Appendix A
Alternatives Analysis

APPENDIX A
Alternatives Considered but Eliminated from Detailed Analysis

A.1 Overview

Early in the environmental review process for this Project, before it was understood that no unresolved conflicts would result from Project implementation, the BIA, in consultation with NPS, considered potential alternatives to the Proposed Action. This Appendix describes the alternatives eliminated from detailed study by the Applicant and/or BLM throughout the planning process and provides a rationale for their elimination (40 CFR Section 1502.14[a]). These include alternatives discussed during pre-application meetings and other alternatives considered but eliminated from consideration by the Applicant early in the planning process.

A.2 Alternative Alignments for Segments 1, 2 and 4

No alternatives were considered for Segments 1, 2, and 4, because there are no feasible alternative routes that would lessen project-related impacts while still connecting these segments and providing an adequate level of service in Orleans, Weitchpec, Wautec, and Elk Camp (Karuk Tribe, 2020). These segments are generally proposed to be located alongside existing roadways using existing poles. Any alternative alignments in these segments that did not use existing roadways and poles would generally be longer than those proposed as part of the Project and would result in increased disturbance and impacts in comparison to the Project as a result of the need for additional pole installation and construction in undisturbed areas.

A.3 Alternative Alignments for Segment 3

The Applicant considered an alternative alignment for Segment 3 (Karuk Tribe, 2017). This alternative comprised an alignment that connected Segment 2 to Segment 4 via a fiber optic cable overhead across the Klamath River in the vicinity of Wautec. The cable would then be installed underground to Elk Camp to connect with Segment 4. This alternative would avoid the historic Lyons Ranch area in the RNP along Bald Hills Road (see Section 4.5.1 of the Initial Study). However, as a result of discussions between the Applicant and Yurok Tribe cultural resources staff (Karuk Tribe, 2020), this alternative was eliminated as there were no locations near the west end of Segment 2 where an overhead crossing could be accomplished due to the presence of numerous sensitive cultural areas located adjacent to the Klamath River in that location (see Section 4.5.1).

A.4 Alternative Alignments for Segment 5

A.4.1 2017 Coastal Alignment

In its 2017 PEA, the Applicant initially proposed Segment 5 would follow an alignment between Orick and McKinleyville that would be predominantly installed underground within roadside ditches and would cross Redwood National Park (RNP) as well as numerous roadways. However, preliminary environmental review discussions between the Applicant, Bureau of Indian Affairs and National Parks Service (Karuk Tribe, 2019) identified concerns over potential impacts of the Project on biological and cultural resources, particularly within land under management of Green Diamond Resources and within RNP (see 2020 PEA, Section 4.1.2). In order to address these concerns, and reduce Project construction disturbance impacts, the Applicant considered a revised route that would be installed on existing PG&E poles along an existing transmission route, reducing the need for trenching from 26.2 miles to 3.5 miles (see 2020 PEA, Table 4.1.1) and the overall segment length from 41.6 to 31 miles (see 2020 PEA, Table 4.1.2). This revised route would result in reduced environmental impacts on numerous resources and was supported by BIA and NPS. The revised route is presented in this IS/EA as Segment 5 and the 2017 Coastal Alignment was eliminated from further analysis

A.4.2 Alternative 5A

In its 2017 PEA, the Applicant considered an alternative alignment to Segment 5 as it was proposed in that document (the 2017 coastal environment described above). Alternative 5A (Karuk Tribe, 2017) comprises an alternative alignment for a portion of Segment 5. Under this Alternative the Project alignment would depart from the proposed Project alignment just west of Orick. Instead of continuing along the proposed Segment 5 alignment. Alternative 5A would cross an unnamed creek just west of Hiltons Road in an overhead crossing. The alignment would continue overhead within Redwood National Park along U.S. Highway 101 between Orick and Big Lagoon, occupying the Highway 101 easement across the Humboldt Lagoons Park and the Merlo State Recreation Area. Installation would revert to underground just south of the lagoon at the point where the alignment meets Highway 101. The route would then continue south alongside Highway 101, with installation either in the road ditch or at the edge of the Highway 101 ROW. At the second crossing of Big Lagoon the alignment would revert to overhead installation, reverting to underground beyond the lagoon and continuing south to the intersection with the northbound on-ramp from Patrick's Point Drive approximately two thirds of the way along the alignment Alternative 5A would be installed underground along Patrick's Point Drive.

Alternative 5A would cross on Patrick's Point Drive into Trinidad, then turn south on Trinidad's Main Street, go under Highway 101, and continue along county roads to the PG&E substation, then be installed underground northeast along the access road that serves the "Trinidad tap" line that carries power from the 69kV transmission line crossing GDR lands to that substation. At the intersection of 5A and the main GDR haul road Alternative 5A would revert to the Segment 5 alignment.

As a result of the development of Segment 5 (see Section 2.3.1) into an alignment primarily installed on existing PG&E poles and avoiding RNP, Alternative 5A was eliminated from further analysis as it would have resulted in greater impacts on a range of resources, including cultural and biological resources, similar to those described above under the 2017 Coastal Alignment.

References – Appendix A

Karuk Tribe, 2017, Proponent's Environmental Assessment: Klamath Rural Broadband Initiative December 2017

Karuk Tribe, 2019, Klamath River Rural Broadband Initiative Revised Project Update, November 2019

Karuk Tribe, 2020, Amendment for Proponent's Environmental Assessment: Klamath Rural Broadband Initiative May 2020

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Appendix B
Air Quality and Greenhouse Gas Emissions

ESA

CONSTRUCTION EMISSIONS SUMMARY

Applicant PEA Appendix A Construction Emissions Summary

Emissions Source	ROG	NOx	CO	PM_{10}	$PM_{2.5}$	CO_2e
Pounds per Day	1.78	10.88	10.99	4.83	1.56	-
Tons per Construction Period	-	-	-	-	-	451
Metric Tons per Construction Period	-	-	-	-	-	409

Applicant Equipment Assumptions Used for CalEEMod Input

Equipment Type	h.p.	total hr.	Average hr./day
Aerial Lifts	25	1,376	5.21
Air Compressors	15	196	0.74
Bore-Drill Rigs	120	464	1.76
Rock Saw Trencher	25	288	1.09
Cranes	175	20	0.08
Dumpers/Tenders/Water Trucks	25	3,327	12.60
On Highway HDDTs	500	286	1.08
Off-Highway Trucks	175	232	0.88
Roller Compactors	81	264	1.00
Backhoes	95	3,134	11.87
Trenchers	120	2,672	10.12

Notes: Equipment Type, hp, and total use hours are assumptions provided by the Applicant (Master On Off Site Const Emissions Estimates Option 2) to support its emission estimates presented in the PEA. Average hours per day are estimated by dividing total hours by the number of workdays (i.e., 264 workdays for 12 months).

Revisions to Onsite Fugitive Dust Emissions

Emissions Totals	PM_{10}	$PM_{2.5}$
tons/period (80% Controlled)*	0.52	0.11
tons/month (80% Controlled)*	0.05	0.01
avg lbs/day (80% Controlled)*	4.71	0.99
avg lbs/day (Uncontrolled)**	23.54	4.94
Revised avg. lbs/day (55% Controlled	10.59	2.22

*Onsite emission estimates provided by the Applicant (file: Master On Off Site Const Emissions Estimates Option 2) to support its emission estimates presented in the PEA. Applicants estimates assume watering and speed limit dust control measures would achieve 80 percent control efficiency; however, only watering has been proposed.

**Uncontrolled emissions are estimated here by dividing the 80 percent controlled emissions by the 0.20 release fraction.

***Revised controlled emissions are estimated based on the CalEEMod control efficiency of 55 percent for watering twice daily.

CalEEMod Summary for 2021 Construction Start Date

Emissions Source	Criteria Pollutants (pounds per day)					CO_2e	
	ROG	NOx	CO	PM_{10}	$PM_{2.5}$	lb/day	total MT
Off-road Equipment Exhaust	1.47	13.38	11.51	0.81	0.75	1,743	208.8
On-road Vehicle Exhaust	0.66	6.30	4.69	0.04	0.04	2,550	305.4
On-site Fugitive Dust*	-	-	-	10.59	2.22	-	-
Off-site Fugitive Dust	-	-	-	1.15	0.31	-	-
Total Emissions	2.13	19.67	16.20	12.60	3.32	4,294	514
Total Amortized Emissions (30 years)							17

Note: See CalEEMod output for 2021 that follows this spreadsheet.
*See on-site fugitive dust emissions revisions above.

Water Usage During Construction Indirect Emissions

Project Water Demand

0.3 Short-term construction demand (million gallons)

Water energy use factor* (CEC, 2005)

1,450 kW-hr/million gallons

Electricity use emission factors (TCR, 2017)

Units	CO_2	CH_4	N_2O
lbs./MW-hr.	568.6	0.0331	0.004

Project Indirect Electricity Usage (MW-hr.)

MW-hr. 0.3992

Indirect Electricity Emission Assoc. with Water Use During Construction (metric tons)

	CO_2	CH_4	N_2O	CO_2e
Emissions	0.103	0.000	0.000	0.103

Notes: Global Warming Potential for CH4 = 25; GWP for N2O = 298.
Construction of the proposed Project would require 275,342 gallons of water.
* Water energy use factor includes supply, conveyance, treatment, and distribution.

INDIRECT ELECTRICITY GENERATION GHG EMISSIONS DURING OPERATIONS

Electricity use emission factors (TCR, 2017)

Units	CO_2	CH_4	N_2O
lbs./MW-hr.	568.6	0.0331	0.004

Project Indirect Electricity Usage (MW-hr.)

MW-hr. 12.8720

Indirect Electricity Emission Assoc. with Water Use During Construction (metric tons)

	CO_2	CH_4	N_2O	CO_2e
Emissions	3.320	0.000	0.000	3.332

Notes: Global Warming Potential for CH4 = 25; GWP for N2O = 298.

Klamath River Rural Broadband Initiative

Humboldt County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	103
Climate Zone	1			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - placeholder land use settings for construction emissions.

Construction Phase - Average daily emissions

Off-road Equipment - Daily average.

Trips and VMT - Site Support Staff and Worker Commutes are worker trips; Construction Support and vendor trips. Added three additional HHDT trips for off-site bucket, dump, and water truck trips.

Stationary Sources - Emergency Generators and Fire Pumps - Emergency generator

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Parking	250	0

Klamath River Rural Broadband Initiative - Humboldt County, Summer

tblConstructionPhase	NumDays	100.00	1.00
tblFleetMix	HHD	0.05	0.00
tblFleetMix	LDA	0.48	0.00
tblFleetMix	LDT1	0.05	0.00
tblFleetMix	LDT2	0.21	0.00
tblFleetMix	LHD1	0.04	0.00
tblFleetMix	LHD2	7.2380e-003	0.00
tblFleetMix	MCY	5.7460e-003	0.00
tblFleetMix	MDV	0.14	0.00
tblFleetMix	MH	9.3300e-004	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	3.2920e-003	0.00
tblFleetMix	SBUS	1.5150e-003	0.00
tblFleetMix	UBUS	1.6180e-003	0.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	231.00	175.00
tblOffRoadEquipment	HorsePower	97.00	95.00
tblOffRoadEquipment	HorsePower	63.00	25.00
tblOffRoadEquipment	HorsePower	78.00	15.00
tblOffRoadEquipment	HorsePower	221.00	120.00
tblOffRoadEquipment	HorsePower	81.00	25.00
tblOffRoadEquipment	HorsePower	16.00	25.00
tblOffRoadEquipment	HorsePower	402.00	500.00
tblOffRoadEquipment	HorsePower	402.00	175.00
tblOffRoadEquipment	HorsePower	80.00	81.00
tblOffRoadEquipment	HorsePower	78.00	120.00
tblOffRoadEquipment	UsageHours	6.00	0.10

tblOffRoadEquipment	UsageHours	6.00	11.90
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	68.00
tblTripsAndVMT	HaulingTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripLength	6.60	68.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	WorkerTripLength	16.80	68.00
tblTripsAndVMT	WorkerTripNumber	0.00	13.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.1348	19.6735	16.1986	0.0429	1.1550	0.8505	2.0055	0.3129	0.7879	1.1008	0.0000	4,278.9654	4,278.9654	0.5833	0.0000	4,293.5484
Maximum	**2.1348**	**19.6735**	**16.1986**	**0.0429**	**1.1550**	**0.8505**	**2.0055**	**0.3129**	**0.7879**	**1.1008**	**0.0000**	**4,278.9654**	**4,278.9654**	**0.5833**	**0.0000**	**4,293.5484**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.1348	19.6735	16.1986	0.0429	1.1550	0.8505	2.0055	0.3129	0.7879	1.1008	0.0000	4,278.9654	4,278.9654	0.5833	0.0000	4,293.5484
Maximum	**2.1348**	**19.6735**	**16.1986**	**0.0429**	**1.1550**	**0.8505**	**2.0055**	**0.3129**	**0.7879**	**1.1008**	**0.0000**	**4,278.9654**	**4,278.9654**	**0.5833**	**0.0000**	**4,293.5484**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Stationary	0.0264	2.5400e-003	0.0687	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		1.6863	1.6863	3.5300e-003		1.7745
Total	**0.0264**	**2.5400e-003**	**0.0688**	**1.0000e-005**	**0.0000**	**1.5000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**1.5000e-004**		**1.6866**	**1.6866**	**3.5300e-003**	**0.0000**	**1.7747**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Stationary	0.0264	2.5400e-003	0.0687	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		1.6863	1.6863	3.5300e-003		1.7745
Total	**0.0264**	**2.5400e-003**	**0.0688**	**1.0000e-005**	**0.0000**	**1.5000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**1.5000e-004**		**1.6866**	**1.6866**	**3.5300e-003**	**0.0000**	**1.7747**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	4/5/2021	4/5/2021	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Aerial Lifts	1	5.20	25	0.31
Building Construction	Air Compressors	1	0.70	15	0.48
Building Construction	Bore/Drill Rigs	1	1.80	120	0.50
Building Construction	Concrete/Industrial Saws	1	1.10	25	0.73
Building Construction	Cranes	1	0.10	175	0.29
Building Construction	Dumpers/Tenders	1	12.60	25	0.38
Building Construction	Off-Highway Trucks	1	1.10	500	0.38
Building Construction	Off-Highway Trucks	1	0.90	175	0.38
Building Construction	Rollers	1	1.00	81	0.38
Building Construction	Tractors/Loaders/Backhoes	1	11.90	95	0.37
Building Construction	Trenchers	1	10.10	120	0.50

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	11	13.00	3.00	5.00	68.00	68.00	68.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4710	13.3767	11.5112	0.0182		0.8101	0.8101		0.7495	0.7495		1,730.3150	1,730.3150	0.5205		1,743.3261
Total	**1.4710**	**13.3767**	**11.5112**	**0.0182**		**0.8101**	**0.8101**		**0.7495**	**0.7495**		**1,730.3150**	**1,730.3150**	**0.5205**		**1,743.3261**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1222	3.9935	0.6561	0.0122	0.2952	0.0221	0.3173	0.0807	0.0212	0.1019		1,278.0012	1,278.0012	0.0167		1,278.4176
Vendor	0.0809	1.8470	0.4185	6.3200e-003	0.1881	0.0127	0.2008	0.0540	0.0122	0.0662		660.7542	660.7542	8.4500e-003		660.9655
Worker	0.4607	0.4563	3.6129	6.1500e-003	0.6717	5.5800e-003	0.6773	0.1781	5.1500e-003	0.1832		609.8950	609.8950	0.0378		610.8392
Total	**0.6638**	**6.2968**	**4.6875**	**0.0247**	**1.1550**	**0.0404**	**1.1954**	**0.3129**	**0.0385**	**0.3513**		**2,548.6504**	**2,548.6504**	**0.0629**		**2,550.2223**

3.2 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4710	13.3767	11.5112	0.0182		0.8101	0.8101		0.7495	0.7495	0.0000	1,730.3149	1,730.3149	0.5205		1,743.3261
Total	**1.4710**	**13.3767**	**11.5112**	**0.0182**		**0.8101**	**0.8101**		**0.7495**	**0.7495**	**0.0000**	**1,730.3149**	**1,730.3149**	**0.5205**		**1,743.3261**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1222	3.9935	0.6561	0.0122	0.2952	0.0221	0.3173	0.0807	0.0212	0.1019		1,278.0012	1,278.0012	0.0167		1,278.4176
Vendor	0.0809	1.8470	0.4185	6.3200e-003	0.1881	0.0127	0.2008	0.0540	0.0122	0.0662		660.7542	660.7542	8.4500e-003		660.9655
Worker	0.4607	0.4563	3.6129	6.1500e-003	0.6717	5.5800e-003	0.6773	0.1781	5.1500e-003	0.1832		609.8950	609.8950	0.0378		610.8392
Total	**0.6638**	**6.2968**	**4.6875**	**0.0247**	**1.1550**	**0.0404**	**1.1954**	**0.3129**	**0.0385**	**0.3513**		**2,548.6504**	**2,548.6504**	**0.0629**		**2,550.2223**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.2	10	15	0.73	CNG

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - CNG (0 - 500 HP)	0.0264	2.5400e-003	0.0687	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		1.6863	1.6863	3.5300e-003		1.7745
Total	**0.0264**	**2.5400e-003**	**0.0687**	**1.0000e-005**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**1.6863**	**1.6863**	**3.5300e-003**		**1.7745**

11.0 Vegetation

CONSTRUCTION EQUIPMENT EXHAUST EMISSIONS

Project: KRRBI Phase ID: **Route Construction Corridor, Tower Site, Staging Areas**

Assumptions:

Composite fuel consumption rates for const equipment:	diesel	0.039	gal/hp-hr
	gasoline	0.11	gal/hp-hr

Construction Schedule:	14	months	Construction Totals	1.17	period, yrs.
	22	days/month		308	work days
	8.00	hours/day		2464	work hours

Anticipated Construction Start Year: 2017

Equipment types and use rates supplied by the Applicant >>

Diesel Equipment Category	Weighted Average HP	# of Units Used for Project	Avg Use Rate Hrs/day	# of Days On Site (each)	Total Hrs/Day	Total Hrs per Const Period	Total HP-Hrs Period
Aerial Lifts	25	0	0	0	0	1376	34400
Air Compressors	15	0	0	0	0	196	2940
Bore-Drill Rigs	120	0	0	0	0	464	55680
Rock Saw Trencher	25	0	0	0	0	288	7200
Concrete/Industrial Saws	81	0	0	0	0	0	0
Cranes	175	0	0	0	0	20	3500
Crawler Tractors/Dozers	208	0	0	0	0	0	0
Crushing/Processing Eq.	85	0	0	0	0	0	0
Dumpers/Tenders/Water Trucks	25	0	0	0	0	3327	83175
Excavators	163	0	0	0	0	0	0
Forklifts	89	0	0	0	0	0	0
Generator Sets	84	0	0	0	0	0	0
Graders	175	0	0	0	0	0	0
On Highway HDDTs	500	0	0	0	0	286	143000
Off-Highway Trucks	175	0	0	0	0	232	40600
Other Diesel Construction Eq. (H2O Trk)	172	0	0	0	0	0	0
Other General Industrial Eq.	88	0	0	0	0	0	0
Other Material Handling Eq.	167	0	0	0	0	0	0
Pavers	126	0	0	0	0	0	0
Paving Eq. Other	131	0	0	0	0	0	0
Plate Compactors	8	0	0	0	0	0	0
Pressure Washers	13	0	0	0	0	0	0
Cement Mixers	15	0	0	0	0	0	0
Roller Compactors	81	0	0	0	0	264	21384
Rough Terrain Forklifts	100	0	0	0	0	0	0
Rubber Tired Dozers	255	0	0	0	0	0	0
Rubber Tires Loaders	200	0	0	0	0	0	0
Scrapers	362	0	0	0	0	0	0
Signal Boards	6	0	0	0	0	0	0
Skid Steer Loaders	65	0	0	0	0	0	0
Surfacing Eq.	254	0	0	0	0	0	0
Sweepers/Scrubbers	64	0	0	0	0	0	0
Tractors	98	0	0	0	0	0	0
Front End Loaders	98	0	0	0	0	0	0
Backhoes	95	0	0	0	0	3134	297730
Trenchers	120	0	0	0	0	2672	320640
Welders	46	0	0	0	0	0	0
Gasoline Const Equipment	175	0	0	0	0	0	0

CO2e Multipliers:

