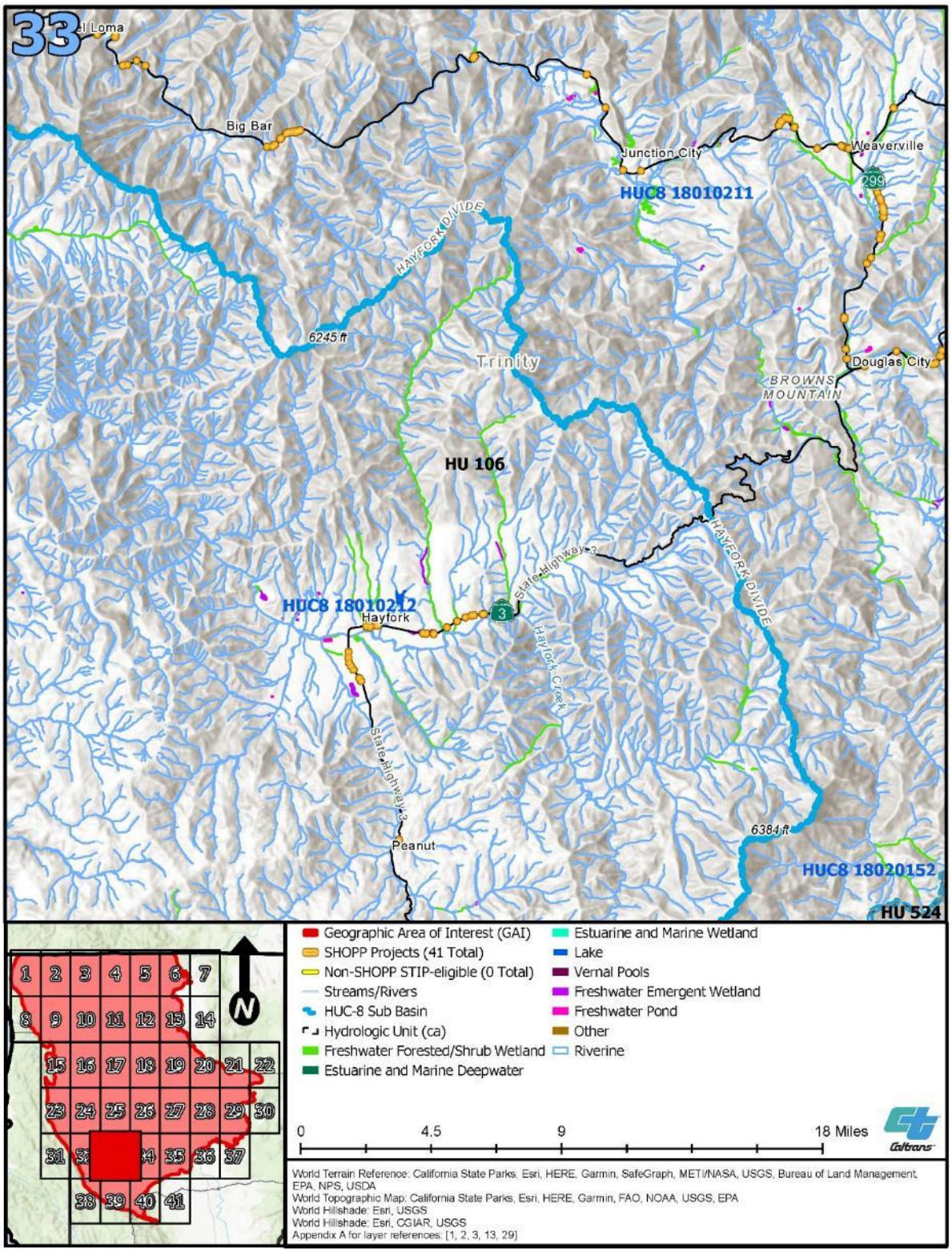

28
106
HUC8
18010211
Sims
Gibson
HU 525
Fisher
Pollard Flat
Lamoine
HUC8 18020154
HUC8 18020005
Vollmers
5
Riverview
Lakehead
Sugarloaf
Salt Creek
HU 506
Obrien
HU 505
McCloud River
5457 ft
4655 ft
HIGH MOUNTAIN
NAWTAWAKET MOUNTAIN
HUC8 18020004
Point McCloud
CURL RIDGE
GARDEN RIDGE
Squaw Creek
HUC8 18020003
Bully Hill
BROCK MOUNTAIN
Shasta Lake
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