Diesel Fuel: 1.003471

Gasoline: 1.003583

Const Period Diesel Hp-Hrs = 1010249

Const Period Gasoline Hp-Hrs = 0

Const Period Diesel Fuel Use = 39400 gals

Const Period Gasoline Fuel Use = 0 gals

	Emissions Factors					
Diesel Equipment Category	**lbs/hr VOC (ROG)**	**lbs/hr CO**	**lbs/hr NOx**	**lbs/hr SOx**	**lbs/hr PM10**	**lbs/hr CO2**
Aerial Lifts	0.0146	0.0473	0.0873	0.0001	0.0041	11.0
Air Compressors	0.0101	0.0458	0.0624	0.0001	0.0035	7.2
Bore-Drill Rigs	0.0326	0.4667	0.2962	0.0009	0.0095	77.1
Rock Saw Trencher	0.0397	0.1355	0.2509	0.0004	0.0094	32.9
Concrete/Industrial Saws	0.0605	0.3850	0.3959	0.0007	0.0261	58.5
Cranes	0.0807	0.4774	0.5549	0.0009	0.0314	80.3
Crawler Tractors/Dozers	0.1185	0.5387	0.7960	0.0013	0.0457	114.0
Crushing/Processing Eq.	0.1109	0.6328	0.7330	0.0015	0.0412	132.3
Dumpers/Tenders	0.0092	0.0314	0.0585	0.0001	0.0023	7.6
Excavators	0.0848	0.5160	0.5181	0.0013	0.0249	119.6
Forklifts	0.0372	0.2173	0.2186	0.0006	0.0101	54.4
Generator Sets	0.0477	0.2786	0.3759	0.0007	0.0192	61.0
Graders	0.1049	0.5812	0.7217	0.0015	0.0355	132.7
On Highway HDDTs	0.1753	0.5676	1.1034	0.0027	0.0397	272.3
Off-Highway Trucks	0.1072	0.7547	0.6764	0.0014	0.0363	125.1
Other Diesel Construction Eq.	0.0633	0.3542	0.4478	0.0013	0.0181	122.5
Other General Industrial Eq.	0.1113	0.4591	0.8242	0.0016	0.0336	152.2
Other Material Handling Eq.	0.1050	0.4495	0.8053	0.0015	0.0324	141.2
Pavers	0.1121	0.5017	0.6241	0.0009	0.0419	77.9
Paving Eq. Other	0.0857	0.4136	0.5558	0.0008	0.0374	68.9
Plate Compactors	0.0050	0.0263	0.0314	0.0001	0.0012	4.3
Pressure Washers	0.0101	0.0562	0.0703	0.0001	0.0036	9.4
Cement Mixers	0.0074	0.0386	0.0461	0.0001	0.0018	6.3
Roller Compactors	0.0161	0.0549	0.1017	0.0002	0.0038	13.3
Rough Terrain Forklifts	0.0638	0.4499	0.4219	0.0008	0.0277	70.3
Rubber Tired Dozers	0.2343	0.8819	1.8194	0.0025	0.0737	239.1
Rubber Tires Loaders	0.0861	0.4470	0.5831	0.0012	0.0300	108.6
Scrapers	0.2135	0.8418	1.6042	0.0027	0.0653	262.5
Signal Boards	0.0143	0.0916	0.1029	0.0002	0.0050	16.7
Skid Steer Loaders	0.0253	0.2146	0.1799	0.0004	0.0074	30.3
Surfacing Eq.	0.0923	0.4187	0.8043	0.0017	0.0291	166.0
Sweepers/Scrubbers	0.0681	0.4946	0.4308	0.0009	0.0251	78.5
Tractors	0.0513	0.3647	0.3331	0.0008	0.0189	66.8
Front End Loaders	0.0513	0.3647	0.3331	0.0008	0.0189	66.8
Backhoes	0.0477	0.3442	0.3216	0.0006	0.0217	51.7
Trenchers	0.1018	0.4529	0.6266	0.0008	0.0514	64.9
Welders	0.0388	0.1876	0.1941	0.0003	0.0133	25.6
Gasoline Const Equipment	0.0771	0.3855	1.08	0.00014	0.1542	14.2

Diesel Equipment Category	Construction Period Emissions, lbs					
	VOC	**CO**	**NOx**	**SOx**	**PM10**	**CO2**
Aerial Lifts	20	65	120	0	6	15081
Air Compressors	2	9	12	0	1	1416
Bore-Drill Rigs	15	217	137	0	4	35785
Cement Mixers	11	39	72	0	3	9480
Rock Saw Trencher	0	0	0	0	0	0
Cranes	2	10	11	0	1	1607
Crawler Tractors/Dozers	0	0	0	0	0	0
Crushing/Processing Eq.	0	0	0	0	0	0
Dumpers/Tenders	31	104	195	0	8	25366
Excavators	0	0	0	0	0	0
Forklifts	0	0	0	0	0	0
Generator Sets	0	0	0	0	0	0
Graders	0	0	0	0	0	0
On Highway HDDTs	50	162	316	1	11	77887
Off-Highway Trucks	25	175	157	0	8	29020
Other Diesel Construction Eq.	0	0	0	0	0	0
Other General Industrial Eq.	0	0	0	0	0	0
Other Material Handling Eq.	0	0	0	0	0	0
Pavers	0	0	0	0	0	0
Paving Eq. Other	0	0	0	0	0	0
Plate Compactors	0	0	0	0	0	0
Pressure Washers	0	0	0	0	0	0
Cement Mixers	0	0	0	0	0	0
Roller Compactors	4	15	27	0	1	3522
Rough Terrain Forklifts	0	0	0	0	0	0
Rubber Tired Dozers	0	0	0	0	0	0
Rubber Tires Loaders	0	0	0	0	0	0
Scrapers	0	0	0	0	0	0
Signal Boards	0	0	0	0	0	0
Skid Steer Loaders	0	0	0	0	0	0
Surfacing Eq.	0	0	0	0	0	0
Sweepers/Scrubbers	0	0	0	0	0	0
Tractors	0	0	0	0	0	0
Front End Loaders	0	0	0	0	0	0
Backhoes	150	1079	1008	2	68	162116
Trenchers	272	1210	1674	2	137	173400
Welders	0	0	0	0	0	0
Gasoline Const Equipment	0	0	0	0	0	0

Construction Equipment Exhaust Emissions Estimates

Totals	**VOC**	**CO**	**NOx**	**SOx**	**PM10**	**PM2.5**	**CO2**
Lbs per const. period	582	3084	3729	6	248	245.46	534681
Tons per const. period	**0.29**	**1.54**	**1.86**	**0.003**	**0.12**	**0.12**	**267.3**
Monthly, Lbs	**41.6**	**220.3**	**266.4**	**0.440**	**17.69**	**17.53**	**38191.5**
Daily, Lbs	**1.9**	**10.0**	**12.1**	**0.020**	**0.80**	**0.80**	**1736.0**

CO2 from Diesel Fuel Use:	267.3	tons/period	**Total CO2e:**	268.3	tons/period
CO2 from Gasoline Use:	0.0	tons/period			

CONSTRUCTION ACTIVITIES FUGITIVE DUST ESTIMATES

MRI Level 2 Analysis (Notes 1, 3-7) **Route Construction Corridor, Tower Site, Staging Areas**

Acres Subject to Construction Disturbance Activites:			50		
Max Acres Subject to Construction Disturbance Activites on any day:			2.000	note 10	
Emissions Factor for PM10 Uncontrolled, tons/acre/month:			0.12		
PM2.5 fraction of PM10 (per CARB CEIDARS Profiles):			0.21		
Activity Levels:	Hrs/Day:		8		
	Days/Wk:		5		
	Days/Month:	Applicant Data	22		
Phase Const Period, Months:			14	**1.17**	yrs
Phase Const Period, Days:			308		

Wet Season Adjustment: (Per AP-42, Section 13.2.2, Figure 13.2.2-1, 12/03 or CalEEMod, Appendix D, Table 1.1.)

Mean # days/year with rain >= 0.01 inch:	103	
Mean # months/yr with rain >= 0.01 inch:	3.43	
Adjusted Const Period, Months:	9.99	
Adjusted Const Period, Days:	220	

Controls for Fugitive Dust: Proposed watering cycle 2 times per day

2 watering cycles/8 hour construction shift yields a 60% reduction, use 60% for non-desert sites. (11)(12)
Speed control of onsite const traffic to <15 mph yields a 40-70% reduction (use 50% control as conservative for site). (11)(12)

Calculated % control based on mitigations proposed:	80	% control
Conservative control % used for emissions estimates:	80	% control
	0.2	release fraction

Emissions:	PM10	PM2.5
tons/month	0.05	0.01
tons/period	0.48	0.10
avg lbs/day	4.36	0.92

Soil Handling Emissions (Cut and Fill): (2)

Total cu.yds of soil handled:		18000	Mean annual wind speed, mph: (8)			5.15
Total tons of soil handled:		46548.0	Avg. Soil moisture, %: (9)			0.5
Total days soil handled:		264	Avg. Soil density, tons/cu.yd:			1.3
Tons soil/day:		176	k factor for PM10:			0.35
Control Eff, watering/speed control, %		80	Number of Drops per ton:			2
Release Fraction:		0.2	Calc 1	wind		1.039
			Calc 2	moisture		0.144
Emissions:	PM10	PM2.5	Calc 3	int		7.237
tons/period	0.038	0.008	Calc 4	PM10	lb/ton	0.0081
tons/month	0.004	0.001	PM2.5 fraction of PM10:			0.210
avg lbs/day	0.343	0.072				

Controlled Emissions Totals:	**PM10**	**PM2.5**
tons/period	**0.517**	**0.109**
tons/month	**0.052**	**0.011**
avg lbs/day	**4.707**	**0.988**

CONSTRUCTION PHASE - Truck Hauling/Delivery, Site Support, and Worker Commute Vehicle Emissions

Construction Support (assumed 100% MDTs) Ford F350/550

				Emissions Factors, Lbs/VMT (SCAQMD 2017-for Construction Start Year)						
Phase ID:	Construction			NOx	CO	VOC	SOx	PM10	PM2.5	CO2
Phase Length, months:	14	Applicant data								
Avg Days/Month:	22	Applicant data	MDTs	0.01070034	0.00998101	0.00150224	0.00002723	0.00043131	0.00034605	2.84005
Avg Deliveries per Day:	0		LDTs	0.00051297	0.00537891	0.00060109	0.00001079	0.00009446	0.00006192	1.10627
Avg Delivery RT distance, mi:	68	Avg all segments	LDAs	0.00051297	0.00537891	0.00060109	0.00001079	0.00009446	0.00006192	1.10627
VMT/day	165									
VMT/month	3682			**MDDT Delivery and Hauling Emissions Estimates**						
VMT/period	68942		lbs/day	1.766	1.647	0.248	0.004	0.071	0.057	469
			lbs/month	39.399	36.750	5.531	0.100	1.588	1.274	10457
			tons/period	0.369	0.344	0.052	0.001	0.015	0.012	98

Site Support Staff Vehicles (assumed 100% LDTs) Ford F150

Estimated # of vehicles:	5	1 per segment		**Site Support Vehicle Emissions Estimates**						
Avg VMT/day:	15	Consultant estimat	lbs/day	0.038	0.403	0.045	0.001	0.007	0.005	83
VMT/day	75		lbs/month	0.846	8.875	0.992	0.018	0.156	0.102	1825
VMT/month	1650		tons/period	0.006	0.062	0.007	0.000	0.001	0.001	12.777
VMT/period	23100									

Worker Commute Vehicles (assumed 4x4 PUs per Applicant)

Avg # of Workers/day:	NA			**Worker Commute Vehicle Emissions**						
# Workers per vehicle:	NA		lbs/day	0.149	1.560	0.174	0.003	0.027	0.018	320.82
Vehicles per day:	NA		lbs/month	3.267	34.253	3.828	0.069	0.602	0.394	7044.73
Avg commute RT distance, mi.	68		tons/period	0.031	0.325	0.036	0.001	0.006	0.004	66.93
VMT/day	290									
VMT/month	6368									
VMT/period	121000	calculated from Applicant data								

RT=round trip
Repositioning of construction equipment will be done by HDDTs, these emissions are included on the Const Exhaust sheet.
HDDT use estimate is <=10,000 VMT at 35 mph, which equates to a use rate over the construction period of 286 hrs.

Fugitive Dust Emissions from Paved Roads

Paved Road Technical Data	Onsite	Offsite	
Mean Vehicle Weight, tons:	0	8.9	See Veh Weight tab
			Table 13.2.1-3, AP-42, Ubiquitous Baseline
Road Surface Silt Loading, gms/sq.m	0.6	0.06	Values based on ADT data (2011)
PM10 "k" factor	0.0022	0.0022	
PM2.5 "k" factor	0.00054	0.00054	
PM10 Intermediate Calculation 1	0.628	0.077	
PM10 Intermediate Calculation 2	0.000	9.298	
PM10 Emissions Factor, lb/VMT	0.000	0.002	
PM2.5 Intermediate Calculation 1	0.628	0.077	
PM2.5 Intermediate Calculation 2	0.000	9.298	
PM2.5 Emissions Factor, lb/VMT	0.0000	0.0004	

Paved Road Travel Data			
Average RT Length, miles	0	68	Applicant data (avg RT distance for all segments)
Total RT per day	0	NA	
Total VMT/day	0	530	
Avg Days/month	0	22	Applicant data
Monthly VMT	0	11647	
Construction Period, months	0	9.99	Adj Months, see Const Dust tab
Period VMT	0	221292	

Controlled Emissions PM10	**Onsite**	**Offsite**
lbs/day	0.00	0.84
lbs/month	0.00	18.41
lbs/period	0.00	349.85
tons/period	0.00	0.17

Controlled Emissions PM2.5	**Onsite**	**Offsite**
lbs/day	0.00	0.21
lbs/month	0.00	4.52
lbs/period	0.00	85.87
tons/period	0.00	0.04

Fugitive Dust from Wind Erosion of Soil Storage Piles

Site Preparation and Grading Phases

Avg acres of soil storage piles exposed per day:	0.1	Consultant estimate*	
Soil silt content, %:	4.3	0.043	
Number of days/year with precipitation >0.01 inches:	103		
Annual % of time wind speed greater than 12 mph:	5	0.05	from met data set
Watering control efficiency, %:	80	0.8	
PM10 aerodynamic factor:	0.5		
PM2.5 aerodynamic factor:	0.2		
Avg Const Days/month:	22		
Total construction period exposure time, months:	9.99	Adj Months, see Const Dust tab	

Controlled Emissions Estimates

	lb/acre-day	lbs/day	lbs/month	lbs/period	tons/period
PM10	**0.006**	**0.0006**	**0.013**	**0.13**	**0.0001**
PM2.5	**0.002**	**0.0002**	**0.005**	**0.05**	**0.0000**

* trenching and pole holes will be filled on the day of drilling or trenching, therefore soil storage piles subject to wind blown conditions will be insignificant.

Average Vehicle Weight Estimate for Construction Period

Vehicle Type	Avg Weight tons	Avg # Vehicles per day	Frac. of total vehicles	
Passenger LDP/LDT	1.5	26	0.277	Worker and support travel vehicles
HDD Loaded	35	4	0.043	
HDD Unloaded	15	4	0.043	Materials delivery trucks, service
MDGT Loaded	15	30	0.319	trucks, fuel trucks, concrete trucks, etc.
MDGT Unloaded	5	30	0.319	
		94	1.000	
Vehicle Total		60		

Weighted Avg Vehicle Weight, tons : **8.9**

Ref: Mission Rock Energy Center, AFC-Air Quality Analysis, Appendix 5.1E, 10/2015.

Diesel Fuel Consumption Rate Conversions

Source: Rice Solar Project AFC, 10/2009, Construction Appendix
Tables 5.1A-28, 40, 72

Equipment Type	HP	BSFC gal/hr	BSFC gal/hp-hr
Air Compressor	23.5	0.66	0.028
Paver	174	5.86	0.034
Scraper	450	14.62	0.032
Dozer	410	12.1	0.030
Grader	210	6.57	0.031
Water Truck	450	11.51	0.026
Backhoe	97	2.37	0.024
Excavator	325	10.59	0.033
Compactor	410	11.51	0.028
Crane 150 ton	347	8.18	0.024
Crane 20 ton	130	3.67	0.028
Crane 225 ton	340	8.18	0.024
Crane 225 ton	173	3.67	0.021
Loader	216	7.78	0.036
Concrete Truck	350	11.51	0.033
Rock Plant-Screen	191	6.75	0.035
Generator	173	7.3	0.042
Generator	98	4.3	0.044
Generator	173	7.3	0.042
Generator	98	4.3	0.044
Generator	173	7.3	0.042
Generator	25	0.81	0.032
Generator	26	0.81	0.031
Welder	19.5	0.52	0.027
Welder (gasoline)	19.5	0.89	0.046
		avg diesel	0.032
variability factor 20%			0.039

Conversion of Tons/Period to Normalized Tons/Year and Summation of Emissions

Enter the length (months) of this phase or period. If the value is less than 12 months, then enter 12 months:	14	1.167	Eq Years
Avg Construction Work Days per Month:	22		

On Site Emissions — **Tons/Period**

	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CO2e
Construction Equipment Exhaust	0.291	1.542	1.865	0.003	0.124	0.123	267.3	268.3
Construction Site Fugitive Dust	0.000	0.000	0.000	0.000	0.517	0.109	0.0	0.0
Unpaved Roads Fugitive Dust	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0
Paved Roads Fugitive Dust	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0
Storage Pile Wind Blown Dust	0.000	0.000	0.000	0.000	0.0001	0.0000	0.0	0.0

Cumulative On Site Emissions Summary

Total Tons/Period	0.291	1.542	1.865	0.003	0.641	0.231	267.3	268.3
Normalized Tons/Year	**0.249**	**1.322**	**1.598**	**0.003**	**0.550**	**0.198**	**229.1**	**229.9**
Avg Lbs/Month	**41.55**	**220.32**	**266.39**	**0.44**	**91.62**	**33.06**		
Avg Lbs/Day	**1.89**	**10.01**	**12.11**	**0.02**	**4.16**	**1.50**		

Off Site Emissions — **Tons/Period**

	VOC	CO	NOx	SOx	PM10	PM2.5	CO2	CO2e
Construction Equipment Exhaust	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Construction Site Fugitive Dust	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Const Support Vehicle Exhaust	0.052	0.344	0.369	0.001	0.015	0.012	97.9	98.2
Site Support Vehicle Exhaust	0.007	0.062	0.006	0.000	0.001	0.001	12.8	12.8
Worker Commute Exhaust	0.036	0.325	0.031	0.001	0.006	0.004	66.9	67.2
Unpaved Roads Fugitive Dust	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0
Paved Roads Fugitive Dust	0.000	0.000	0.000	0.000	0.175	0.043	0.0	0.0
Track Out Fugitive Dust	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0

Cumulative Off Site Emissions Summary

Total Tons/Period	0.095	0.732	0.406	0.002	0.197	0.059	177.606	178.232
Normalized Tons/Year	**0.082**	**0.627**	**0.348**	**0.001**	**0.169**	**0.051**	**152.2**	**152.8**
Avg Lbs/Month	**13.58**	**104.52**	**57.97**	**0.25**	**28.09**	**8.48**		
Avg Lbs/Day	**0.62**	**4.75**	**2.64**	**0.01**	**1.28**	**0.39**		

Total CO2e, tons/yr: **382.7**

Statewide Fleet Average Emission Factors (Diesel) EMFAC-CARB

2017

Air Basin	SC

		(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(lb/hr)
Equipment	**MaxHP**	**ROG**	**CO**	**NOX**	**SOX**	**PM**	**CO2**	**CH4**
Aerial Lifts	15	0.0101	0.0528	0.0631	0.0001	0.0025	8.7	0.0009
	25	0.0146	0.0473	0.0873	0.0001	0.0041	11.0	0.0013
	50	0.0382	0.1548	0.1580	0.0003	0.0104	19.6	0.0034
	120	0.0368	0.2336	0.2787	0.0004	0.0194	38.1	0.0033
	500	0.0890	0.3983	0.9891	0.0021	0.0299	213	0.0080
	750	0.1647	0.7200	1.8445	0.0039	0.0549	385	0.0149
Aerial Lifts Composite		0.0358	0.1768	0.2310	0.0004	0.0134	34.7	0.0032
Air Compressors	15	0.0101	0.0458	0.0624	0.0001	0.0035	7.2	0.0009
	25	0.0212	0.0654	0.1205	0.0002	0.0062	14.4	0.0019
	50	0.0591	0.2209	0.1914	0.0003	0.0148	22.3	0.0053
	120	0.0562	0.3122	0.3674	0.0006	0.0294	47.0	0.0051
	175	0.0752	0.4998	0.5700	0.0010	0.0306	88.5	0.0068
	250	0.0791	0.2692	0.7388	0.0015	0.0230	131	0.0071
	500	0.1321	0.4598	1.1363	0.0023	0.0381	232	0.0119
	750	0.2057	0.7106	1.8141	0.0036	0.0600	358	0.0186
	1000	0.3127	1.0739	3.9506	0.0049	0.1048	486	0.0282
Air Compressors Composite		0.0641	0.3165	0.4318	0.0007	0.0282	63.6	0.0058
Bore/Drill Rigs	15	0.0120	0.0632	0.0754	0.0002	0.0029	10.3	0.0011
	25	0.0193	0.0658	0.1219	0.0002	0.0046	16.0	0.0017
	50	0.0210	0.2215	0.1992	0.0004	0.0044	31.0	0.0019
	120	0.0326	0.4667	0.2962	0.0009	0.0095	77.1	0.0029
	175	0.0519	0.7541	0.3589	0.0016	0.0121	141	0.0047
	250	0.0580	0.3426	0.3124	0.0021	0.0088	188	0.0052
	500	0.0955	0.5511	0.5035	0.0031	0.0145	311	0.0086
	750	0.1891	1.0890	1.0018	0.0062	0.0287	615	0.0171
	1000	0.3016	1.6457	4.3972	0.0093	0.0855	928	0.0272
Bore/Drill Rigs Composite		0.0578	0.5013	0.4692	0.0017	0.0126	165	0.0052
Cement and Mort	15	0.0074	0.0386	0.0461	0.0001	0.0018	6.3	0.0007
	25	0.0237	0.0762	0.1411	0.0002	0.0067	17.6	0.0021
Cement and Mortar Mixers Co		0.0087	0.0417	0.0539	0.0001	0.0022	7.2	0.0008
Concrete/Industri	25	0.0199	0.0678	0.1256	0.0002	0.0047	16.5	0.0018
	50	0.0625	0.2602	0.2473	0.0004	0.0167	30.2	0.0056
	120	0.0728	0.4691	0.5331	0.0009	0.0385	74.1	0.0066
	175	0.1116	0.8663	0.9349	0.0018	0.0466	160	0.0101
Concrete/Industrial Saws Com		0.0679	0.3892	0.4267	0.0007	0.0298	58.5	0.0061
Cranes	50	0.0709	0.2588	0.2087	0.0003	0.0168	23.2	0.0064
	120	0.0690	0.3509	0.4155	0.0006	0.0341	50.1	0.0062
	175	0.0807	0.4774	0.5549	0.0009	0.0314	80.3	0.0073
	250	0.0830	0.2572	0.6832	0.0013	0.0235	112	0.0075
	500	0.1262	0.4243	0.9704	0.0018	0.0351	180	0.0114
	750	0.2137	0.7132	1.6890	0.0030	0.0602	303	0.0193
	9999	0.7823	2.5343	8.2827	0.0098	0.2344	971	0.0706
Cranes Composite		0.1073	0.4152	0.8625	0.0014	0.0352	129	0.0097
Crawler Tractors	50	0.0876	0.2947	0.2312	0.0003	0.0197	24.9	0.0079
	120	0.1008	0.4707	0.5971	0.0008	0.0489	65.8	0.0091
	175	0.1347	0.7342	0.9293	0.0014	0.0522	121	0.0122
	250	0.1413	0.4308	1.1399	0.0019	0.0426	166	0.0127
	500	0.2069	0.7531	1.5987	0.0025	0.0609	259	0.0187
	750	0.3726	1.3475	2.9402	0.0047	0.1106	465	0.0336

	1000	0.5672	2.1186	6.0245	0.0066	0.1793	658	0.0512
Crawler Tractors Composite		0.1258	0.5464	0.8617	0.0013	0.0500	114	0.0114
Crushing/Proc. E	50	0.1086	0.4355	0.3739	0.0006	0.0274	44.0	0.0098
	120	0.0948	0.5547	0.6210	0.0010	0.0484	83.1	0.0086
	175	0.1380	0.9527	1.0155	0.0019	0.0545	167	0.0124
	250	0.1466	0.4993	1.2854	0.0028	0.0405	245	0.0132
	500	0.2135	0.7357	1.7109	0.0037	0.0582	374	0.0193
	750	0.3347	1.1549	2.7641	0.0059	0.0920	589	0.0302
	9999	0.8702	2.8310	10.1798	0.0131	0.2693	1,308	0.0785
Crushing/Proc. Equipment Co		0.1219	0.6388	0.8113	0.0015	0.0473	132	0.0110
Dumpers/Tender	25	0.0092	0.0314	0.0585	0.0001	0.0023	7.6	0.0008
Dumpers/Tenders Composite		0.0092	0.0314	0.0585	0.0001	0.0023	7.6	0.0008
Excavators	25	0.0198	0.0677	0.1253	0.0002	0.0047	16.4	0.0018
	50	0.0521	0.2568	0.2082	0.0003	0.0128	25.0	0.0047
	120	0.0760	0.5042	0.4840	0.0009	0.0340	73.6	0.0069
	175	0.0896	0.6644	0.5783	0.0013	0.0308	112	0.0081
	250	0.0992	0.3354	0.6878	0.0018	0.0231	159	0.0090
	500	0.1415	0.4762	0.8988	0.0023	0.0323	234	0.0128
	750	0.2356	0.7890	1.5359	0.0039	0.0544	387	0.0213
Excavators Composite		0.0916	0.5184	0.5858	0.0013	0.0289	120	0.0083
Forklifts	50	0.0254	0.1463	0.1228	0.0002	0.0068	14.7	0.0023
	120	0.0287	0.2125	0.1926	0.0004	0.0128	31.2	0.0026
	175	0.0425	0.3322	0.2685	0.0006	0.0146	56.1	0.0038
	250	0.0467	0.1564	0.3057	0.0009	0.0103	77.1	0.0042
	500	0.0659	0.2139	0.3937	0.0011	0.0145	111	0.0059
Forklifts Composite		0.0399	0.2181	0.2493	0.0006	0.0119	54.4	0.0036
Generator Sets	15	0.0126	0.0647	0.0874	0.0002	0.0045	10.2	0.0011
	25	0.0236	0.0799	0.1471	0.0002	0.0073	17.6	0.0021
	50	0.0559	0.2326	0.2443	0.0004	0.0156	30.6	0.0050
	120	0.0725	0.4728	0.5629	0.0009	0.0381	77.9	0.0065
	175	0.0902	0.7328	0.8439	0.0016	0.0383	142	0.0081
	250	0.0926	0.3988	1.1003	0.0024	0.0307	213	0.0084
	500	0.1343	0.6237	1.5464	0.0033	0.0459	337	0.0121
	750	0.2224	1.0068	2.5746	0.0055	0.0754	544	0.0201
	9999	0.5622	2.1570	7.9778	0.0105	0.1939	1,049	0.0507
Generator Sets Composite		0.0527	0.2821	0.4052	0.0007	0.0216	61.0	0.0048
Graders	50	0.0743	0.2932	0.2387	0.0004	0.0176	27.5	0.0067
	120	0.0928	0.5166	0.5753	0.0009	0.0447	75.0	0.0084
	175	0.1135	0.7301	0.7781	0.0014	0.0429	124	0.0102
	250	0.1180	0.3848	0.9383	0.0019	0.0321	172	0.0106
	500	0.1497	0.5344	1.1139	0.0023	0.0400	229	0.0135
	750	0.3187	1.1303	2.4323	0.0049	0.0862	486	0.0288
Graders Composite		0.1121	0.5844	0.8008	0.0015	0.0397	133	0.0101
Off-Highway Trac	120	0.1712	0.6931	0.9973	0.0011	0.0834	93.7	0.0154
	175	0.1697	0.8122	1.1987	0.0015	0.0677	130	0.0153
	250	0.1344	0.4001	1.1003	0.0015	0.0446	130	0.0121
	750	0.5434	2.2170	4.4309	0.0057	0.1765	568	0.0490
	1000	0.8220	3.4738	8.4378	0.0082	0.2696	814	0.0742
Off-Highway Tractors Compos		0.1716	0.6906	1.3177	0.0017	0.0623	151	0.0155
Off-Highway Truc	175	0.1072	0.7547	0.6764	0.0014	0.0363	125	0.0097
	250	0.1109	0.3608	0.7625	0.0019	0.0256	167	0.0100
	500	0.1753	0.5676	1.1034	0.0027	0.0397	272	0.0158
	750	0.2856	0.9204	1.8476	0.0044	0.0655	442	0.0258
	1000	0.4308	1.3660	4.6014	0.0063	0.1229	625	0.0389
Off-Highway Trucks Composit		0.1712	0.5722	1.1851	0.0027	0.0407	260	0.0154
Other Constructio	15	0.0118	0.0617	0.0737	0.0002	0.0029	10.1	0.0011
	25	0.0159	0.0544	0.1008	0.0002	0.0038	13.2	0.0014

	50	0.0468	0.2392	0.2185	0.0004	0.0125	28.0	0.0042
	120	0.0671	0.5141	0.5013	0.0009	0.0329	80.9	0.0061
	175	0.0665	0.5860	0.5133	0.0012	0.0252	107	0.0060
	500	0.1181	0.4796	0.9136	0.0025	0.0311	254	0.0107
Other Construction Equipment		0.0675	0.3568	0.5044	0.0013	0.0206	123	0.0061
Other General Ind	15	0.0066	0.0391	0.0466	0.0001	0.0018	6.4	0.0006
	25	0.0185	0.0632	0.1170	0.0002	0.0044	15.3	0.0017
	50	0.0621	0.2377	0.1935	0.0003	0.0152	21.7	0.0056
	120	0.0811	0.4307	0.4956	0.0007	0.0404	62.0	0.0073
	175	0.0911	0.5665	0.6307	0.0011	0.0351	95.9	0.0082
	250	0.0936	0.2900	0.7778	0.0015	0.0249	136	0.0084
	500	0.1745	0.5443	1.3258	0.0026	0.0459	265	0.0157
	750	0.2894	0.8971	2.2570	0.0044	0.0770	437	0.0261
	1000	0.4068	1.2739	4.6403	0.0056	0.1274	560	0.0367
Other General Industrial Equip		0.1187	0.4650	0.9138	0.0016	0.0379	152	0.0107
Other Material Ha	50	0.0860	0.3282	0.2689	0.0004	0.0211	30.3	0.0078
	120	0.0786	0.4192	0.4839	0.0007	0.0394	60.7	0.0071
	175	0.1146	0.7173	0.8014	0.0014	0.0445	122	0.0103
	250	0.0988	0.3087	0.8309	0.0016	0.0266	145	0.0089
	500	0.1243	0.3915	0.9560	0.0019	0.0330	192	0.0112
	9999	0.5621	1.6821	6.1372	0.0073	0.1681	741	0.0507
Other Material Handling Equip		0.1123	0.4544	0.8948	0.0015	0.0366	141	0.0101
Pavers	25	0.0228	0.0771	0.1440	0.0002	0.0058	18.7	0.0021
	50	0.1040	0.3262	0.2615	0.0004	0.0234	28.0	0.0094
	120	0.1095	0.4895	0.6606	0.0008	0.0548	69.2	0.0099
	175	0.1443	0.7653	1.0437	0.0014	0.0582	128	0.0130
	250	0.1664	0.5174	1.4290	0.0022	0.0537	194	0.0150
	500	0.1858	0.7239	1.5415	0.0023	0.0588	233	0.0168
Pavers Composite		0.1193	0.5073	0.6672	0.0009	0.0453	77.9	0.0108
Paving Equipmer	25	0.0152	0.0520	0.0963	0.0002	0.0036	12.6	0.0014
	50	0.0885	0.2760	0.2230	0.0003	0.0200	23.9	0.0080
	120	0.0858	0.3834	0.5187	0.0006	0.0433	54.5	0.0077
	175	0.1124	0.5987	0.8196	0.0011	0.0458	101	0.0101
	250	0.1018	0.3178	0.8949	0.0014	0.0329	122	0.0092
Paving Equipment Composite		0.0910	0.4165	0.5965	0.0008	0.0404	68.9	0.0082
Plate Compactors	15	0.0050	0.0263	0.0314	0.0001	0.0012	4.3	0.0005
Plate Compactors Composite		0.0050	0.0263	0.0314	0.0001	0.0012	4.3	0.0005
Pressure Washer	15	0.0060	0.0310	0.0419	0.0001	0.0022	4.9	0.0005
	25	0.0096	0.0324	0.0596	0.0001	0.0030	7.1	0.0009
	50	0.0195	0.0918	0.1098	0.0002	0.0061	14.3	0.0018
	120	0.0191	0.1393	0.1659	0.0003	0.0100	24.1	0.0017
Pressure Washers Composite		0.0111	0.0570	0.0733	0.0001	0.0040	9.4	0.0010
Pumps	15	0.0103	0.0471	0.0641	0.0001	0.0036	7.4	0.0009
	25	0.0286	0.0883	0.1625	0.0002	0.0084	19.5	0.0026
	50	0.0680	0.2744	0.2773	0.0004	0.0184	34.3	0.0061
	120	0.0760	0.4802	0.5715	0.0009	0.0400	77.9	0.0069
	175	0.0940	0.7342	0.8462	0.0016	0.0398	140	0.0085
	250	0.0932	0.3841	1.0601	0.0023	0.0303	201	0.0084
	500	0.1468	0.6478	1.6054	0.0034	0.0489	345	0.0132
	750	0.2481	1.0709	2.7377	0.0057	0.0823	571	0.0224
	9999	0.7548	2.8273	10.4295	0.0136	0.2569	1,355	0.0681
Pumps Composite		0.0508	0.2751	0.3560	0.0006	0.0214	49.6	0.0046
Rollers	15	0.0074	0.0386	0.0461	0.0001	0.0018	6.3	0.0007
	25	0.0161	0.0549	0.1017	0.0002	0.0038	13.3	0.0015
	50	0.0729	0.2611	0.2245	0.0003	0.0174	26.0	0.0066
	120	0.0736	0.3944	0.4749	0.0007	0.0378	59.0	0.0066
	175	0.0964	0.6140	0.7248	0.0012	0.0393	108	0.0087

	250	0.0985	0.3375	0.9035	0.0017	0.0302	153	0.0089
	500	0.1323	0.5091	1.1463	0.0022	0.0401	219	0.0119
Rollers Composite		0.0736	0.3913	0.4866	0.0008	0.0322	67.0	0.0066
Rough Terrain Fo	50	0.0743	0.3373	0.2846	0.0004	0.0190	33.9	0.0067
	120	0.0660	0.4203	0.4341	0.0007	0.0319	62.4	0.0060
	175	0.0993	0.7233	0.6899	0.0014	0.0371	125	0.0090
	250	0.1047	0.3544	0.8098	0.0019	0.0269	171	0.0094
	500	0.1514	0.5104	1.0707	0.0025	0.0383	257	0.0137
Rough Terrain Forklifts Compo		0.0704	0.4522	0.4645	0.0008	0.0323	70.3	0.0064
Rubber Tired Doz	175	0.1763	0.8232	1.2239	0.0015	0.0692	129	0.0159
	250	0.1992	0.5845	1.5954	0.0021	0.0654	183	0.0180
	500	0.2660	1.0972	2.0893	0.0026	0.0849	265	0.0240
	750	0.4016	1.6469	3.2071	0.0040	0.1289	399	0.0362
	1000	0.6276	2.6606	6.2665	0.0060	0.2034	592	0.0566
Rubber Tired Dozers Compos		0.2465	0.9300	1.9508	0.0025	0.0796	239	0.0222
Rubber Tired Loa	25	0.0204	0.0697	0.1291	0.0002	0.0048	16.9	0.0018
	50	0.0818	0.3270	0.2684	0.0004	0.0195	31.1	0.0074
	120	0.0714	0.4038	0.4460	0.0007	0.0346	58.9	0.0064
	175	0.0954	0.6234	0.6571	0.0012	0.0362	106	0.0086
	250	0.1000	0.3290	0.7984	0.0017	0.0272	149	0.0090
	500	0.1514	0.5411	1.1288	0.0023	0.0405	237	0.0137
	750	0.3121	1.1077	2.3876	0.0049	0.0844	486	0.0282
	1000	0.4149	1.4822	4.7146	0.0060	0.1302	594	0.0374
Rubber Tired Loaders Compos		0.0920	0.4510	0.6446	0.0012	0.0336	109	0.0083
Scrapers	120	0.1471	0.6728	0.8712	0.0011	0.0719	93.9	0.0133
	175	0.1673	0.8975	1.1638	0.0017	0.0655	148	0.0151
	250	0.1805	0.5495	1.4783	0.0024	0.0552	209	0.0163
	500	0.2594	0.9602	2.0375	0.0032	0.0777	321	0.0234
	750	0.4502	1.6557	3.6101	0.0056	0.1359	555	0.0406
Scrapers Composite		0.2257	0.8713	1.7483	0.0027	0.0716	262	0.0204
Signal Boards	15	0.0072	0.0377	0.0450	0.0001	0.0018	6.2	0.0006
	50	0.0738	0.3047	0.2923	0.0005	0.0195	36.2	0.0067
	120	0.0781	0.5033	0.5729	0.0009	0.0410	80.2	0.0070
	175	0.1057	0.8280	0.8988	0.0017	0.0440	155	0.0095
	250	0.1230	0.4919	1.2834	0.0029	0.0379	255	0.0111
Signal Boards Composite		0.0151	0.0918	0.1098	0.0002	0.0055	16.7	0.0014
Skid Steer Loade	25	0.0179	0.0588	0.1090	0.0002	0.0050	13.8	0.0016
	50	0.0288	0.2057	0.1865	0.0003	0.0079	25.5	0.0026
	120	0.0268	0.2686	0.2172	0.0005	0.0114	42.8	0.0024
Skid Steer Loaders Composite		0.0274	0.2161	0.1912	0.0004	0.0088	30.3	0.0025
Surfacing Equipm	50	0.0346	0.1270	0.1178	0.0002	0.0085	14.1	0.0031
	120	0.0722	0.4096	0.4995	0.0007	0.0368	63.8	0.0065
	175	0.0685	0.4685	0.5589	0.0010	0.0282	85.8	0.0062
	250	0.0780	0.2927	0.7732	0.0015	0.0253	135	0.0070
	500	0.1186	0.5248	1.1392	0.0022	0.0385	221	0.0107
	750	0.1888	0.8224	1.8408	0.0035	0.0614	347	0.0170
Surfacing Equipment Compos		0.0981	0.4333	0.8855	0.0017	0.0321	166	0.0088
Sweepers/Scrubb	15	0.0124	0.0729	0.0870	0.0002	0.0034	11.9	0.0011
	25	0.0237	0.0808	0.1495	0.0002	0.0056	19.6	0.0021
	50	0.0581	0.3019	0.2627	0.0004	0.0158	31.6	0.0052
	120	0.0701	0.4996	0.4855	0.0009	0.0336	75.0	0.0063
	175	0.1029	0.8018	0.7099	0.0016	0.0381	139	0.0093
	250	0.0936	0.3232	0.6970	0.0018	0.0230	162	0.0084
Sweepers/Scrubbers Compos		0.0737	0.4962	0.4726	0.0009	0.0288	78.5	0.0067
Tractors/Loaders	25	0.0192	0.0653	0.1213	0.0002	0.0047	15.9	0.0017
	50	0.0555	0.2889	0.2435	0.0004	0.0141	30.3	0.0050
	120	0.0477	0.3442	0.3216	0.0006	0.0217	51.7	0.0043

	175	0.0726	0.5847	0.4886	0.0011	0.0254	101	0.0066
	250	0.0968	0.3506	0.6887	0.0019	0.0229	172	0.0087
	500	0.1886	0.6859	1.2315	0.0039	0.0438	345	0.0170
	750	0.2842	1.0286	1.9040	0.0058	0.0668	517	0.0256
Tractors/Loaders/Backhoes C		0.0559	0.3666	0.3681	0.0008	0.0222	66.8	0.0050
Trenchers	15	0.0099	0.0517	0.0617	0.0001	0.0024	8.5	0.0009
	25	0.0397	0.1355	0.2509	0.0004	0.0094	32.9	0.0036
	50	0.1222	0.3728	0.3051	0.0004	0.0274	32.9	0.0110
	120	0.1018	0.4529	0.6266	0.0008	0.0514	64.9	0.0092
	175	0.1590	0.8464	1.1893	0.0016	0.0653	144	0.0143
	250	0.1883	0.6031	1.6715	0.0025	0.0635	223	0.0170
	500	0.2433	1.0086	2.1048	0.0031	0.0805	311	0.0220
	750	0.4610	1.8971	4.0616	0.0059	0.1535	587	0.0416
Trenchers Composite		0.1129	0.4422	0.5410	0.0007	0.0423	58.7	0.0102
Welders	15	0.0086	0.0394	0.0536	0.0001	0.0030	6.2	0.0008
	25	0.0166	0.0511	0.0941	0.0001	0.0049	11.3	0.0015
	50	0.0638	0.2408	0.2183	0.0003	0.0162	26.0	0.0058
	120	0.0444	0.2559	0.3033	0.0005	0.0234	39.5	0.0040
	175	0.0774	0.5404	0.6214	0.0011	0.0322	98.2	0.0070
	250	0.0657	0.2384	0.6582	0.0013	0.0200	119	0.0059
	500	0.0865	0.3263	0.8096	0.0016	0.0264	168	0.0078
Welders Composite		0.0434	0.1912	0.2054	0.0003	0.0150	25.6	0.0039