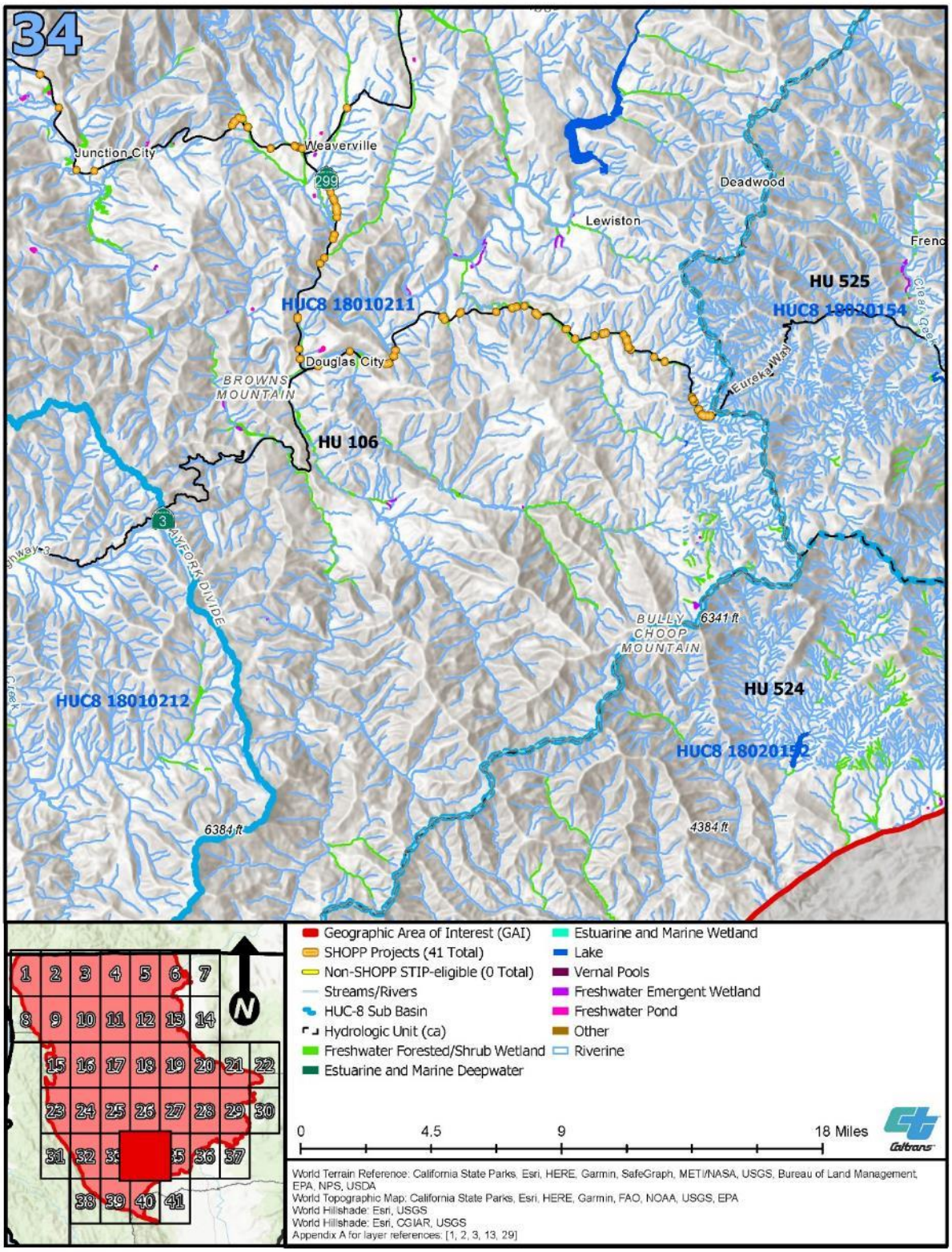

29
HU 525
HUC8 18020005
HU 505
HUC8 18020004
NAWTAWAKET MOUNTAIN
Point McCloud
EAST FORK MOUNTAIN
HUC8 18020003
HU 526
Big Bend
Hillcrest
Montgomery Creek
LITTLE ROUND MOUNTAIN
Round Mountain
HU 506
Bully Hill
BROCK MOUNTAIN
HUC8 18020151
HU 507
Shasta
Shasta Lake
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