CONSTRUCTION EMISSION
SEGEMENT 1 ORLEANS - WEITCHPEC

ACTIVITY	PEAK NO. of CREWS	CREW SIZE	QUANTITY (lf)	DURATION (days)	TYPE	# / CREW	HRS / DAY	TOTAL HRS
Aerial (existing poles)	1	7	*7,850*	2	Bucket Truck	2	8	32
					4X4 Pick-up	3	6	36
Trenching	2	7	68,000	28	Trencher	1	8	448
					Backhoe	1	6	336
					Dump Truck	1	4	224
					Water Truck	1	4	224
					4X4 Pick-up	3	2	336
Directional Bore	2	4	7,600	8	Drill	1	8	128
					Backhoe	1	4	64
					Vacuum Truck	1	4	64
					Water Truck	1	4	64
					4X4 Pick-up	3	2	96
Saw Cutting	1	2	18,200	13	Trencher	1	8	104
					Backhoe	1	4	52
					Dump Truck	1	4	52
					Water Truck	1	4	52
					4X4 Pick-up	1	2	26
Rock Cutting	1	6	8,400	17	Rock Saw Trencher	1	8	136
					Backhoe	1	4	68
					Dump Truck	1	4	68
					Water Truck	1	4	68
					4X4 Pick-up	3	2	102
Bridge Hang	1	7	1,000	5	Knuckle Man-Lift	1	8	40
					4X4 Pick-up	2	2	20
Asphalt Repair	1	4	18,200	25	Roller	1	8	200
					Backhoe	1	6	150
					Dump Truck	1	4	100
					4X4 Pick-up	2	2	100
Vault Placement	1	3	30	5	Backhoe	1	8	40
					4X4 Pick-up	2	2	20
Cable Placement	1	13	*87,300*	8	Cable Pulling Equip.	3	8	192
					Air Compressor	1	4	32
					Backhoe	1	4	32
					4X4 Pick-up	4	2	64
Cable Splicing	1	2	*920*	5	Splicing Trailer	1	8	40
					4X4 Pick-up	1	2	10

CONSTRUCTION EMISSION
SEGEMENT 2 WEITCHPEC - WAUTEC

ACTIVITY	PEAK NO. of CREWS	CREW SIZE	QUANTITY (lf)	DURATION (days)	TYPE	# / CREW	HRS / DAY	TOTAL HRS
Aerial	1	7	*111,936*	15	Bucket Truck	2	8	240
(existing poles)					4X4 Pick-up	3	6	270
Trenching	2	7	*10,032*	5	Trencher	1	8	80
					Backhoe	1	6	60
					Dump Truck	1	4	40
					Water Truck	1	4	40
					4X4 Pick-up	3	2	60
Saw Cutting	1	2	*2,112*	2	Trencher	1	8	16
					Backhoe	1	4	8
					Dump Truck	1	4	8
					Water Truck	1	4	8
					4X4 Pick-up	2	2	8
Vault Placement	1	3	*6*	1	Backhoe	1	8	8
					4X4 Pick-up	2	2	4
Cable Placement	1	13	*124,080*	10	Cable Pulling Equip.	3	8	240
					Air Compressor	1	4	40
					Backhoe	1	4	40
					4X4 Pick-up	4	2	80
Cable Splicing	1	2	*768*	4	Splicing Trailer	1	8	32
					4X4 Pick-up	1	2	8

CONSTRUCTION EMISSION

SEGEMENT 3 WEITCHPEC - ELK CAMP

ACTIVITY	PEAK NO. of CREWS	CREW SIZE	QUANTITY (lf)	DURATION (days)	TYPE	# / CREW	HRS / DAY	TOTAL HRS
Trenching	2	7	119,500	48	Trencher	1	8	768
					Backhoe	1	6	576
					Dump Truck	1	4	384
					Water Truck	1	4	384
					4X4 Pick-up	3	2	576
Directional Bore	2	4	2,500	3	Drill	1	8	48
					Backhoe	1	4	24
					Vacuum Truck	1	4	24
					Water Truck	1	4	24
					4X4 Pick-up	3	2	36
Saw Cutting	1	2	3,600	3	Trencher	1	8	24
					Backhoe	1	4	12
					Dump Truck	1	4	12
					Water Truck	1	4	12
					4X4 Pick-up	2	2	12
Rock Cutting	1	6	5,980	13	Rock Saw Trencher	1	8	104
					Backhoe	1	4	52
					Dump Truck	1	4	52
					Water Truck	1	4	52
					4X4 Pick-up	3	2	78
Asphalt Repair	1	4	3,600	5	Roller	1	8	40
					Backhoe	1	6	30
					Dump Truck	1	4	20
					4X4 Pick-up	2	2	20
Vault Placement	1	3	52	9	Backhoe	1	8	72
					4X4 Pick-up	2	2	36
Cable Placement	1	13	125,900	11	Cable Pulling Equip.	3	8	264
					Air Compressor	1	4	44
					Backhoe	1	4	44
					4X4 Pick-up	4	2	88
Cable Splicing	1	2	1,650	9	Splicing Trailer	1	8	72
					4X4 Pick-up	1	2	18

CONSTRUCTION EMISSION
SEGEMENT 4 ELK CAMP - ORICK

ACTIVITY	PEAK NO. of CREWS	CREW SIZE	QUANTITY (lf)	DURATION (days)	TYPE	# / CREW	HRS / DAY	TOTAL HRS
Aerial (existing poles)	1	7	*5,280*	1	Bucket Truck	2	8	16
					4X4 Pick-up	3	6	18
Trenching	2	7	53,700	22	Trencher	1	8	352
					Backhoe	1	6	264
					Dump Truck	1	4	176
					Water Truck	1	4	176
					4X4 Pick-up	3	2	264
Directional Bore	2	4	600	1	Drill	1	8	16
					Backhoe	1	4	8
					Vacuum Truck	1	4	8
					Water Truck	1	4	8
					4X4 Pick-up	3	2	12
Saw Cutting	1	2	2,200	2	Trencher	1	8	16
					Backhoe	1	4	8
					Dump Truck	1	4	8
					Water Truck	1	4	8
					4X4 Pick-up	2	2	8
Rock Cutting	1	6	2,690	6	Rock Saw Trencher	1	8	48
					Backhoe	1	4	24
					Dump Truck	1	4	24
					Water Truck	1	4	24
					4X4 Pick-up	3	2	36
Bridge Hang	1	7	110	1	Knuckle Man-Lift	2	8	16
					4X4 Pick-up	3	2	6
Asphalt Repair	1	4	2,200	3	Roller	1	8	24
					Backhoe	1	6	18
					Dump Truck	1	4	12
					4X4 Pick-up	2	2	12
Vault Placement	1	3	14	3	Backhoe	1	8	24
					4X4 Pick-up	2	2	12
Cable Placement	1	13	*67,200*	6	Cable Pulling Equip.	3	8	144
					Air Compressor	1	4	24
					Backhoe	1	4	24
					4X4 Pick-up	4	2	48
Cable Splicing	1	2	*674*	4	Splicing Trailer	1	8	32
					4X4 Pick-up	1	2	8

CONSTRUCTION EMISSION
SEGEMENT 5 ORICK - MEET ME

ACTIVITY	PEAK NO. of CREWS	CREW SIZE	QUANTITY (lf)	DURATION (days)	TYPE	# / CREW	HRS / DAY	TOTAL HRS
Aerial (existing poles)	1	7	*20,592*	3	Bucket Truck	2	8	48
					4X4 Pick-up	3	6	54
Trenching	2	7	*134,640*	54	Trencher	1	8	864
					Backhoe	1	6	648
					Dump Truck	1	4	432
					Water Truck	1	4	432
					4X4 Pick-up	3	2	648
Directional Bore	2	4	*16,896*	17	Drill	1	8	272
					Backhoe	1	4	136
					Vacuum Truck	1	4	136
					Water Truck	1	4	136
					4X4 Pick-up	3	2	204
Bridge Hang	1	7	*1,584*	7	Knuckle Man-Lift	2	8	112
					4X4 Pick-up	3	2	42
Vault Placement	1	3	*12*	2	Backhoe	1	8	16
					4X4 Pick-up	2	2	8
Cable Placement	1	13	*173,184*	14	Cable Pulling Equip.	3	8	336
					Air Compressor	1	4	56
					Backhoe	1	4	56
					4X4 Pick-up	4	2	112
Cable Splicing	1	2	*1,152*	6	Splicing Trailer	1	8	48
					4X4 Pick-up	1	2	12

TYPE	PRODUCTION (per day)	
Aerial - existing	8,000	lineal feet
Aerial - new	15	lineal feet
Plow	10,000	lineal feet
Trenching	2,500	lineal feet
Saw Cut	1,500	lineal feet
Rock	500	lineal feet
Asphalt Repair	750	lineal feet
Directional Drill	1,000	lineal feet
Bridge Hang	250	lineal feet
Vault Placement	6	lineal feet
Cable Placement	12,500	lineal feet
Cable Splicing	192	lineal feet

Appendix C
Special-Status Species

TABLE C-1
SPECIAL-STATUS WILDLIFE WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within Project Area
Invertebrates			
Behren's silverspot butterfly *Speyeria zerene behrensii*	FE/--/--	Prefers coastal terrace prairie. Historical distribution covered most of California's north coast, but is now restricted to one population at Point Arena in Mendocino County. Larvae feed solely on blue violet (*Viola adunca*).	**Not Present.** The project alignment is located far north of Point Arena. An occurrence record that is located along Segment 5 is from 1975 and is extirpated.
Obscure bumblebee *Bombus caliginosus*	--/--/--	Pacific coast from Canada to southern California. Bumble bees are found in a wide variety of natural, agricultural, urban, and rural habitats with adequate floral resources for nectar.	**Unlikely.** Segments have suitable roadside habitat, but species is sparsely scattered across much of former range.
Western bumblebee *Bombus occidentalis*	--/--/--	This species is found throughout western North America; bumble bees are found in a wide variety of natural, agricultural, urban, and rural habitats with adequate floral resources for nectar.	**Unlikely.** Sparsely scattered across much of former range but all segments have suitable roadside habitat.
Fish			
Green Sturgeon - sDPS *Acipenser medirostris*	FT/--/--	Anadromous, but tend to spend more time in the ocean than most species. Spawns several times in their lives, in natal rivers every 3-5 year. Can live up to 70 years old, reaching maturity at 15 years. Ranges from Alaska to Mexico, but higher concentrations are located north of Point Conception. sDPS spawn in the Sacramento River.	**Unlikely.** The headwaters and estuaries known to be used by green sturgeon are located south of the project alignment. The marine coastal region is located close to Segment 5 of the project area. This project will not impact coastal waters and streams.
Pacific lamprey *Entosphenus tridentatus*	--/--/SSC	Adults are parasitic on a variety of marine and anadromous fish in the marine environment. After 1 – 3 years in the ocean they migrate to freshwater for a year before spawning. This species spawns in similar habitat to salmon- with gravel bottomed stream, at the upstream end of riffle habitat. Ammocoetes live in silt/sand substrates and filter feed for 3 – 7 years before transforming to larvae and migrating to the ocean.	**Unlikely.** Waters known to be used by the Pacific lamprey are located south of the project alignment. The marine coastal region is located close to Segment 5 of the project area, but the project will not impact coastal waters.
Tidewater goby *Eucyclogobius newberryi*	FE/--/SSC	Typically, an annual benthic species that occurs in loose aggregations of a few to several hundreds or thousands of individuals. Peak breeding activities in late April to May. Inhabits coastal lagoons and brackish bays at the mouth of freshwater streams. Vegetation within habitat is generally sparse. Occurs along the coast of Mendocino, Humboldt, and Del Norte Counties.	**Unlikely.** There are three occurrence records that fall within one quarter mile of Segment 5. One record is extirpated. The other two records are from 2010 and encompass Stone Lagoon and Big Lagoon. These lagoons would not be impacted by the project.
Coast cutthroat trout *Oncorhynchus clarkii clarkii*	--/--/SSC	Freshwater fish that inhabits clear, cold streams with naturally fluctuation flows, low levels of fine sediments, well-vegetated streambanks, and diverse abundant instream cover. They seek out sediment-free gravel substrate in riffles and pool crests.	**Moderate.** There are 12 occurrences in Segments 2, 4, and 5. The latest occurrence record from 1995, overlaps Segment 4 and 5, and encompasses Redwood Creek and tributaries.

TABLE C-1 (CONTINUED)
SPECIAL-STATUS WILDLIFE WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within Project Area
Fish (cont.)			
Coho salmon – southern Oregon/ northern California ESU *Oncorhynchus kisutch*	FT/CT/--	Spends first half of life cycle rearing and feeding in streams and small freshwater tributaries with stable gravel substrates. The remainder of life is spent foraging in estuaries and marine waters. Returns to natal streams to spawn and then die.	**Moderate.** Occurs within Redwood Creek in Segment 4, and in coastal waters offshore of the Project alignment.
Steelhead trout – northern California DPS *Oncorhynchus mykiss*	FT/--/SSC	Occurs in rivers and streams with gravel-bottomed, fast-flowing, well-oxygenated fresh water. Juveniles may spend up to 7 years in freshwater maturing before migrating to the ocean. They remain in the ocean for 3 years before returning to freshwater to spawn. Spawning habitat consists of gravel substrates free of excessive silt. Northern California DPS occurs from Klamath River south to the Russian River.	**Present.** Segments 4, and 5 overlap 7 creeks (Prairie, Lower Redwood, Maple, Little River, Tom, McDonald, and North Fork McDonald) that are known to be used by this DPS for spawning habitat.
Chinook salmon – California coastal *Oncorhynchus tshawytscha*	FT/--/--	Occur in freshwater streams where they spend 3 months to 2 years in streams before migrating to estuarine areas, and then to the ocean. Adults remain at sea for 1 – 6 years before returning to freshwater to spawn.	**High Potential.** Segments 4 and 5 overlap 4 creeks (Prairie, Lower Redwood, Maple and Little River) used by this species. (Prairie and Lower Redwood creek provide spawning habitat.)
Chinook salmon – upper Klamath and Trinity Rivers ESU *Oncorhynchus tshawytscha*	--/--/SSC	Occur in freshwater streams where they spend 3 months to 2 years in streams before migrating to estuarine areas, and then to the ocean. Adults remain at sea for 1 – 6 years before returning to freshwater to spawn.	**High Potential.** Occurrence in Segment 1 from 1999, in the Klamath River, where 18,780 individuals captured and released.
Longfin smelt *Spirinchus thaleichthys*	Candidate/CT/SSC	Anadromous smelt that occurs in the middle or bottom of water column in salt or brackish water. Concentrated in Suisun Bay, Montezuma Slough, and the lower reaches of the Sacramento and San Joaquin Rivers. May also be found throughout San Francisco Bay, Humboldt Bay, Eel river estuary and other local coastal areas. Spawning occurs in freshwater rivers, where they die afterwards.	**Unlikely.** One occurrence record within half-mile of Segment 5 from 2004 and in Trinidad Bay. The project will not impact coastal waters.
Eulachon *Thaleichthys pacificus*	FT/--/--	Anadromous smelt that spend most of life in the ocean, returning after 2 – 5 years to spawn in freshwater rivers. Eggs incubate in the spawning habitat of coarse sand, until larvae drift downstream to estuarine habitats. Juveniles disperse into ocean waters where they can be found on the continental shelf waters.	**Unlikely.** Two occurrence records overlap Segments 4 and 5: Mad River and Redwood Creek from 1976 and 1978. The alignment will not cross estuarine habitat.
Amphibians			
Pacific tailed frog *Ascaphus truei*	--/--/SSC	Inhabits swift, cold, clear, rocky streams in wet forests. Rocky stream bed is necessary for breeding and refugia. This species does not inhabit ponds or lakes. Range is from Anchor Bay, CA almost all the way to the north coast of British Columbia.	**Moderate.** Numerous occurrence records in the vicinity of the project area. Three overlap Segment 5 from 1989. All are mapped along creek limits for: Beach Creek, Burris Creek, Savage Creek and Mill Creek.

TABLE C-1 (CONTINUED)
SPECIAL-STATUS WILDLIFE WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within Project Area
Amphibians (cont.)			
Del Norte salamander *Plethodon elongatus*	--/--/WL	Completely terrestrial species that occurs in cool, moist microhabitats in older forests with a closed, multi-storied canopy (conifers and hardwoods), with cobble-sized rocky substrates. Breeds on moist soil. Currently ranges from southwest Oregon and northwest California. In California, this species is found in Del Norte, Humboldt, Trinity, and Siskiyou Counties from sea level to 1570 meters (5151 feet).	**Moderate.** Numerous occurrence records in the vicinity of the project area. Occurrence along Segment 1 in Ullathorne Creek, 2 miles southwest of Orleans from 1989. Suitable habitat for this species along Bald Hills Rd. in Segment 4.
Northern red-legged frog *Rana aurora*	--/--/SSC	Found in humid forests, woodlands, grasslands, and streamside with plant cover, but most common in lowlands or foothills. Breeding habitat is permanent sources of water such as lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ranges from Mendocino County in California along the coast to the southwestern coast of British Columbia.	**High Potential.** Numerous occurrence records in the vicinity of the project area along the coastline. Sixteen occurrence records are within a quarter mile of Segment 2, 4, and 5; seven overlap with the alignment. One occurrence from 2011 is near the mouth of Redwood Creek. One dead individual seen near Redwood Creek during 2018 site visit.
Foothill yellow-legged frog *Rana boylii*	--/--/SSC	Rarely occurs far from permanent water. Rocky streams and rivers with rocky substrate and open sunny banks in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools. Attaches egg clusters to gravel or rocks in moving water near stream margins.	**Moderate.** Numerous occurrence records in vicinity of the project area along the coastline. Seven occurrence records are within quarter mile of Segment 1, 4, and 5; five records overlap the alignment. Occurrence from 2015 along Segment 1, in unnamed drainage to Klamath River.1.4 miles of Skate Creek Rd in steeply sloped creek just off the road.
Southern torrent salamander *Rhyacotriton variegatus*	--/--/SSC	Found in shallow, cold, clear, well-shaded streams, waterfalls and seepages, particular those that run through talus and under rocks year long, in mature to old-growth forests. Occasionally found in riparian vegetation adjacent to water. Reproduction is aquatic. Ranges from southern Mendocino County along the coast to the Oregon coniferous belt. Elevation from 1,390 – 1,500 meters (4,500 – 5,000 ft).	**High Potential.** Numerous occurrence records in the vicinity of the project area along the coastline. Fifteen occurrence records within quarter mile along all Segments; eight occurrence records overlap alignment. Occurrence from 2003, 2.6 miles east northeast of Orick in Redwood State and National Park, along Bald Hills Rd. in old-growth redwood forest.
Reptiles			
Western pond turtle *Actinemys marmorata*	--/--/SSC	Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches with abundant vegetation and either rocky or muddy bottoms in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks required for basking. Lays eggs in sandy soils along stream or pond margins.	**Unlikely.** All occurrence records are located more than one half-mile from the project alignment. The closest occurrence record is located approximately one half-mile north of Segment 5, along Little River at Little River State Park in 2016.

TABLE C-1 (CONTINUED)
SPECIAL-STATUS WILDLIFE WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within Project Area
Birds			
Northern goshawk *Accipiter gentilis*	--/--/SSC	Prefers high elevation. Nests in mature and old-growth forest with more than 60% closed canopy, north facing slopes, and near water. Feeds on birds, mammals, reptiles, as well as insects and sometimes carrion. Breeding range from North Coast Ranges through the Sierra Nevada, Klamath, Cascade, and Warner Mts.	**Unlikely.** No occurrence records within half mile of project alignment. Closest record 0.6 miles north of Segment 1 is from 1980, a successful nest site for at least two years.
Grasshopper sparrow *Ammodramus savannarum*	--/--/SSC (Nesting)	Occurs in dry, dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches. Builds nest of grasses and forbs in a slight depression in ground hidden at the base of an overhanging clump of grasses or forbs.	**Moderate.** There is suitable nesting and foraging habitat throughout Segment 3. Suitable coastal grasslands present near the proposed alignment.
Golden eagle *Aquila chrysaetos*	--/--/FP/BCC (Nesting & wintering)	Typically inhabits rolling foothills and mountain terrain, wide arid plateaus deeply cut by steams and canyons, open mountain slopes, cliffs and rock outcroppings, sage-juniper flats and deserts from elevations of sea level to 11,500 feet. Builds large platform nest on cliffs of all heights and in large trees in open areas. Nest size is from 10 feet across to 3 feet high of sticks, twigs, and greenery. Most are resident, but some may migrate into downslope for winter. The majority of California is in year-long range.	**Unlikely.** No occurrence records within 20 miles of the project alignment. The project alignment is within range for this species. There is potential suitable nesting and foraging habitat along Segment 3.
Marbled murrelet *Brachyramphus marmoratus*	FT/CE/--	Only breeds along California coast. Nests in mature, dense forests of redwood and Douglas fir. Can be seen as far as 4 – 5 miles inland. Prefers to nest in tall trees. Nests made of moss and lichen. Known breeding grounds include Jedediah Smith Redwood State Park, Prairie Creek Redwoods State Park, Russian Gulch State Park, Portola State Park, Butano Creek, Waddell Greek and Big Basin Redwoods State Park.	**High Potential.** Numerous occurrence records located at the north end of Segments 4 and 5. One occurrence record overlaps Segment 4, birds detected in flight in 1988. Nesting colony located in Lady Bird Johnson grove near the alignment in Segment 4.
Vaux's swift *Chaetura vauxi*	--/--/SSC (Nesting)	Prefers redwood and Douglas fir habitats with nest-sites in large hollow trees and snags, especially tall, burned-out stubs. Occasionally nests in chimneys and buildings. Feeds exclusively on flying insects in long, continuous foraging fights high in the air. There is an apparent preference for foraging over rivers and lakes.	**Moderate.** No occurrence records for this species are located in the vicinity of the project alignment, although there is suitable foraging habitat with limited suitable nesting locations.
Western snowy plover *Charadrius alexandrius nivosus*	FT/--/SSC/BCC	Sandy coastal beaches, salt pans, coastal dredged spoils sites, dry salt ponds, salt pond levees and gravel bars. Nests in sandy substrate and forages in sandy marine and estuarine bodies.	**Unlikely.** One occurrence record is located within one half-mile of Segment 5, breeding habitat on the strip of sand spit located between the ocean and Big Lagoon. Critical habitat is also located along the coast in this area. The project will not impact this habitat type.

TABLE C-1 (CONTINUED)
SPECIAL-STATUS WILDLIFE WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within Project Area
Birds (cont.)			
Northern harrier *Circus cyaneus*	--/--/SSC (Nesting)	Inhabits annual grassland up to lodgepole pine and alpine meadow habitats. Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas. Nests on the ground in shrubby vegetation, usually at marsh edge. Nest is a large mound of sticks on wet areas. Mostly found in flat, open areas of tall, dense grasses.	**Moderate.** Suitable foraging and nesting habitat in the project alignment. The project is within the species year-long and winter range and is known locally.
Yellow-billed cuckoo *Coccyzus americanus*	FT/--/SSC/BCC	Inhabits extensive deciduous riparian thickets or forests with dense, low-level or understory foliage, which abut on slow-moving watercourses, backwaters, or seeps. Willow is almost always a dominant component of vegetation. Nest sites in dense low-level or understory foliage, high humidity, and wooded foraging spaces.	**Unlikely.** Known breeding locations are outside of the project area. There are no occurrence records located within one half mile of the project alignment.
Olive-sided flycatcher *Contopus cooperi*	--/--/SSC/BCC (Nesting)	Preferred breeding habitats include mixed conifer, montane hardwood-conifer, Douglas-fir, redwood, red fir, and lodgepole pine. Nest is an open cup of grasses, mosses, lichens, rootlets, and pine needles that is placed 5 to 70 feet above ground on a horizontal limb.	**Moderate.** A common and widespread species in Humboldt County. There is suitable nesting and foraging habitat along the project alignment.
Black swift *Cypseloides niger*	--/--/SSC	Breeds in the Sierra Nevada and Cascade Mountain Range. Nests in moist crevice or cave on sea cliffs above surf or on cliffs behind or adjacent to waterfalls in deep canyons. Will forage over almost any terrain and habitat. Avoids arid regions.	**Unlikely.** One occurrence record along Segment 1 near Orleans. Suitable habitat present along the Klamath River banks.
White-tailed kite *Elanus leucurus*	--/--/FP (Nesting)	Inhabits herbaceous and open stages of most habitats in cismontane California. A yearly resident in coastal and valley lowlands. Nests in top of a dense oak, willow, or other tree stand 20-100 feet above ground. Prey is mostly voles and other small, diurnal mammals, occasionally birds, insects, reptiles, and amphibians. Hunts by soaring, gliding and hovering above ground.	**Moderate. S**uitable nesting and foraging habitat along the proposed alignment. The alignment is within this species year-long range and is known locally in Humboldt County.
Willow flycatcher *Empidonax trailli*	--/CE/--/BCC	Most often occurs in broad, open river valley or large mountain meadows with shrubby willows. Prefers extensive willow thickets on edge of wet meadows, ponds or backwaters.	**Unlikely.** Known breeding locations are outside of the project area. No occurrence records located within one half mile of the project area.
American peregrine falcon *Falco peregrinus anatum*	--/--/FP (Nesting)	Breeds in woodland, forest and coastal habitats near wetlands, lakes, rivers, or other water on high cliffs, banks, dunes or mounds. Nest is a scrape on a depression nor ledge in an open site. Will nest on man-made structures, and occasionally uses tree or snag cavities. Riparian areas and coastal inland wetlands are important yearlong habitats. Hunts by swooping from flight onto flying prey. Rarely hunts from perch.	**Unlikely.** This species is mapped by topographic quad; the closest occurrence is adjacent to Segment 1. Foraging habitat is present along the project alignment, with limited breeding habitat. The project alignment is within this species year-long range.

TABLE C-1 (CONTINUED)
SPECIAL-STATUS WILDLIFE WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within Project Area
Birds (cont.)			
California condor *Gymnogyps californianus*	FE/CE/FP	Wide-ranging bird found in rocky shrubland, coniferous forest, and oak savanna, often found near cliffs or large trees, which may be used as nesting sites.	**Not Present.** Yurok Tribe plans re-introduction.
Bald eagle *Haliaeetus leucocephalus*	Delisted/CE/FP	More common at lower elevations, breeds in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity Counties. Nests in large, or old-growth trees with open branch work, especially ponderosa pine. Prefers remote areas in close proximity to water.	**Moderate.** Two occurrence records are located within the half mile buffer of Segment 1. Both are from 1997 and successfully fledged young.
Yellow-breasted chat *Ictera virens*	--/--/--/BCC	Found in valley foothill riparian. Requires riparian thickets of willow and other bush tangles near watercourses. Nests 2 – 8 ft above ground in dense shrubs.	**Unlikely.** Suitable habitat in alder and willow riparian habitat along the Klamath River and in Redwood Creek.
Osprey *Pandion haliaetus*	--/--/SSC (Nesting)	Nests on man-made structures, ,in tall trees or on elevated platforms close to water, and feeds primarily on fish.	**High.** There are numerous occurrence records in the project vicinity. 24 records are located within the half mile buffer of all Segments of the project alignment. 6 records overlap with Segment 1, 2, and 5, in the vicinity of Big Lagoon.
Purple martin *Progne subis*	--/--/SSC (Nesting)	Uses valley foothill and montane hardwood, valley foothill and montane hardwood-conifer, and riparian habitats. Nests in old woodpecker cavities often located in tall, old, isolated trees or snags. Will occasionally nest in man-made structure such as nesting boxes, under bridges, or in culverts. Forages on the ground for ants and other insects, but hunt insects on gliding flights.	**Unlikely.** This species is an uncommon migrant and breeder in Humboldt County. There is potential suitable nesting and foraging habitat along the proposed alignment.
Bank swallow *Riparia riparia*	--/CT/-- (Nesting)	Vertical banks and cliffs with fine-textured or sandy soils near streams, rivers, ponds, lakes and ocean for nesting. Feeds over grassland, shrubland, savannah, and open riparian areas during nesting season.	**Unlikely.** One occurrence record along Segment 5 at the north end of Freshwater Lagoon. The project will not impact this species' habitat.
Yellow warbler *Setophaga petechia*	--/--/SSC/BCC (Nesting)	Breeds in coast range in Del Norte County. Riparian woodland, montane chaparral, and open ponderosa pine and mixed conifer habitats with substantial amounts of brush. Nest placed 2 – 16 ft about ground in a deciduous sapling or shrub.	**Unlikely.** Suitable habitat in alder and willow riparian habitat along the Klamath River and in Redwood Creek.
Northern spotted owl *Strix occidentalis caurina*	FT/CT/BCC	Resides in dense, old-growth, multi-layered mixed conifer, redwood and Douglas fir. Nests in tree or snag cavity or in broken top of large tree. Requires permanent water source. Prefers narrow, steep-sided canyons with north facing slopes. Breeding range extends west of the Cascade Range through North Coast Ranges, Sierra Nevada and in more localized area of Transverse and Peninsular ranges.	**High Potential.** There are 205 records within one quarter mile of the alignment, indicting activity centers and nest sites along all segments of the project alignment.

TABLE C-1 (CONTINUED)
SPECIAL-STATUS WILDLIFE WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within Project Area
Mammals			
Pallid bat *Antrozous pallidus*	--/--/SSC	Day roosts are mainly in caves, crevices, and mines. Also found in buildings and under bark. Forages in open lowland areas.	**Moderate.** One occurrence record of a single female was located 6 miles east of Orick. Suitable habitat is present along Segments 1, 2, 3, and 4, in trees and buildings.
White-footed vole *Arborimus albipes*	--/--/SSC	Found in mature, coastal forests, preferring the vicinity of small, clear streams with dense alder and other deciduous trees and shrubs. Often found near logs and in the brush when on the ground. Only known from Humboldt and Del Norte Counties in California. Found from sea level to 1100 meters (3500 feet) in pea sisky.	**Unlikely.** Known from three occurrence records, one in Segment 5A from 1926. In this record, seven individuals were trapped and collected near the edge of a forest stream that flowed through a gulch covered with redwoods.
Sonoma tree vole *Arborimus pomo*	--/--/SSC	Found in mature or other stands of Douglas fir, redwood, or montane hardwood-conifer habitats in the fog belt. This species is rare to uncommon in its range along the Northern Coast of Sonoma County to the Oregon border. Drinking water is required. Reproduces in nests constructed of Douglas fir needles in tall trees.	**Unlikely.** Several historical occurrence records in the vicinity of the project area. Five occurrence records overlap with the Segment alignments 3 and 5.
Townsend's big-eared bat *Corynorhinus townsendii*	--/--/SSC	Roosts in caves, mines, buildings, or other human-made structures. Forages in open lowland areas.	**Moderate.** The closest occurrence record is located 3.6 miles southeast of Segment 3 on Hoopa Indian Reservation. Suitable habitat is present along Segments 1, 2, 3 and 4.
Humboldt marten *Martes caurina humboldtensis*	FT/CE/SSC	Optimal habitats are various mixed evergreen forests with more than 40% crown closure, with large trees and snags. Nests in cavities of large trees, snags, stumps, logs, burrows, caves, and crevices in rocky areas. Habitat with limited human use is important.	**Moderate.** The closest occurrence record is located 1.3 miles north-northwest of Segment 1 in the Six Rivers National Forest; species is also present in RNP (Segment 4). Suitable habitat present along the alignment, but the species is sensitive to disturbance.
Fisher – West Coast DPS *Pekania pennanti*	--/--/SSC	Occurs in intermediate to large-tree stages of coniferous forest and deciduous-riparian habitats with a high percentage of canopy closure. Fisher den in a variety of protected cavities, brush piles, logs or under an upturned tree. Hollow logs, trees, and snags are especially important.	**Moderate.** Numerous occurrence records in the vicinity of the project area along the coastline. Seven occurrence records are within a quarter mile of Segment 1, 2, 3 and 4; two records overlap with the alignment along Segment 1, one from 1991 west of Martins Ferry Bridge, 3.1 miles northwest of Weitchpec, in 5 – 10 year old red alder in a riparian area.

TABLE C-2
SPECIAL-STATUS PLANTS WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within the Project Area
Mammals (cont.)			
Pink sand-verbena *Abronia umbellata* var. *breviflora*	--/--/1B.1	Coastal dunes. Perennial herb. Blooms June through October. El. 0 -10 meters (0 – 33 feet).	**Unlikely.** Suitable dune habitat is adjacent to the project alignment, and 2010 occurrence near Redwood Creek Beach. Project alignment will not impact coastal dune habitat.
Bald Mountain milk-vetch *Astragalus umbraticus*	--/--/2B.3	Cismontane woodland, lower montane woodland, and sometimes roadsides. Perennial herb. Blooms May through August. El. 150 – 1250 meters (492 – 4101 feet).	**High.** A 2016 known population occurs along Bald Hills Road, 0.8 miles southwest of French Camp. 55 individual plants were observed along the road in five groups.
Thurber's reed grass *Calamagrostis crassiglumis*	--/--/2B.1	Coastal scrub (mesic), marshes and swamps (freshwater). Perennial rhizomatous herb. Blooms May through August. El. 10 - 60 meters (33 - 197 feet).	**Unlikely.** Closest known population in Prairie Creek Redwoods State Park located 3.7 miles north of the project alignment. Project alignment will not impact marsh or mesic scrub habitat.
Seaside bittercress *Cardamine angulata*	--/--/2B.1	Wet areas, streambanks, lower montane coniferous forest, north coast coniferous forest. Perennial herb. Blooms from (January) March through July. El. 25 - 915 meters (82 - 3002 feet).	**Unlikely.** Population located within one quarter mile of Redwood Creek. Suitable wet streambank habitat located in the project alignment near Prairie Creek and Redwood Creek but alignment will not impact these habitat areas.
Northern clustered sedge *Carex arcta*	--/--/2B.2	Bogs and fens, north coast coniferous forest (mesic). Perennial herb. Blooms June through September. El. 60 - 1400 meters (197 – 4593 feet).	**Unlikely.** Limited distribution. The closest record is located 0.4 miles to the south of the project alignment, from 1934. Project alignment will not impact bogs or fens.
Lagoon sedge *Carex lenticularis* var. *limnophila*	--/--/2B.2	Bogs and fens, marshes and swamps, north coast coniferous forest, shores, beaches (often gravelly). Perennial herb. Blooms June through August. El. 0 – 6 meters (0 - 20 feet).	**Unlikely.** Limited distribution. Identified along the shoreline at Big Lagoon and Humboldt Lagoons State Park in historical records. Project alignment will not impact bogs, fens, or shoreline areas.
Bristle-stalked sedge *Carex leptalea*	--/--/2B.2	Bogs and fens, meadows and seeps (mesic), and marshes and swamps. Perennial rhizomatous herb. Blooms March through July. El. 0 – 700 meters (0 - 2297 feet).	**Moderate.** Limited distribution. Five records in the proximity of Segment 5, closest located to the north of where LP Mill Road crosses Mill Creek from 2011. The species may form mats in depressions and skid trails.
Lyngbye's sedge *Carex lyngbyei*	--/--/2B.2	Marshes and swamps (brackish or freshwater). Perennial rhizomatous herb. Blooms April through August. El. 0 – 10 meters (0 - 33 feet).	**Unlikely.** The closest two occurrence records are located more than one half mile from the project alignment. The closest is an historical record at the mouth of Little River in Little River State Park. The project alignment will not impact marsh or swamp habitat.
Northern meadow sedge *Carex praticola*	--/--/2B.2	Meadows and seeps (mesic). Perennial herb. Blooms May through July. El. 0 – 3200 meters (0 – 10,498 feet).	**Unlikely.** One potential CNDDB occurrence in Segment 4 from 1936. Project alignment will not impact meadows or seeps.

TABLE C-2 (CONTINUED)
SPECIAL-STATUS PLANTS WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within the Project Area
Mammals (cont.)			
Deceiving sedge *Carex saliniformis*	--/--/1B.2	Mesic, coastal prairie, coastal scrub, meadows and seeps, and marshes and swamps (coastal salt). Perennial rhizomatous herb. Blooms June (July). El. 3 – 230 meters (10 - 755 feet).	**Unlikely.** Limited distribution. Closest record is 100 feet from Segment 5A at Humboldt Lagoons State Park from 2921. Project alignment will not impact coastal prairie, mesic scrub or marsh habitat.
Green yellow sedge *Carex viridula* ssp.*viridula*	--/--/2B.3	Bogs and fens, marshes and swamps (freshwater), north coast coniferous forest (mesic). Perennial herb. Blooms July (June) through September (November). El. 0 – 1600 meters (0 - 5249 feet).	**Unlikely.** Limited distribution. Two occurrences within a quarter mile of Segment 5, one along the edge of the bog at Big Lagoon from 2014, and a second occurrence record at Humboldt Lagoons State Park from 1987. Project alignment will not impact bog, fen or marsh habitat.
Humboldt Bay owl's-clover *Castilleja ambigua* var. *humboldtiensis*	--/--/1B.2	Marshes and swamps (coastal salt). Annual herb (hemiparasitic). Blooms April through August. El. 0 – 3 meters (0 - 10 feet).	**Unlikely.** One CNDDB occurrence overlaps Segment 5 from 1927 near Big Lagoon Marsh. Project alignment will not impact coastal swamp or marsh habitat.
Oregon coast paintbrush *Castilleja litoralis*	--/--/2B.2	Sandy in coastal bluff scrub, coastal dunes, and coastal scrub. Perennial herb (hemiparasitic). Blooms in June. El. 15 - 100 meters (49 – 328 feet).	**Unlikely.** Numerous occurrence records, most recently 2014, are located along the coast in the vicinity of the project area and segment 5. Project alignment will not impact coastal scrub.
Mendocino Coast paintbrush *Castilleja mendocinensis*	--/--/1B.2	Coastal bluff scrub, closed-cone coniferous forest, coastal dunes, coastal prairie, and coastal scrub. Perennial herb (hemiparasitic). Blooms in April through August. El. 0 - 160 meters (0 – 525 feet).	**Unlikely.** The closest occurrence is located more than one half mile from the project alignment at Patrick's Point State Park. Project alignment will not impact coastal scrub or dunes.
Naked flag moss *Discelium nudum*	--/--/2B.2	Coastal bluff scrub (soil, on clay banks). Ephemeral moss. El. 10 - 50 meters (33 – 164 feet).	**Unlikely.** Limited distribution. The closest record is near Segment 5 at Patrick's Point State Park. Project alignment will not impact coastal scrub.
Black crowberry *Empetrum nigrum*	--/--/2B.2	Coastal bluff scrub and coastal prairie. Perennial evergreen shrub. Blooms in April through June. El. 10 - 200 meters (33 – 656 feet).	**Unlikely.** Limited distribution. The closest record is a half mile from Segment 5 from 1979 at Trinidad State Park. Project alignment will not impact coastal scrub.
Waldo daisy *Erigeron bloomeri* var. *nudatus*	--/--/2B.3	Serpentinite soil in lower and upper montane coniferous forest. Perennial herb. Blooms in June through July. El. 600 - 2300 meters (1969 – 7546 feet).	**Unlikely.** Species' elevation range is outside of the project elevation. The closest record is in Segment 5, 2 miles north of Trinidad near White Rock from 1937.
Menzies' wallflower *Erysimum menziesii*	FE/CE/1B.1	Coastal dunes. Perennial herb. Blooms in March through September. El. 0 - 35 meters (0 – 115 feet).	**Unlikely.** The closest occurrence record is located south of McKinleyville along the coast, 6.7 miles south of the project alignment. Project alignment will not impact coastal dunes.

TABLE C-2 (CONTINUED)
SPECIAL-STATUS PLANTS WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within the Project Area
Mammals (cont.)			
Giant fawn lily *Erythronium oregonum*	--/--/2B.2	Sometimes serpentinite, rocky or openings in cismontane woodland, and meadows and seeps. Perennial herb. Blooms in March through June (July). El. 100 - 1150 meters (328 – 3773 feet).	**Unlikely.** The closest occurrence record is located more than one half mile of Segment 2, east of Miners Creek. The alignment will not impact suitable habitat for this species.
Coast fawn lily *Erythronium revolutum*	--/--/2B.2	Mesic and streambanks in bogs and fens, broadleaf upland forest, and north coast coniferous forest. Perennial bulbiferous herb. Blooms March through July (August). El. 0 – 1600 meters (0 - 5249 feet).	**Moderate.** Five occurrence records are located within one quarter mile of Segment 3, most recently from 2016, 69 individuals located adjacent to Bald Hills Rd. The alignment will impact roadside habitat in this area.
Minute pocket moss *Fissidens pauperculus*	--/--/1B.2	North coast coniferous forest with damp coastal soil. El. 10 - 1024 meters (feet).	**Unlikely.** The closest occurrence record is located 4.5 miles north of Segment 4 in Prairie Creek State Park.
Pacific gilia *Gilia capitata* ssp. *pacifica*	--/--/1B.2	Coastal bluff scrub, chaparral (openings), coastal prairie, and valley and foothill grasslands. Annual herb. Blooms in April through August. El. 5 - 1665 meters (16 – 5463 feet).	**Unlikely.** The closest occurrence records are located more than one half mile from Segments 3 and 5. Project alignment will not impact coastal scrub.
Dark-eyed gilia *Gilia millefoliata*	--/--/1B.2	Coastal dunes. Annual herb. Blooms April through July. El. 2 - 30 meters (7 to 98 feet).	**Unlikely.** Two occurrence records from the 1960s are within half mile of the project alignment along Segment 5. Project alignment will not impact coastal dunes.
California globe mallow *Iliamna latibracteata*	--/--/1B.2	Often found in burned areas in chaparral (montane), lower montane coniferous forest, north coast coniferous forest (mesic), and riparian scrub (streambanks). Perennial herb. Blooms in June through August. El. 60 - 2000 meters (197 – 6562 feet).	**Moderate.** Two occurrence records are located along Segment 3. The latest occurrence is from 2011 and included 2 individuals located adjacent to Bald Hills Rd at Coyote Peak Rd. The alignment will traverse roadside habitat in this area.
Dudley's rush *Juncus dudleyi*	--/--/2B.3	Lower montane coniferous forest (mesic). Perennial herb. Blooms July through August. El. 455 - 2000 meters (1493 to 6562 feet).	**Unlikely.** Limited distribution. The closest record overlaps with Segment 1 in the town of Orleans in 1944. Project alignment will be limited to disturbed habitat in this area.
Sierra rush *Juncus nevadensis* var. *inventus*	--/--/2B.2	Bogs and fens. Perennial rhizomatous herb. Blooms July through November. El. 0 – 10 meters (0 - 33 feet).	**Unlikely.** Only known from 1 occurrence record located within half mile of Segment 5 from 2007 in Big Lagoon County Park. Project alignment will not impact bogs and fens.
Small groundcone *Kopsiopsis hookeri*	--/--/2B.3	North coast coniferous forest. Perennial rhizomatous herb (parasitic). Blooms April through August. El. 90 - 885 meters (295 - 2904 feet).	**Unlikely.** No occurrence records are located within one half mile of Segments 1, 2 or 3. Project alignment will avoid coniferous forest in this area.
Seaside pea *Lathyrus japonicus*	--/--/2B.1	Coastal dunes. Perennial rhizomatous herb. Blooms May through August. El. 1 - 30 meters (3 - 98 feet).	**Unlikely.** Known from 9 occurrence records, three of which are located within one quarter mile of Segment 5. The latest is from 2007 in Redwood National Park. Project alignment will not impact coastal dunes.