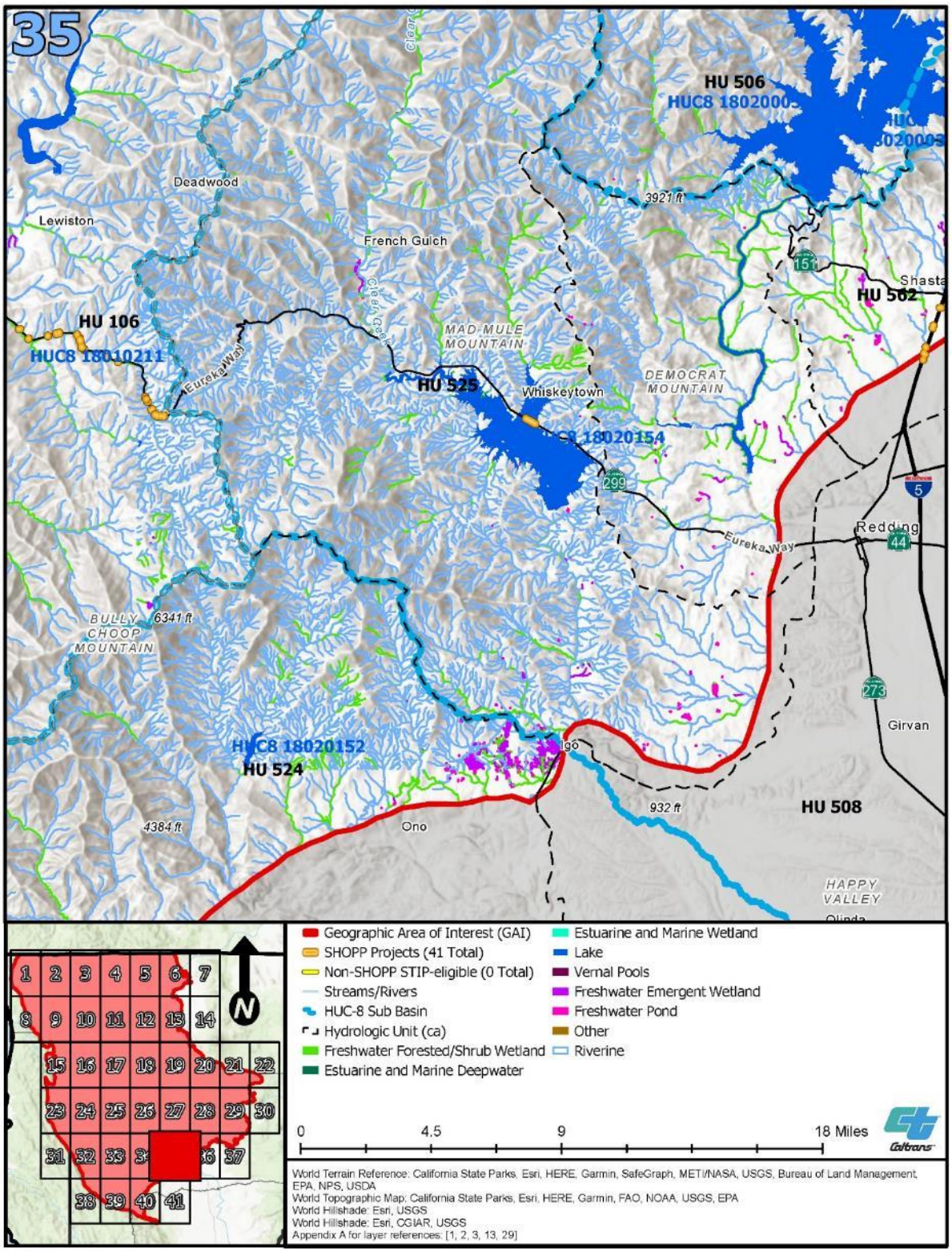

30
HUC8 18020004
BALD MOUNTAIN
Cayton
Lake Britton
Big Bend
CHALK MOUNTAIN
Pit River
89
HUC8 18020003
GOOSE VALLEY
HU 526
GOOSE MOUNTAIN
CA-299-E
Johnson Park
Casse
HATCHET MOUNTAIN
Burney
299
Hat Creek
Hillcrest
Montgomery Creek
HU 506
Round Mountain
HUC8 18020151
HU 507
SNOW MOUNTAIN
BURNEY MOUNTAIN
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