TABLE C-2 (CONTINUED)
SPECIAL-STATUS PLANTS WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within the Project Area
Mammals (cont.)			
Marsh pea *Lathyrus palustris*	--/--/2B.2	Bogs and fens, coastal prairie, coastal scrub, lower montane coniferous forest, north coast coniferous forest, and marshes and swamps. Perennial herb. Blooms March through August. El. 0 – 100 meters (0 - 328 feet).	**Unlikely.** Limited distribution; one occurrence is located within quarter mile of Segment 5 alignment. This occurrence is from 2005 to 2011 near Big Lagoon. Project alignment will not impact coastal scrub or bogs and fens.
Beach layia *Layia carnosa*	FE/CE/1B.1	Coastal dunes and coastal scrub (sandy). Annual herb. Blooms March through July. El. 0 - 60 meters (0 - 197 feet).	**Unlikely.** One occurrence record is located near Segment 5, 1210 individuals in 2011 along Freshwater Lagoon in Redwood State Park. Project alignment will not impact coastal dunes or scrub.
Heckner's lewisia *Lewisia cotyledon* var. *heckneri*	--/--/1B.2	Lower montane coniferous forest (rocky). Perennial herb. Blooms May through July. El. 225 – 2100 meters (738 - 6890 feet).	**Unlikely.** One record overlap Segments 1 and 2. from 1942. Project alignment will avoid lower montane coniferous forest in these areas.
Western lily *Lilium occidentale*	FE/CE/1B.2	Bogs and fens, coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps (freshwater), and north coast coniferous forest (openings). Perennial bulbiferous herb. Blooms June through July (August). El. 2 – 185 meters (7 - 607 feet).	**Unlikely.** Endemic to coastal scrub habitats of California and Oregon where it is now very rare due to overcollecting. Recorded near Clam Beach County Park near Segment 5.The project alignment will not impact coastal scrub.
Inundated bog club-moss *Lycopodiella inundata*	--/--/2B.2	Bogs and fens (coastal), marshes and swamps (lake margins), and lower montane coniferous forest (mesic). Perennial rhizomatous herb. Blooms June through September. El. 5 - 1000 meters (16 - 3281 feet).	**Unlikely.** Limited distribution. Recorded near Segment 5 adjacent to Clam Beach County Park. The project alignment will not impact bogs, fens or marshes.
Wood nymph *Moneses uniflora*	--/--/2B.2	Broadleafed upland forest and north coast coniferous forest. Perennial rhizomatous herb. Blooms May through August. El. 100 – 1100 meters (328 - 3609 feet).	**Unlikely.** Found in dense forest, often near moss or rotting wood. The closest occurrence record is 2 miles to the north in Redwood National Park and Prairie Creek Redwood National Park.
Ghost-pipe *Monotropa uniflora*	--/--/2B.2	Broadleafed upland forest and north coast coniferous forest. Perennial herb (achlorophyllous). Blooms June through August (September). El. 10 – 550 meters (33 - 1805 feet).	**Unlikely.** Three occurrence records along Segment 4 on Bald Hills Rd, in 2007 and 2009 in Redwood National Park in old growth redwood forest. Rarely occurs in dense forest habitat; unlikely to be present along roadsides.
Howell's montia *Montia howellii*	--/--/2B.2	Vernally mesic, sometimes roadsides in meadows and seeps, vernal pools, and north coast coniferous forest. Annual herb. Blooms March (February) through May. El. 0 – 835 meters (0 - 2740 feet).	**Moderate.** Two occurrence records from Segments 3 and 4, one from 2016 on Bald Hills Rd just past the gate at Three Gates Rd. 1376 individuals were observed in 2016 on an infrequently used road bed. Project alignment may impact roadside habitat in this area.

TABLE C-2 (CONTINUED)
SPECIAL-STATUS PLANTS WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within the Project Area
Mammals (cont.)			
Wolf's evening-primrose *Oenothera wolfii*	--/--/1B.1	Sandy, usually mesic in coastal bluff scrub, coastal dunes, coastal prairie, and lower montane coniferous forest. Perennial herb. Blooms in May through October. El. 3 - 800 meters (10 – 2625 feet).	**Unlikely.** One occurrence record from Segment 5 from 2015 at Freshwater Lagoon Beach between lookout point and freshwater rocks, 566 individuals were observed. Additional occurrence record from Segment 1 from 1945. The project alignment will avoid impacts to coastal scrub and coniferous forest habitats.
Seacoast ragwort *Packera bolanderi* var. *bolanderi*	--/--/2B.2	Sometimes roadsides in coastal scrub and north coast coniferous forest. Perennial rhizomatous herb. Blooms May (January - April) through July (August). El. 30 – 650 meters (99 - 2133 feet).	**Unlikely.** Known occurrence records located 2.4 miles to the west of Segment 5 alignment along Little River. Project alignment will avoid coastal scrub habitat.
White-flowered rein orchid *Piperia candida*	--/--/1B.1	Sometimes serpentinite in broadleafed upland forest, lower montane coniferous forest, and north coast coniferous forest. Perennial herb. Blooms May (March) through September. El. 30 – 1310 meters (99 - 4298 feet).	**Unlikely.** One occurrence record is located within half mile of Segment 2 from 2004. The project alignment will avoid impacting serpentinite areas in forest.
Oregon polemonium *Polemonium carneum*	--/--/2B.2	Coastal prairie, coastal scrub, and lower montane coniferous forest. Perennial herb. Blooms April through September. El. 0 – 1830 meters (0 - 6004 feet).	**Unlikely.** Limited distribution. One occurrence record in Segment 5 near Big Lagoon from the early 1900's. The project alignment will not impact coastal scrub.
Tracy's romanzoffia *Romanzoffia tracyi*	--/--/2B.3	Rocky in coastal bluff scrub and coastal scrub. Perennial herb. Blooms March through May. El. 15 – 30 meters (49 - 98 feet).	**Unlikely.** Limited distribution. Four records in the vicinity for Segment 5, one from 1975 in bluffs 2 miles north of Trinidad. The project alignment will not impact coastal scrub.
Columbia yellow cress *Rorippa columbiae*	--/--/1B.2	Mesic areas in lower montane coniferous forest, meadows and seeps, playas, and vernal pools. Perennial rhizomatous herb. Blooms May through September. El. 1200 – 1800 meters (3937 - 8990 feet).	**Unlikely.** One occurrence record in Segment 1 near the town of Orleans from 1956. This records appears to be at the eastern extent of the species range and occurrence records. Project alignment will avoid mesic montane meadows and vernal pools.
Water bulrush *Schoenoplectus subterminalis*	--/--/2B.3	Bogs and fens and marshes and swamps (montane lake margins). Perennial rhizomatous herb. Blooms June through August (September). El. 750 - 2250 meters (2461 - 7382 feet).	**Unlikely.** The project alignment is outside the elevation range for this species. No occurrence records within one half mile; closest occurrence is 2 miles west of Segment 1. Project alignment will avoid impacts to bogs, fens, or marshes.
Siskiyou checkerbloom *Sidalcea malviflora* ssp. *patula*	--/--/1B.2	Often roadcuts in coastal bluff scrub, coastal prairie and north coast coniferous forest. Perennial rhizomatous herb. Blooms May through August. El. 15 – 880 meters (49 - 2887 feet).	**Moderate.** Two occurrence records in Segment 4. One occurrence in Redwood National Park in Gans Prairie, Bald Mountain off Bald Hills Rd, from 1927. The second record is from 2015: 108 individuals located half a mile north of Section 29 on Bald Hills Rd in grassland. This species could occur in roadside habitat on Segment 4.

TABLE C-2 (CONTINUED)
SPECIAL-STATUS PLANTS WITH POTENTIAL TO OCCUR IN THE PROJECT AREA

Species	Listing Status Fed Listed/State Listed/Other*	General Habitat	Potential to Occur within the Project Area
Mammals (cont.)			
Coast checkerbloom *Sidalcea oregana* ssp. *eximia*	--/--/1B.2	Lower montane coniferous forest, meadows and seeps and north coast coniferous forest. Perennial herb. Blooms June through August. El. 5 – 1340 meters (16 - 4396 feet).	**Unlikely.** There are no occurrence records located in the half mile buffer of the project alignment. The closest record is located 1.2 miles to the north of Segment 1, and reported 100 individuals in 2006.
Scouler's catchfly *Silene scouleri* ssp. *scouleri*	--/--/2B.2	Coastal bluff scrub, coastal prairie and valley and foothill grassland. Perennial herb. Blooms June (March-May) through August (September). El. 0 – 600 meters (0 - 1969 feet).	**Unlikely.** No known occurrence records for this species. Project alignment will not impact coastal scrub.
Robust false lupine *Thermopsis robusta*	--/--/1B.2	Broadleafed upland forest and north coast coniferous forest. Perennial rhizomatous herb. Blooms May through July. El. 150 – 1500 meters (492 - 4921 feet).	**Unlikely.** Several known occurrences located in the vicinity of Segments 1 and 2. One occurrence record overlaps the project alignment, near the town of Orleans from 1931. Project alignment will not impact coniferous forest in this area.
Cylindrical trichodon *Trichodon cylindricus*	--/--/2B.2	Sandy, exposed soil and road banks in upper montane coniferous forest, meadows and seeps and broadleafed upland forest. Moss. El. 50 – 2002 meters (164 - 6568 feet).	**Unlikely.** Limited distribution. Two occurrence records near Segment 5 from 1983. One occurrence is located at Dry Lagoon State Park, the other just south of Patrick's Point near Scotty Point.
Alpine marsh violet *Viola palustris*	--/--/2B.2	Bogs and fens (coastal) and coastal scrub (mesic). Perennial rhizomatous herb. Blooms March through August. El. 0 - 150 meters (0 - 492 feet).	**Unlikely.** Limited distribution. One occurrence record near Segment 5 southwest of Big Lagoon from1974, in a bog/ marshy area. Project alignment will not impact coastal scrub or bogs and fens.

NOTES:

CNDDB search of USGS quads Orleans (4112335), Weitchpec (4112326), Hopkins Butte (4112325), Fish Lake (4112336), Johnsons (4112337), French Camp Ridge (4112327), Bald Hills (4112328), Orick (4112431), Holter Ridge (4112338), Rodgers Peak (4112421), Crannell (4112411), Trinidad (4112412), Arcata North (4012481), and Fern Canyon (4112441).

***Status Codes:**
USFWS (U.S. Fish and Wildlife Service)
FE = Listed as Endangered by the Federal Government
FT = Listed as Threatened by the Federal Government.
FC = Listed as Candidate
CDFW (California Department of Fish and Wildlife)
CE = Listed as Endangered by the State of California
CT = Listed as Threatened by the State of California
FP = Fully Protected in the State of California
SSC= State Species of Special Concern
BCC=USFWS Bird of Conservation Concern

California Native Plant Society
List 1A=Plants presumed extinct in California
List 1B=Plants rare, Threatened, or Endangered in California and elsewhere
List 2= Plants rare, Threatened, or Endangered in California but more common elsewhere
List 3= Plants about which more information is needed
List 4= Plants of limited distribution
An extension reflecting the level of threat to each species is appended to each rarity category as follows:
.1 – Seriously endangered in California
.2 – Fairly endangered in California
.3 – Not very endangered in California

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Appendix D
References

APPENDIX D
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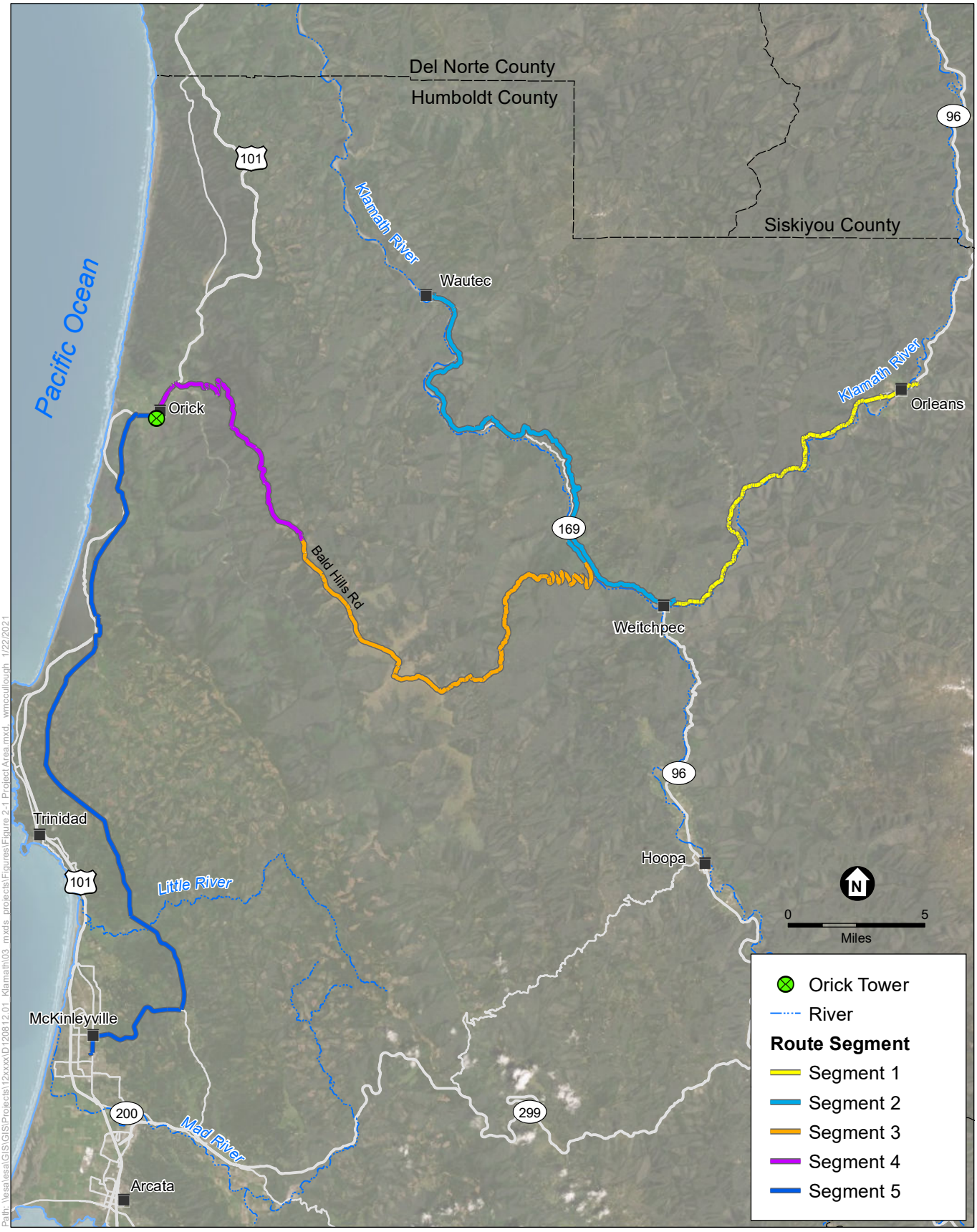
Appendix E
Figures



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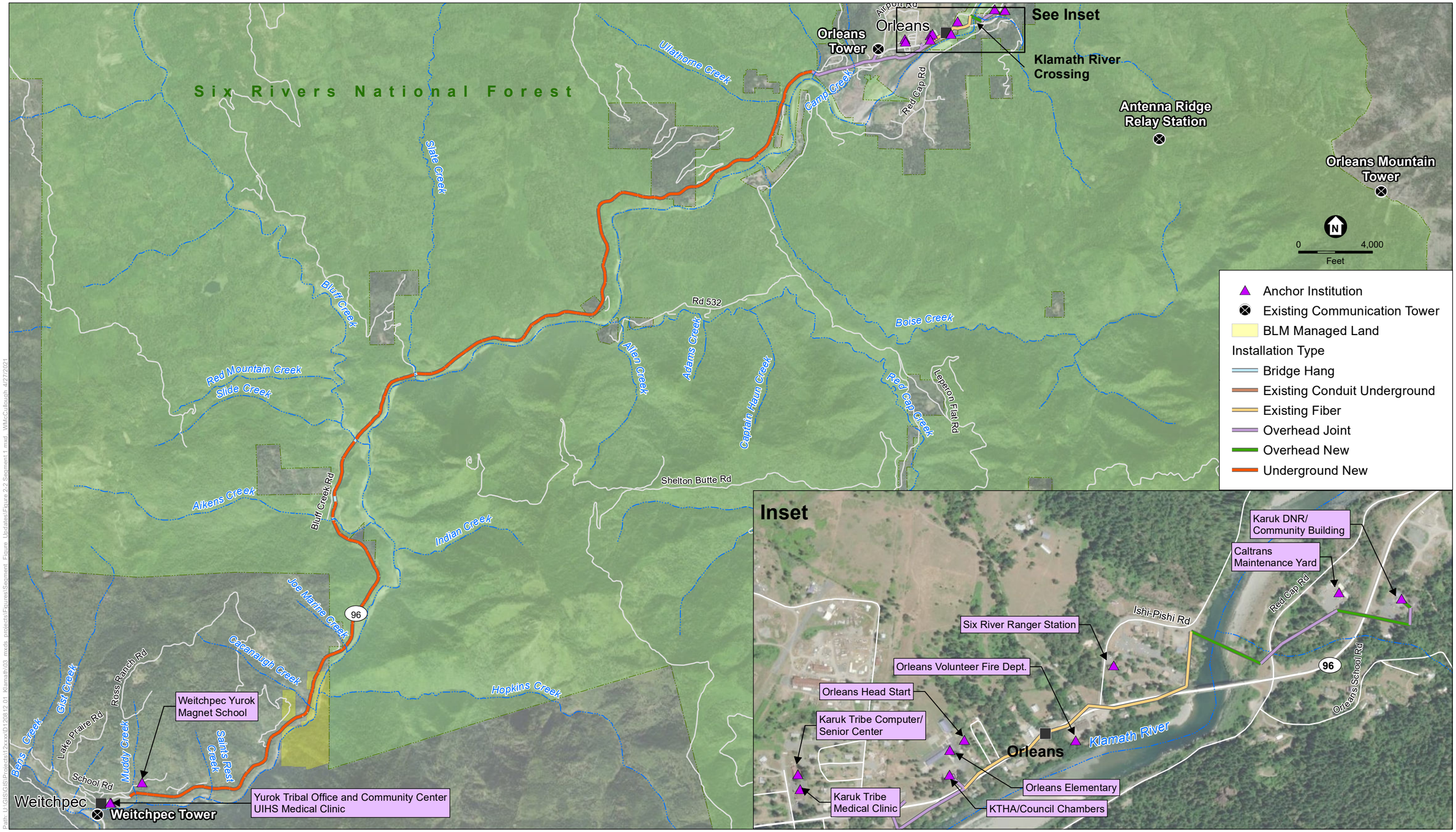
SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-1
Project Location