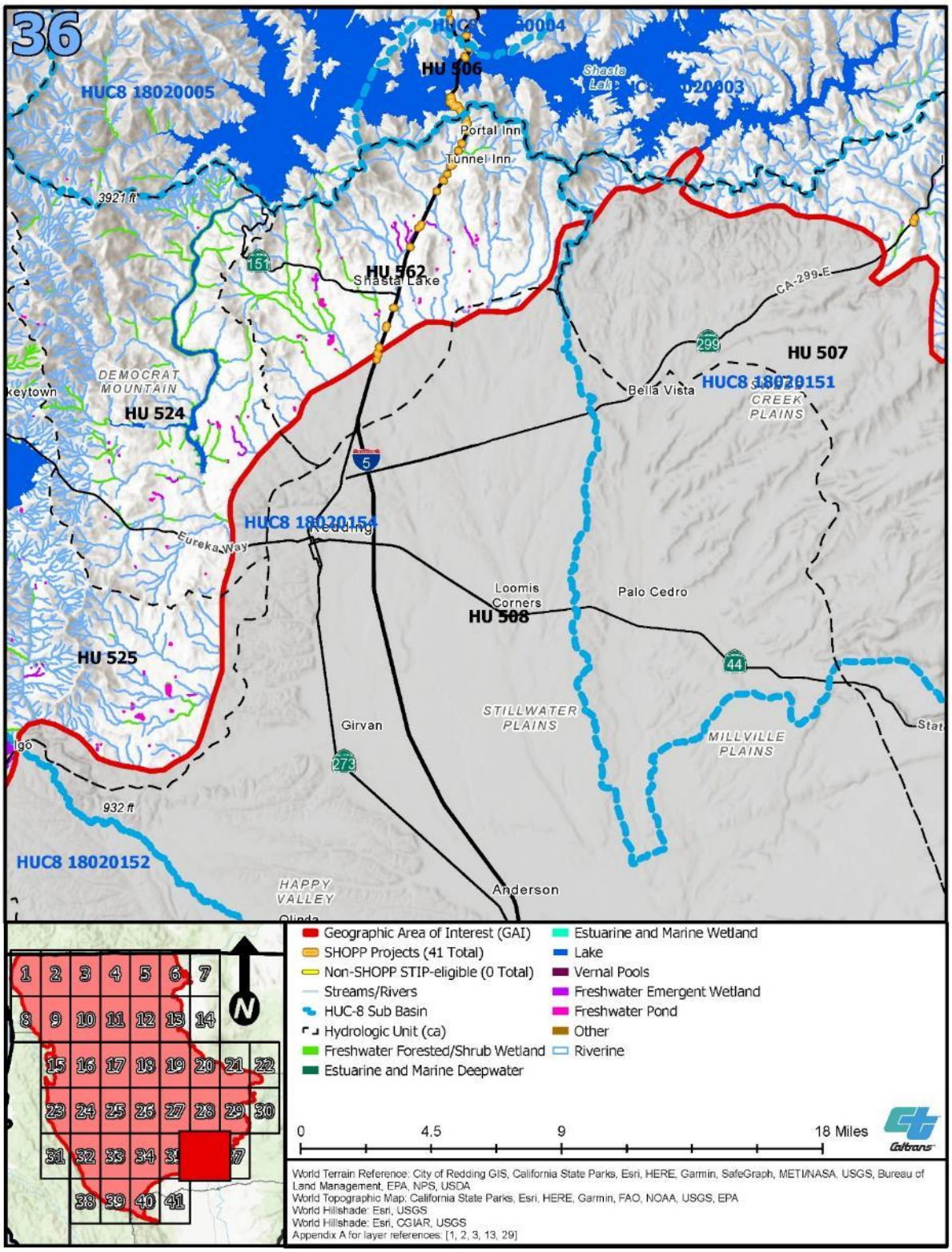

31
Maple Creek
4602 ft
HU 107
Redwood Creek
5459 ft
HUC8 18010211
SIMS MOUNTAIN
HUC8 18010212
Humboldt
5260 ft
HU 106
Mad River
Lone Star Junction
HUC8 18010102
HU 109
PILOT RIDGE
5870 ft
SOUTH FORK MOUNTAIN
Mad River
Yager Junction
HU 111
SOUTH FORK MOUNTAIN
Mad River
Dinsmore
Van Duzen River
SCHOOLHOUSE HILL
Maple Grove
36
State Highway 36
Mad River
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
32 33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

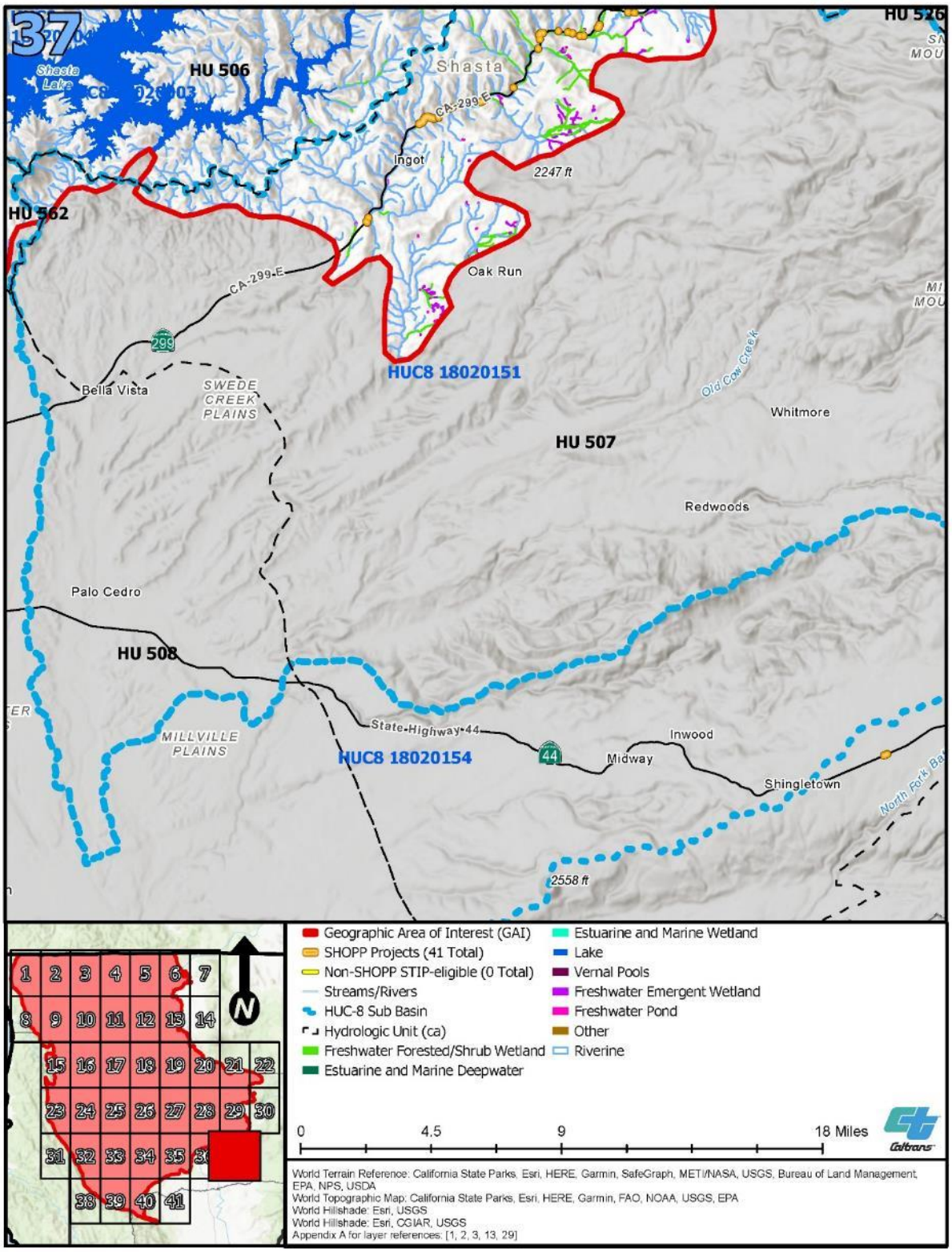

32
Del Loma
299
HUC8 18010211
Big Bar
CHAPARRAL MOUNTAIN
SIMS MOUNTAIN
HYAMPOM MOUNTAIN
6245 ft
HU 106
Hyampom
5870 ft
HUC8 18010212
South Fork Trinity River
SOUTH FORK MOUNTAIN
HUC8 18010102
HU 109
Hayfo
3
SOUTH FORK MOUNTAIN
Mad River
Dinsmore
HU 111
36
Mad River
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
33 34 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0 4.5 9 18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

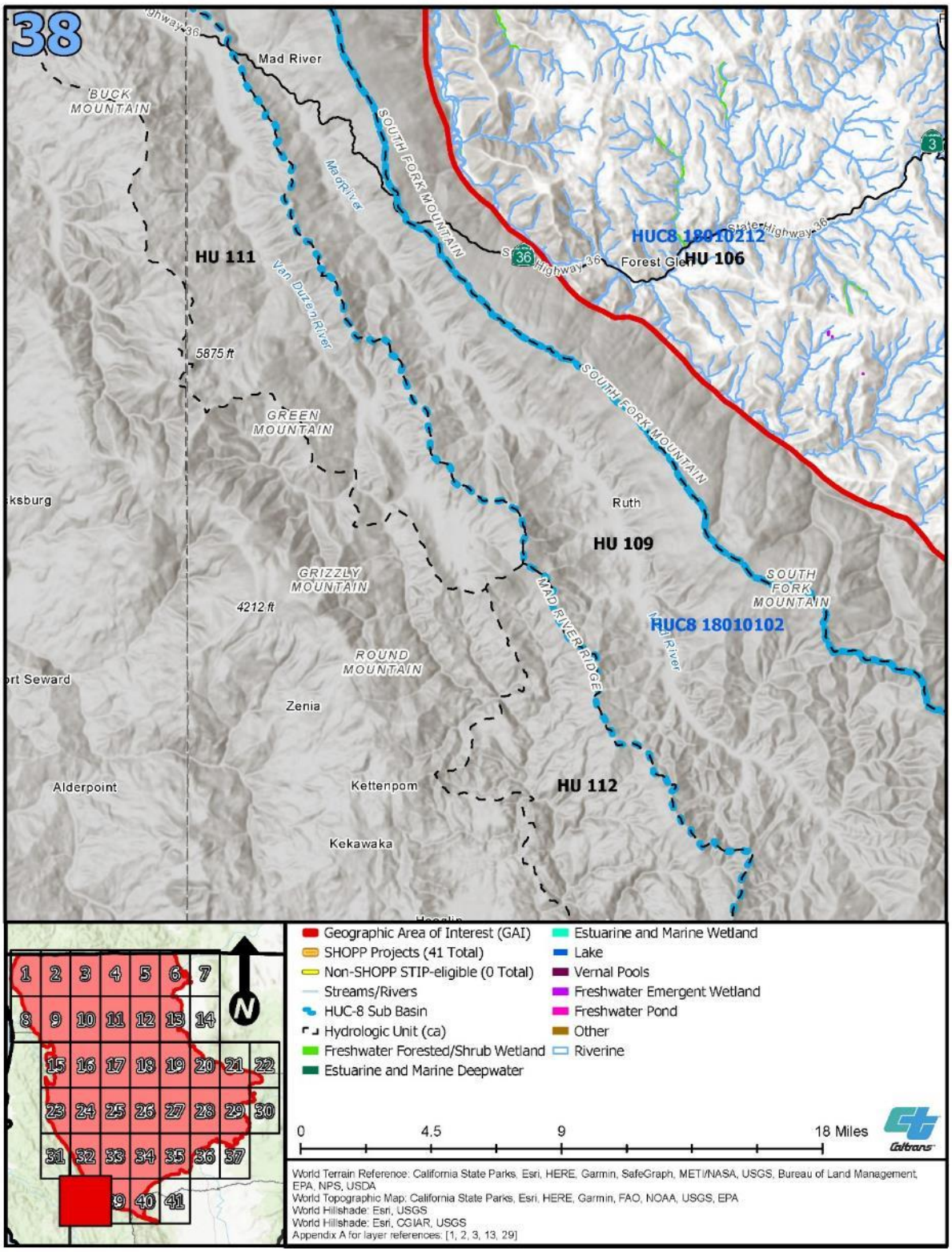

33
Big Bar
Junction City
Weaverville
299
HUC8 18010211
HAYFORK DIVIDE
6245 ft
Trinity
Douglas City
BROWNS MOUNTAIN
HU 106
HUC8 18010212
Hayfork
State Highway 3
Hayfork Creek
Peanut
6384 ft
HUC8 18020152
HU 524
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