ESA

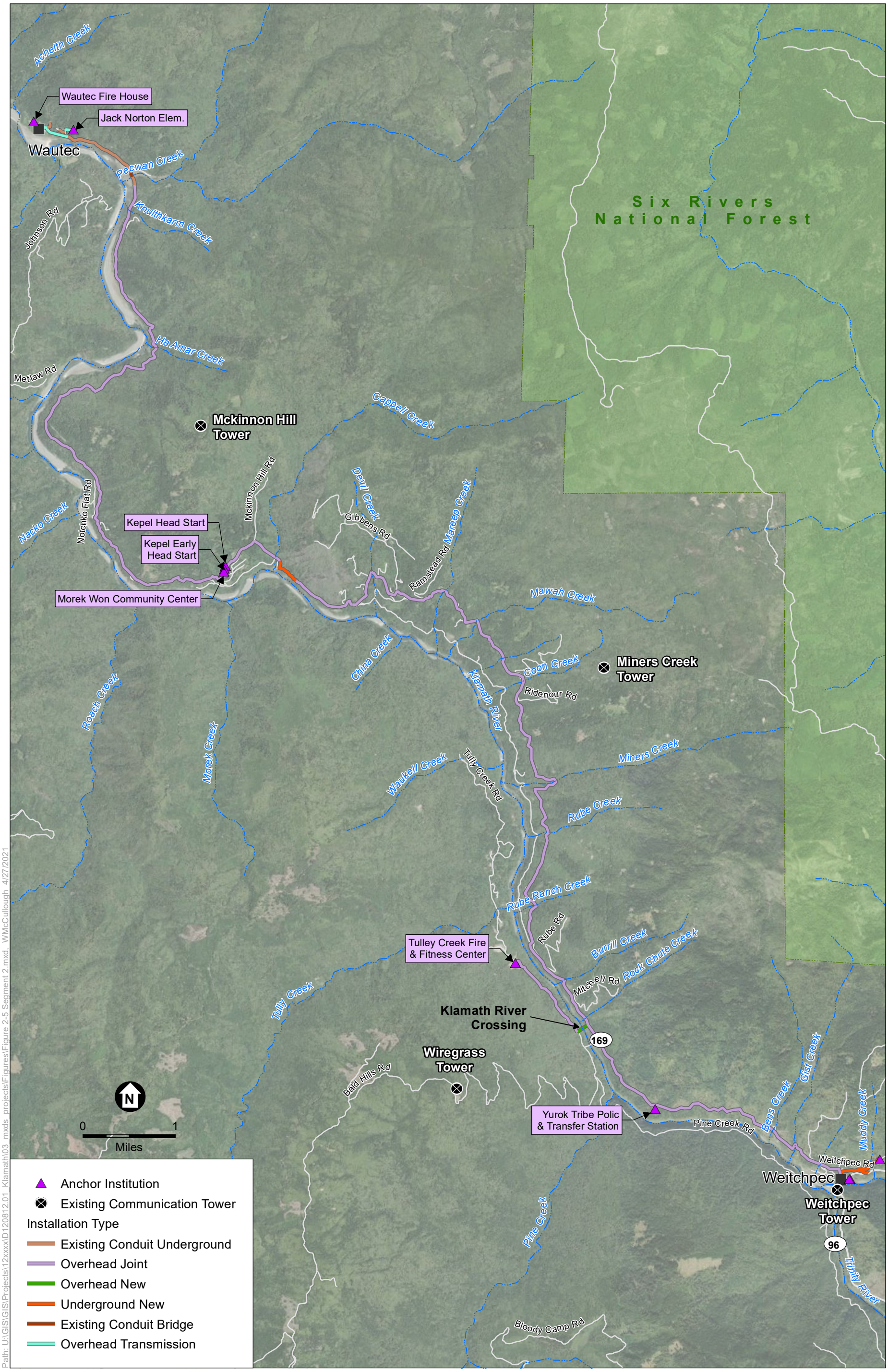


SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-2
Segment 1: Orleans to Weitchpec

ESA



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SOURCE: Karuk Tribe, 2020

ESA

Klamath River Rural Broadband Initiative

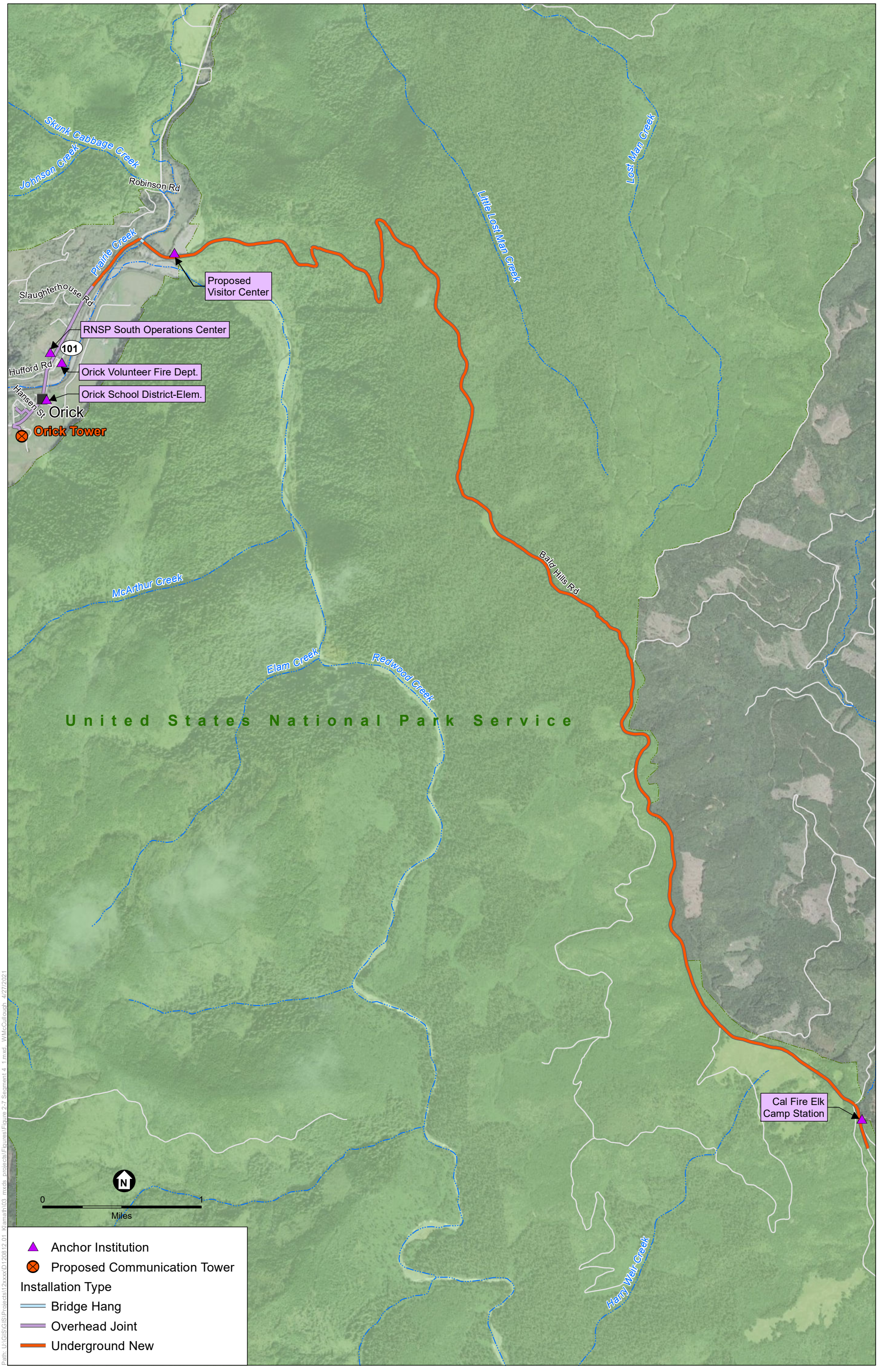
Figure 2-3
Segment 2: Weitchpec to Wautec

SOURCE: Karuk Tribe, 2018

Klamath River Rural Broadband Initiative

Figure 2-4
Segment 3: Weitchpec to Elk Camp

ESA

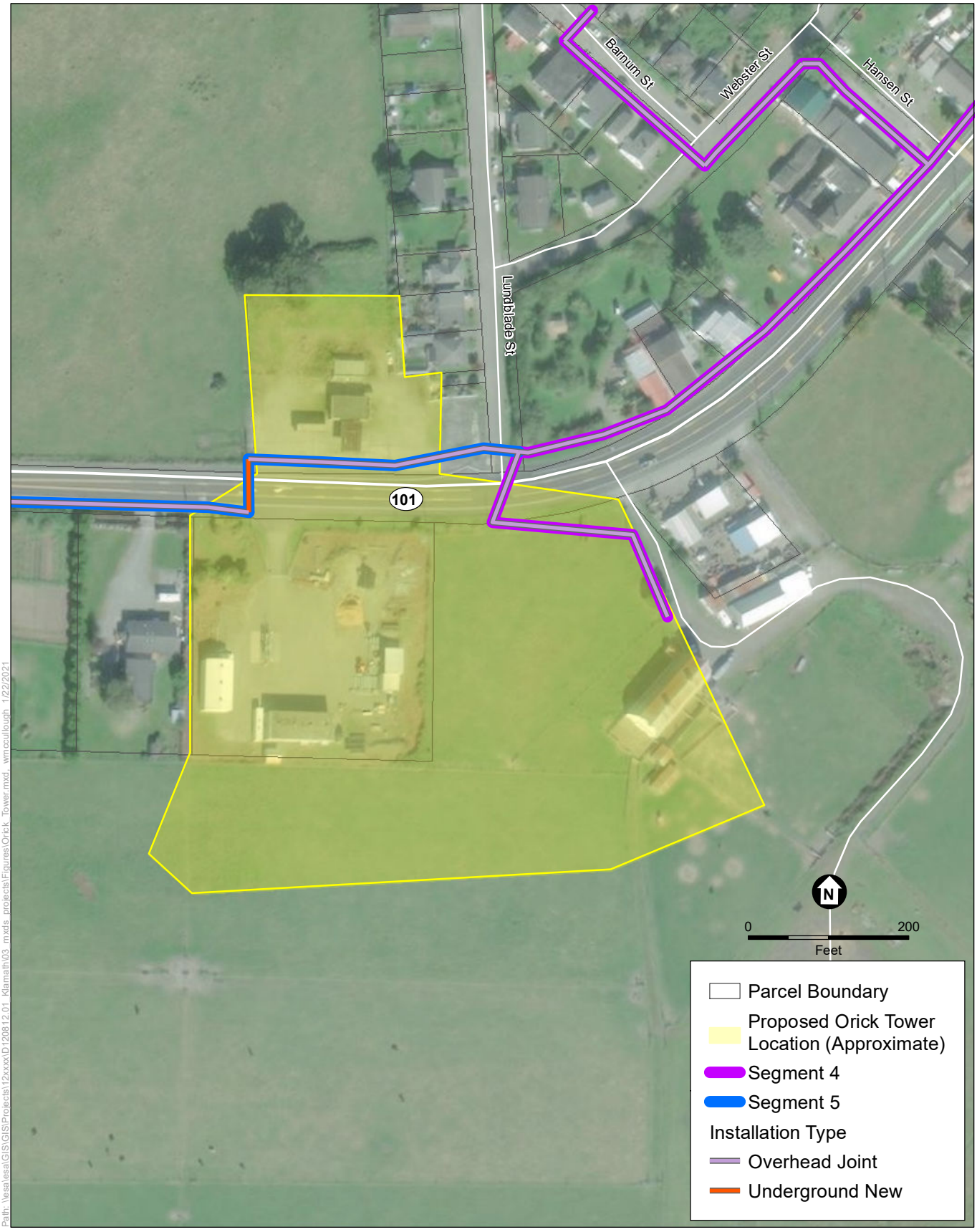


SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-5
Segment 4: Elk Camp to Orick

ESA



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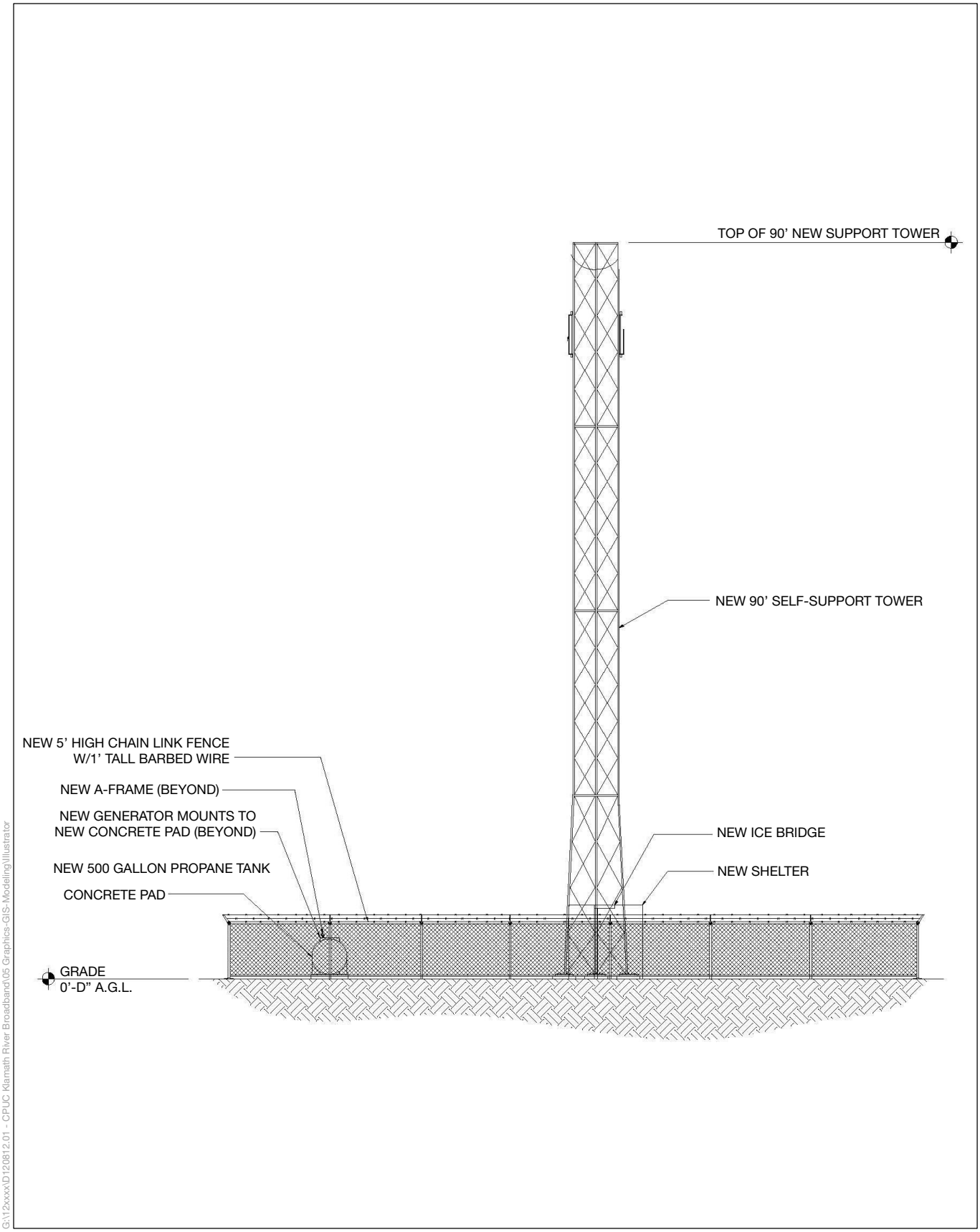
SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-6a
Orick Tower Location

ESA



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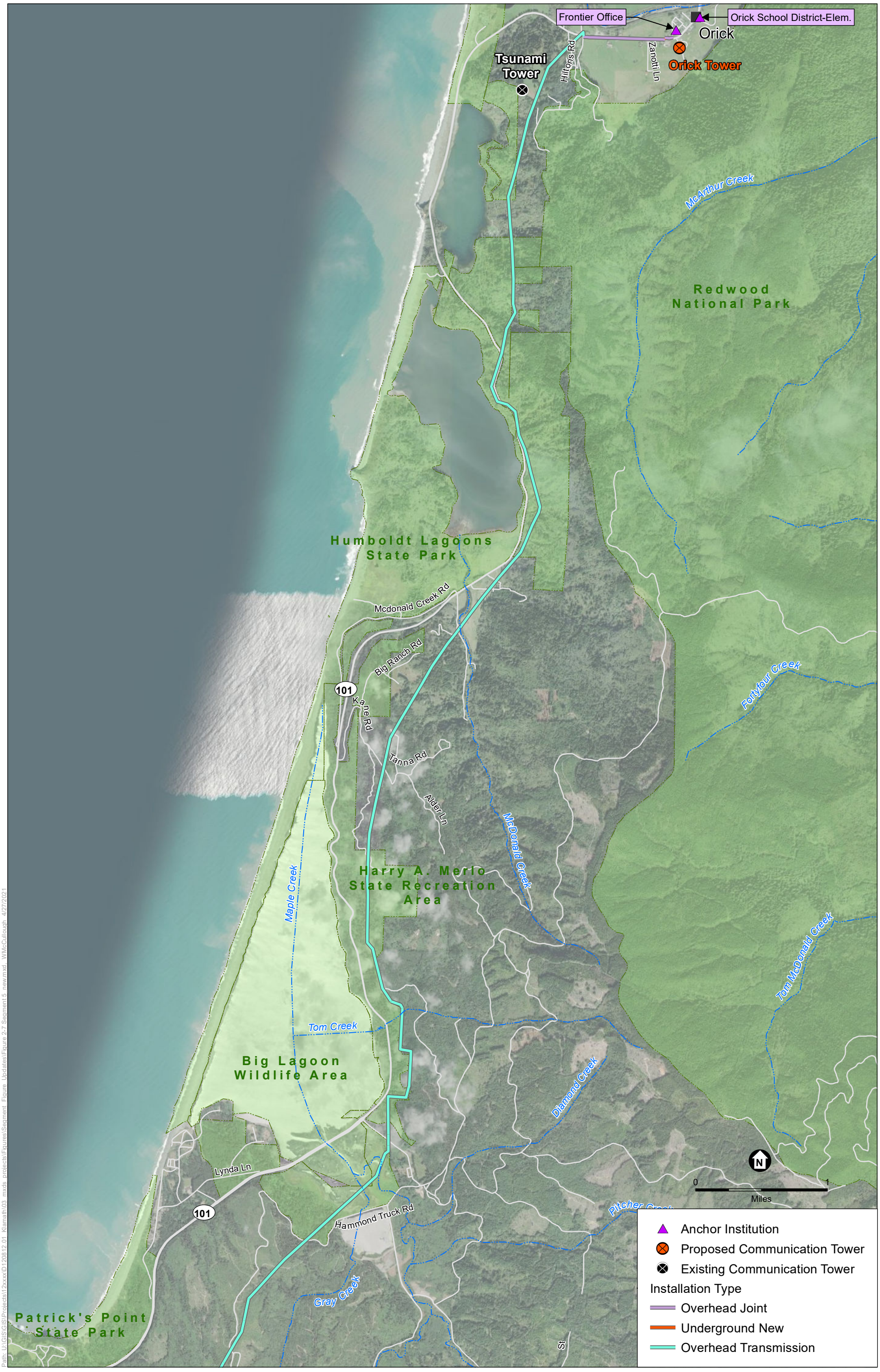
Klamath River Rural Broadband Initiative

SOURCE: Karuk Tribe, 2020

Figure 2-6b
Typical Tower Profile

ESA

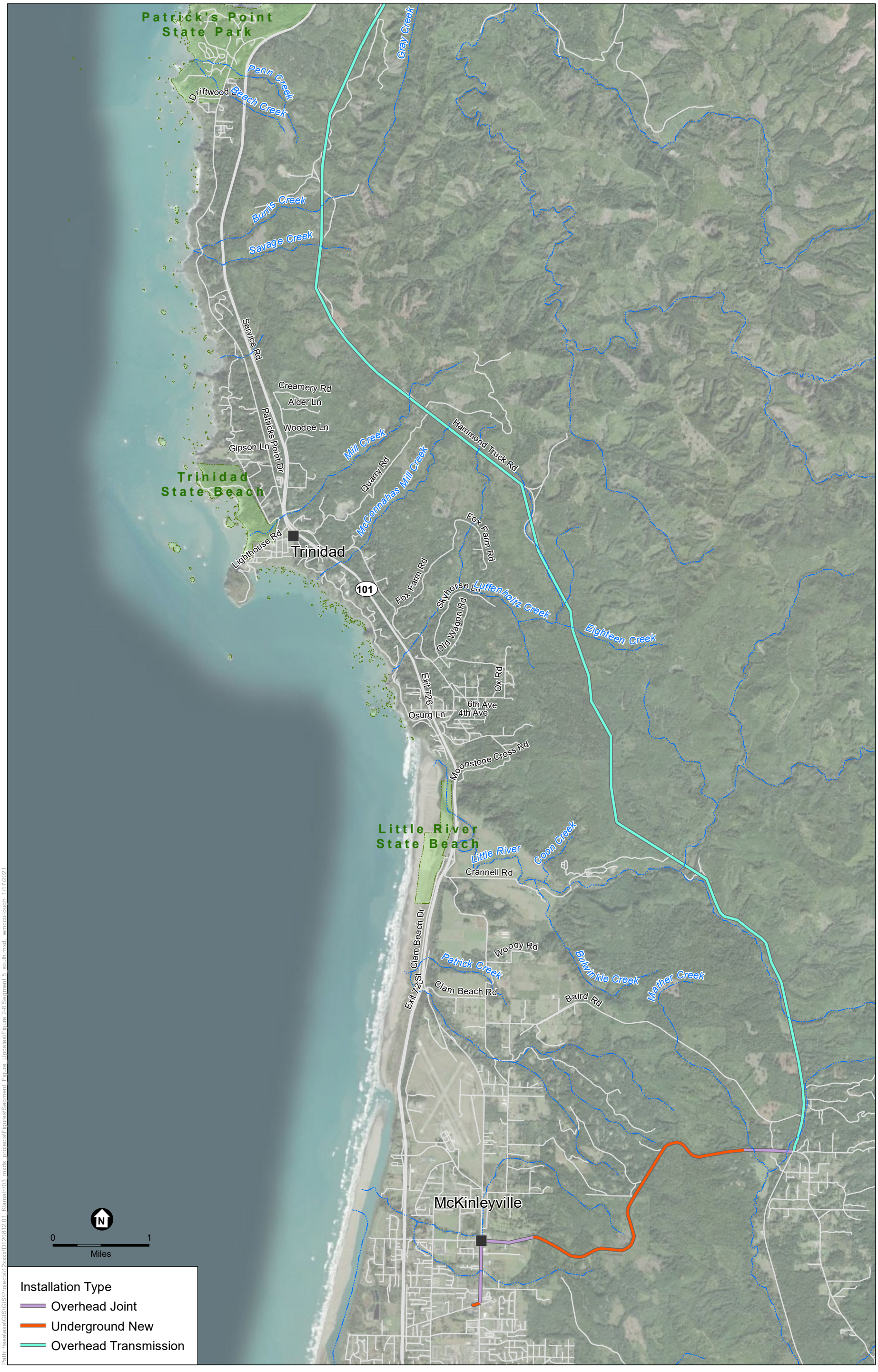


SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-7
Segment 5: Orick to McKinleyville (North)