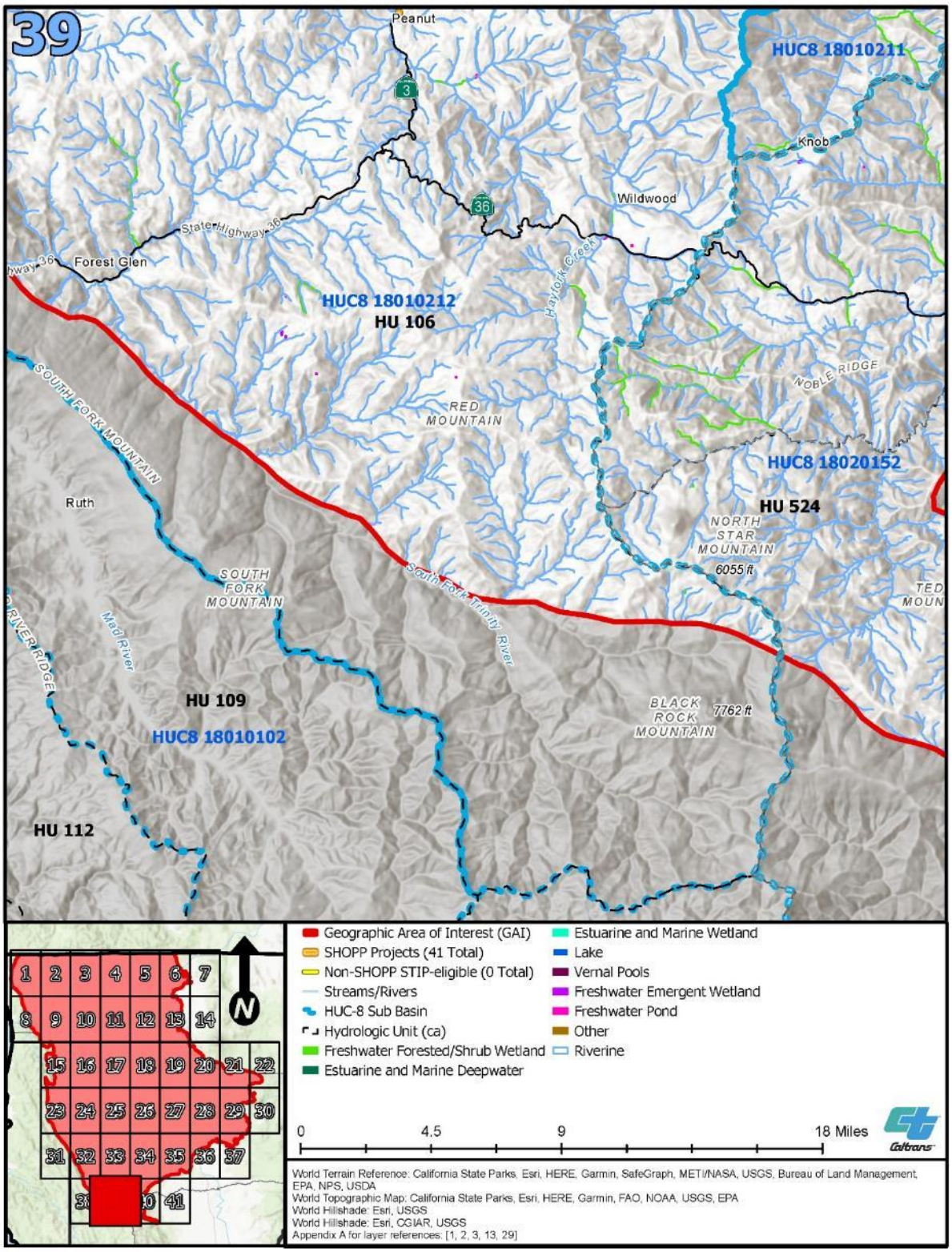

34
Junction City
Weaverville
299
Deadwood
Lewiston
HU 525
HUC8 18010211
HUC8 18020154
Douglas City
BROWNS MOUNTAIN
HU 106
3
TRINITY DIVIDE
BULLY CHOOP MOUNTAIN
6341 ft
HU 524
HUC8 18010212
HUC8 18020152
6384 ft
4384 ft
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 35 36 37
38 39 40 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0 4.5 9 18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

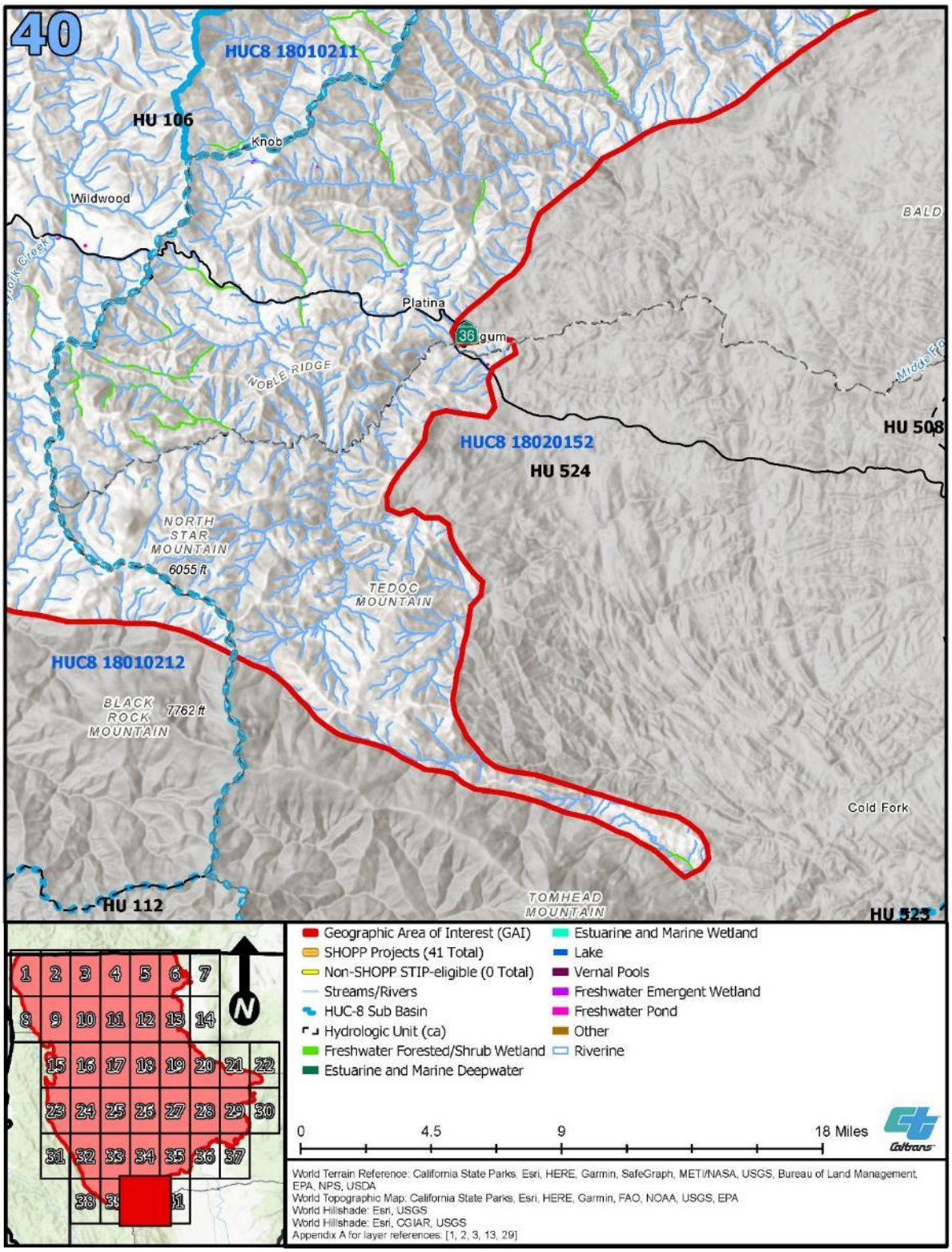

35
HU 506
HUC8 1802000
Deadwood
Lewiston
French Gulch
3921 ft
151
Shasta
HU 502
HU 106
HUC8 18010211
Eureka Way
MAD MULE MOUNTAIN
HU 525
Whiskeytown
DEMOCRAT MOUNTAIN
8 18020154
299
5
Redding
44
Eureka Way
BULLY CHOOP MOUNTAIN
6341 ft
273
Girvan
HUC8 18020152
HU 524
igo
932 ft
HU 508
4384 ft
Ono
HAPPY VALLEY
Olinda
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

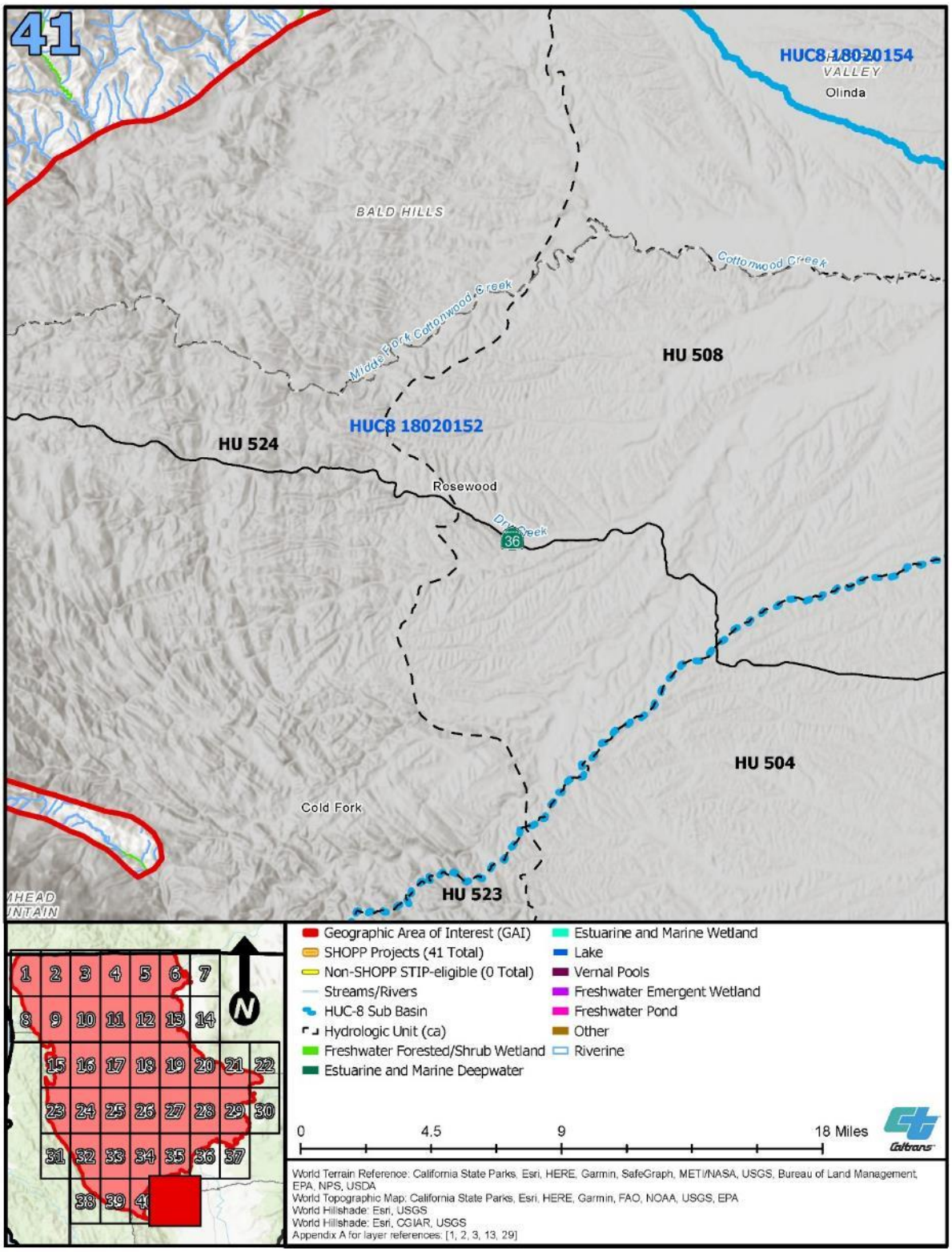

36
HUC8 18020005
HU 506
Shasta Lake
Portal Inn
Tunnel Inn
3921 ft
HU 562
Shasta Lake
151
CA-299-E
299
HU 507
Bella Vista
HUC8 18020151
CREEK PLAINS
DEMOCRAT MOUNTAIN
HU 524
5
HUC8 18020153
Redding
Eureka Way
Loomis Corners
Palo Cedro
HU 508
HU 525
44
STILLWATER PLAINS
MILLVILLE PLAINS
Girvan
273
932 ft
HUC8 18020152
HAPPY VALLEY
Anderson
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: City of Redding GIS, California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]


37
Shasta Lake
HU 506
Shasta
CA-299-E
Ingot
2247 ft
HU 562
Oak Run
HUC8 18020151
Bella Vista
SWEDE CREEK PLAINS
Old Cow Creek
Whitmore
HU 507
Redwoods
Palo Cedro
HU 508
MILLVILLE PLAINS
State Highway 44
HUC8 18020154
Inwood
Midway
Shingletown
North Fork
2558 ft
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]


38
Mad River
BUCK MOUNTAIN
SOUTH FORK MOUNTAIN
Mad River
HU 111
Van Duzen River
5875 ft
GREEN MOUNTAIN
HUC8 18010212
HU 106
Forest Glen
State Highway 36
SOUTH FORK MOUNTAIN
Ruth
HU 109
GRIZZLY MOUNTAIN
4212 ft
MAD RIVER RIDGE
SOUTH FORK MOUNTAIN
HUC8 18010102
ROUND MOUNTAIN
Zenia
Alderpoint
Kettenpom
HU 112
Kekawaka
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]


39
Peanut
HUC8 18010211
Knob
Wildwood
State Highway 36
Forest Glen
HUC8 18010212
HU 106
Hay fork Creek
NOBLE RIDGE
RED MOUNTAIN
SOUTH FORK MOUNTAIN
HUC8 18020152
HU 524
Ruth
NORTH STAR MOUNTAIN
6055 ft
SOUTH FORK MOUNTAIN
South Fork Trinity River
Mad River
HU 109
HUC8 18010102
BLACK ROCK MOUNTAIN
7762 ft
HU 112
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]


40
HUC8 18010211
HU 106
Knob
Wildwood
Platina
36
gum
NOBLE RIDGE
BALD
HU 508
HUC8 18020152
HU 524
NORTH STAR MOUNTAIN
6055 ft
TEDOC MOUNTAIN
HUC8 18010212
BLACK ROCK MOUNTAIN
7762 ft
Cold Fork
HU 112
TOMHEAD MOUNTAIN
HU 523
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21 22
23 24 25 26 27 28 29 30
31 32 33 34 35 36 37
38 39 41
N
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]


41
HUC8 18020154
VALLEY
Olinda
BALD HILLS
Cottonwood Creek
Middle Fork Cottonwood Creek
HU 508
HUC8 18020152
HU 524
Rosewood
Dry Creek
36
HU 504
Cold Fork
HU 523
Geographic Area of Interest (GAI)
SHOPP Projects (41 Total)
Non-SHOPP STIP-eligible (0 Total)
Streams/Rivers
HUC-8 Sub Basin
Hydrologic Unit (ca)
Freshwater Forested/Shrub Wetland
Estuarine and Marine Deepwater
Estuarine and Marine Wetland
Lake
Vernal Pools
Freshwater Emergent Wetland
Freshwater Pond
Other
Riverine
0
4.5
9
18 Miles
Caltrans
World Terrain Reference: California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA
World Topographic Map: California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA
World Hillshade: Esri, USGS
World Hillshade: Esri, CGIAR, USGS
Appendix A for layer references: [1, 2, 3, 13, 29]

This page intentionally left blank.