ESA

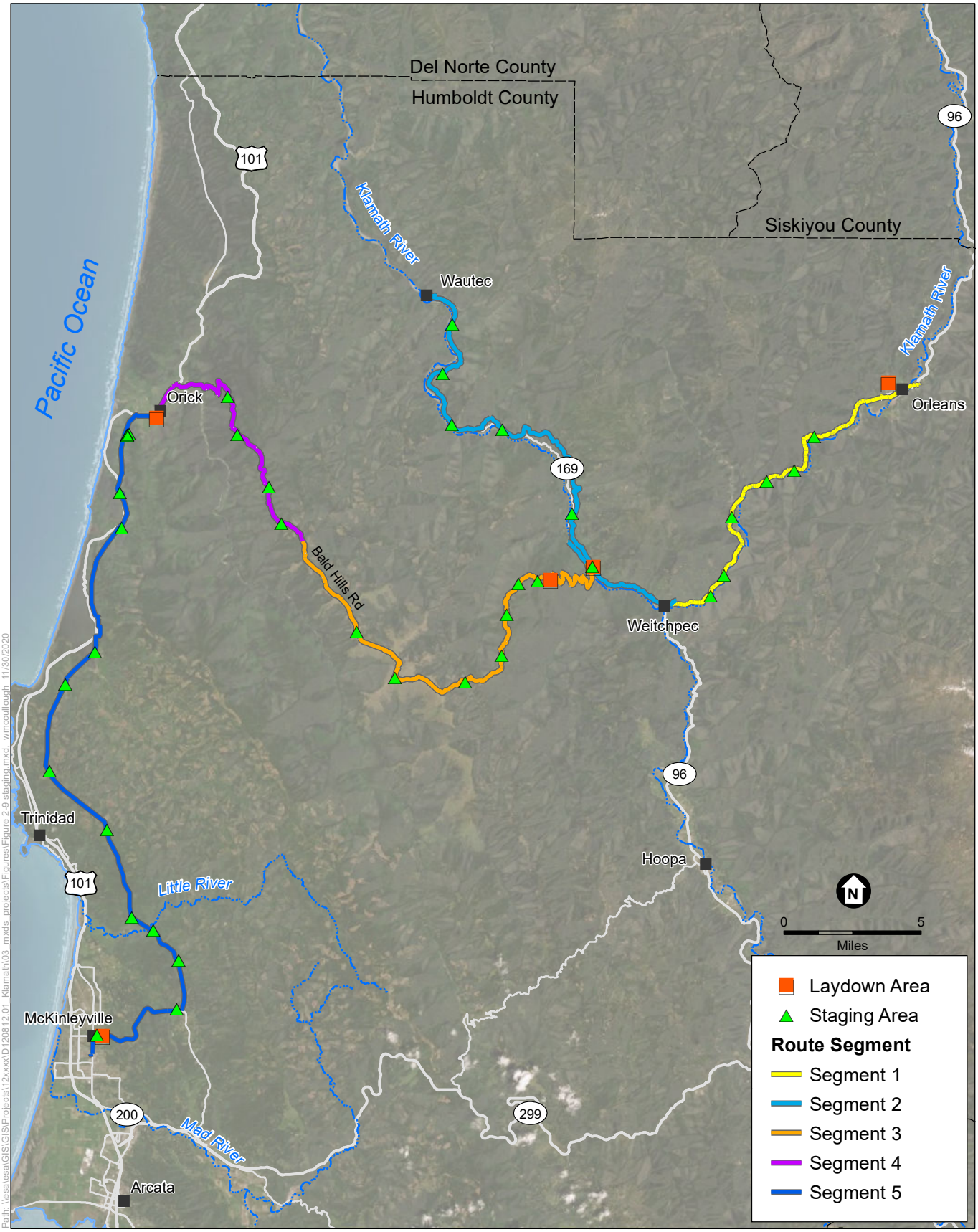


SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-8
Segment 5:
Orick to McKinleyville (South)

ESA

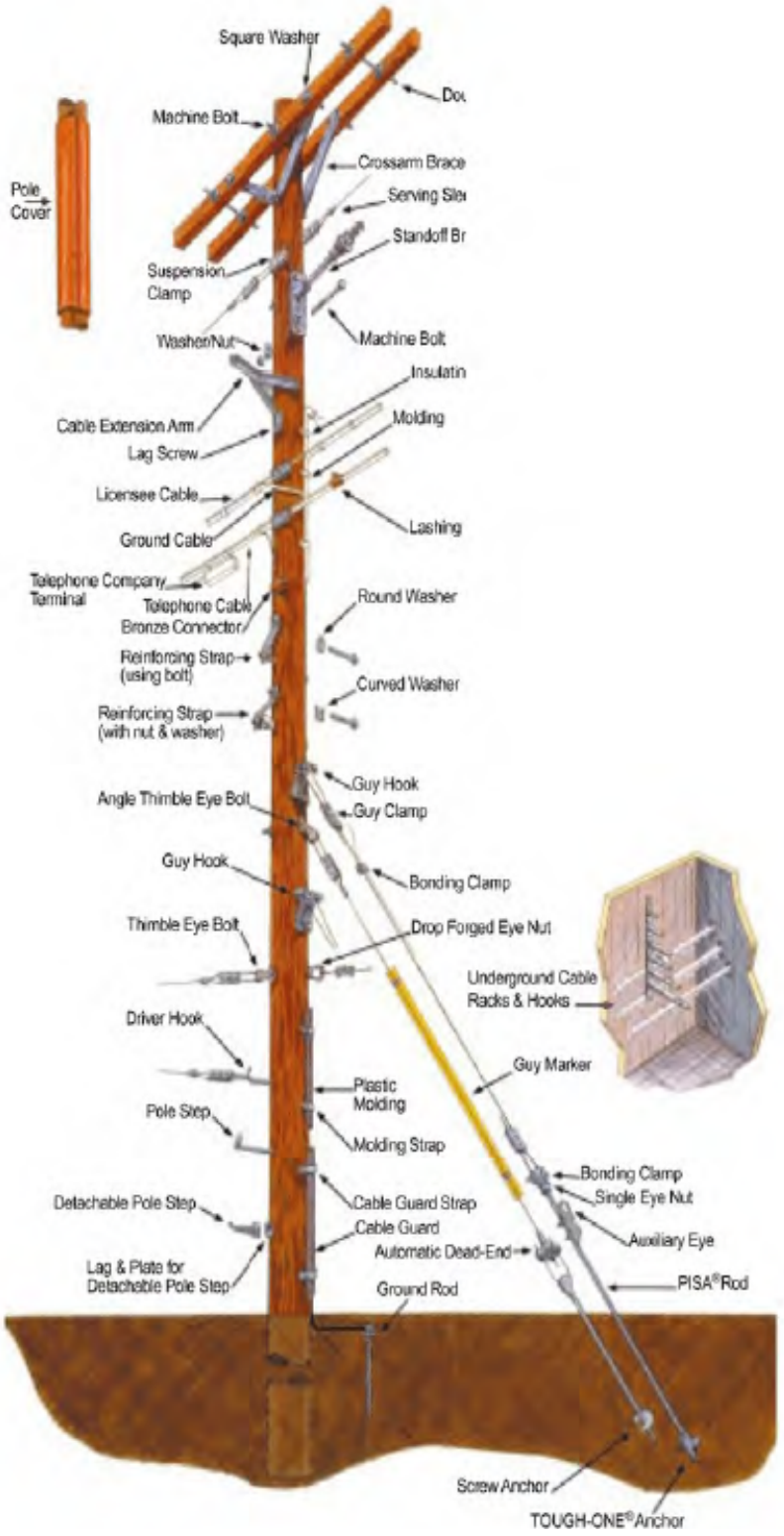


SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-9
Staging and Laydown Areas

ESA



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SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-10
Typical Overhead Installation

ESA

Pole Installation

Trenching Method

Saw Cut Installation

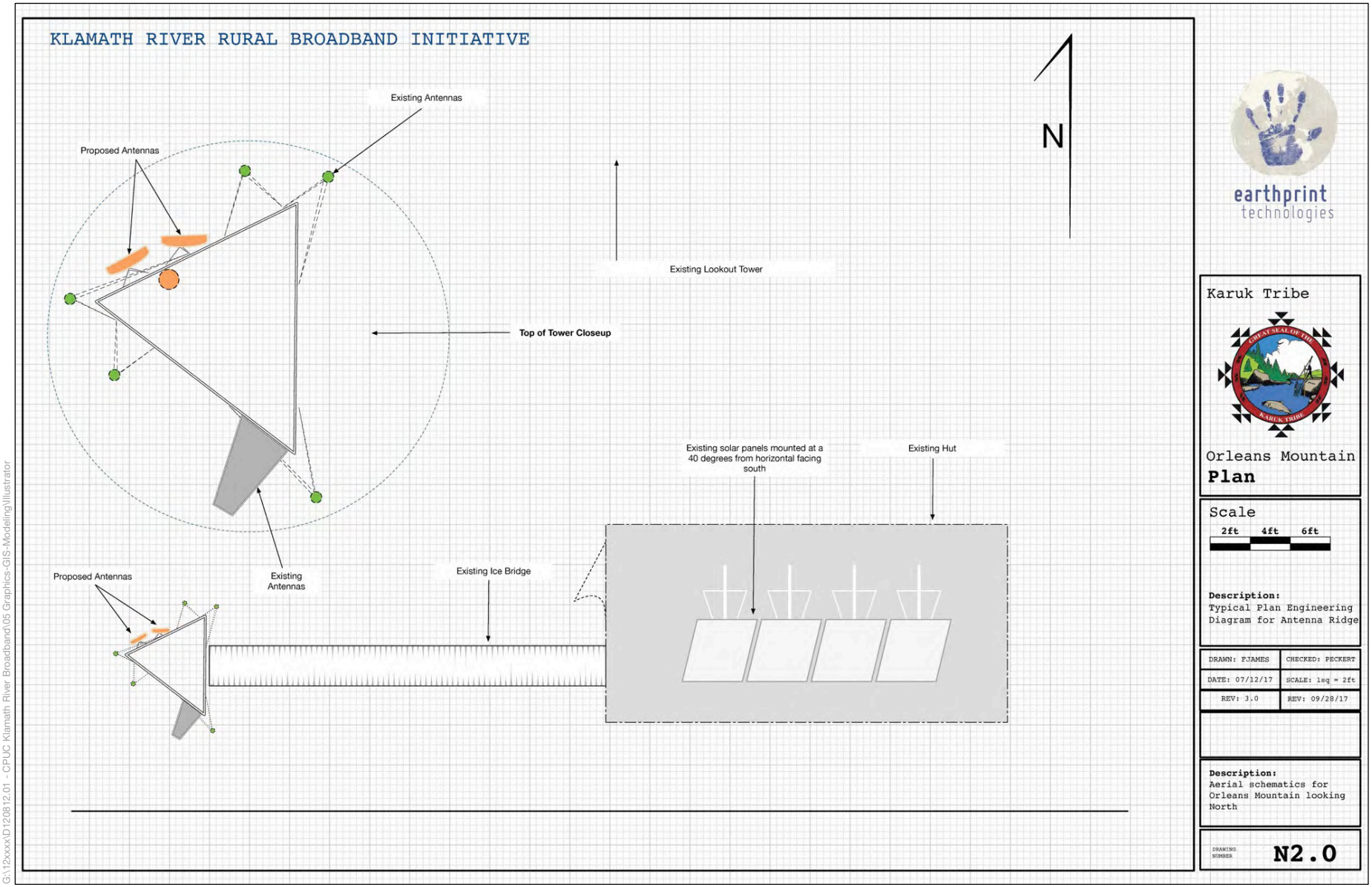
Bridge Hang Installation

Klamath River Rural Broadband Initiative

SOURCE: Karuk Tribe, 2020

Figure 2-11
Installation Methods

ESA

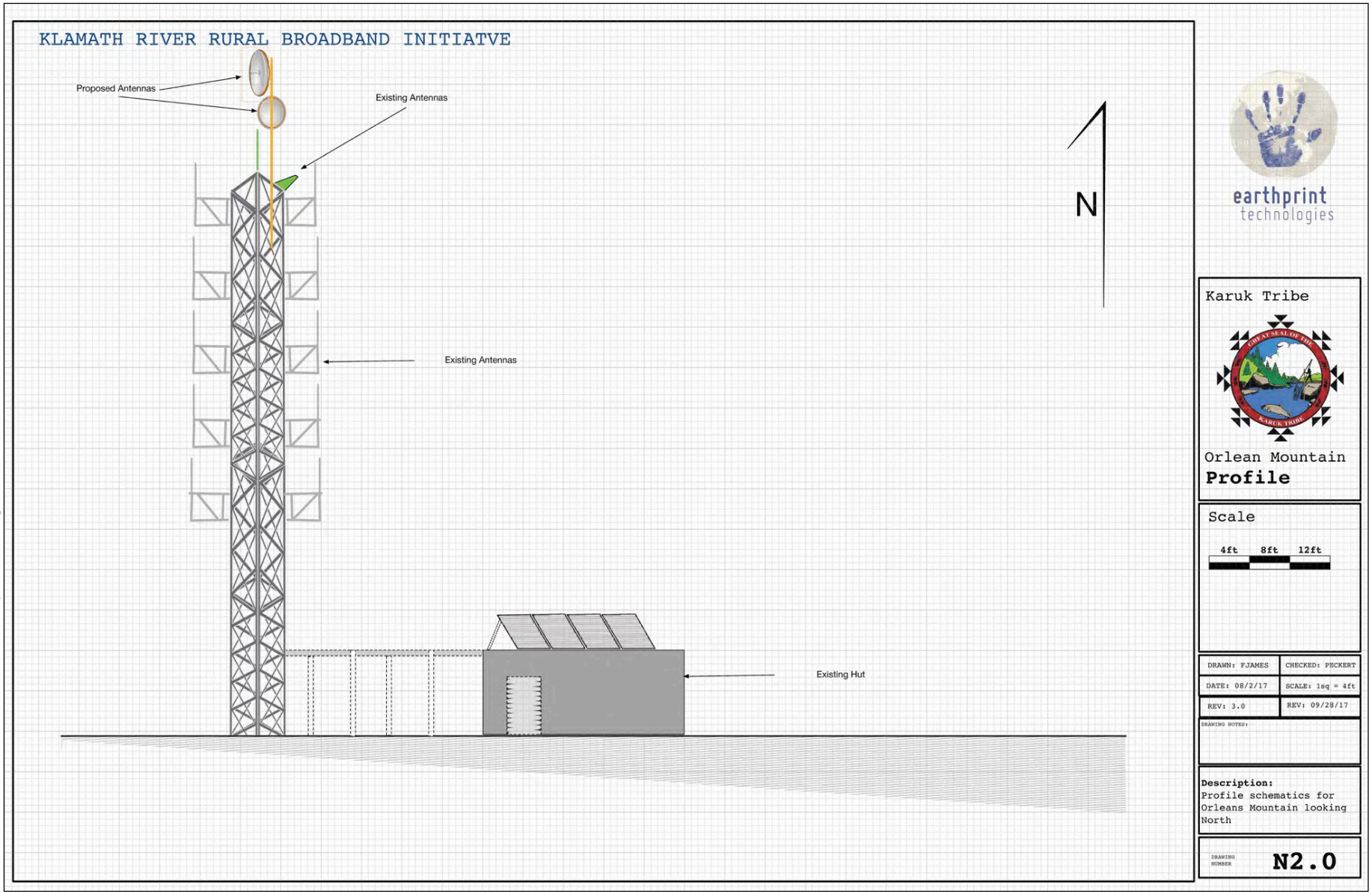


SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-12
Yurok Signal Connection, Orleans Mountain Plan

ESA



SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-13
Yurok Signal Connection, Orleans Mountain Profile

ESA

KLAMATH RIVER RURAL BROADBAND INITIATIVE

earthprint technologies

Karuk Tribe

Antenna Ridge
Aerial Photo

Scale N/A
2ft 4ft 6ft

Description:
Aerial photo for Antenna Ridge

DRAWN: FJAMES	CHECKED: PECKERT
DATE: 08/2/17	SCALE:
REV: 1.0	REV: 08/2/17

Drawing Notes: T

DRAWING NUMBER **N2.0**

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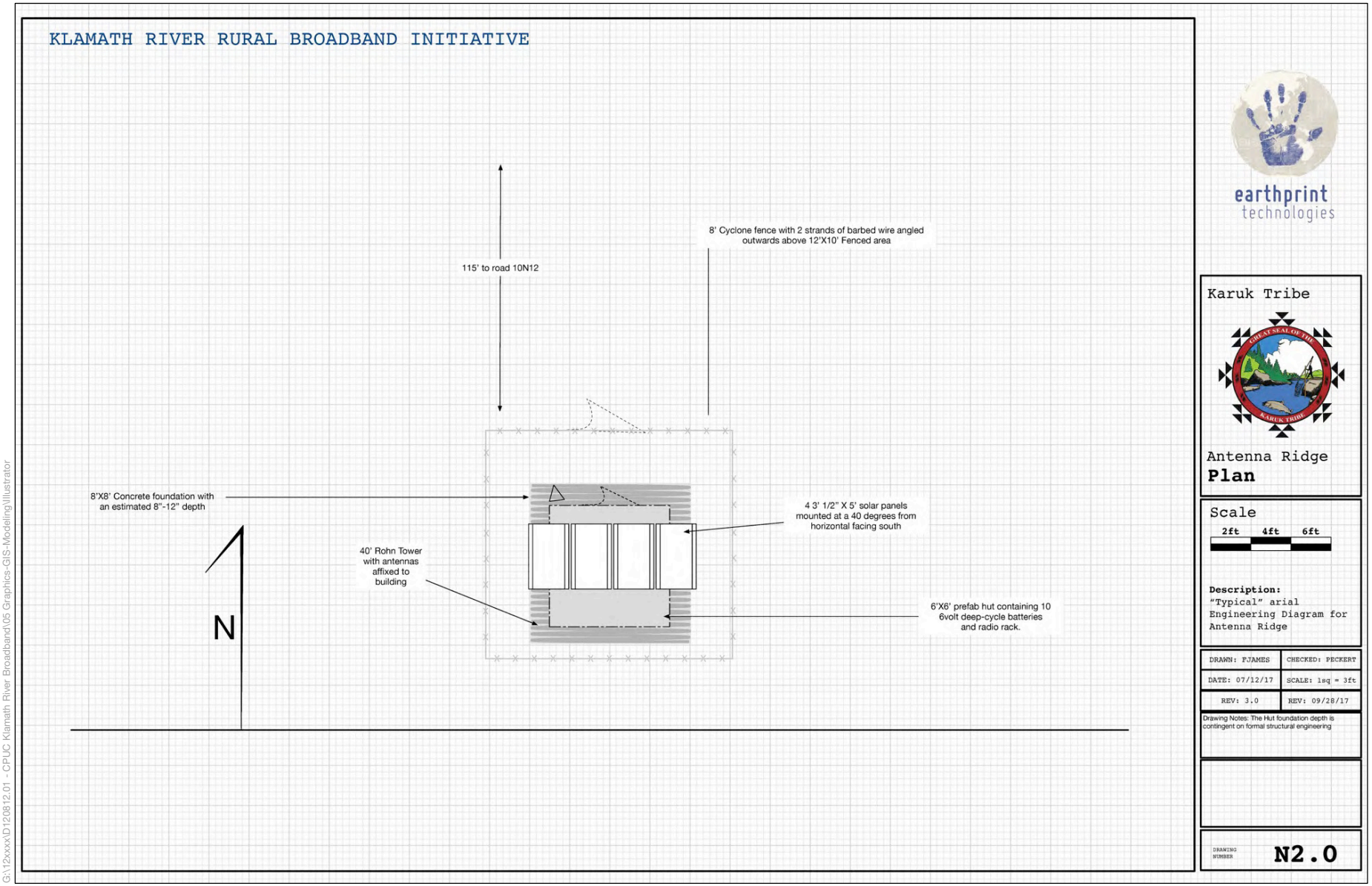
SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-14
Yurok Signal Connection, Antenna Ridge Aerial Photo

ESA



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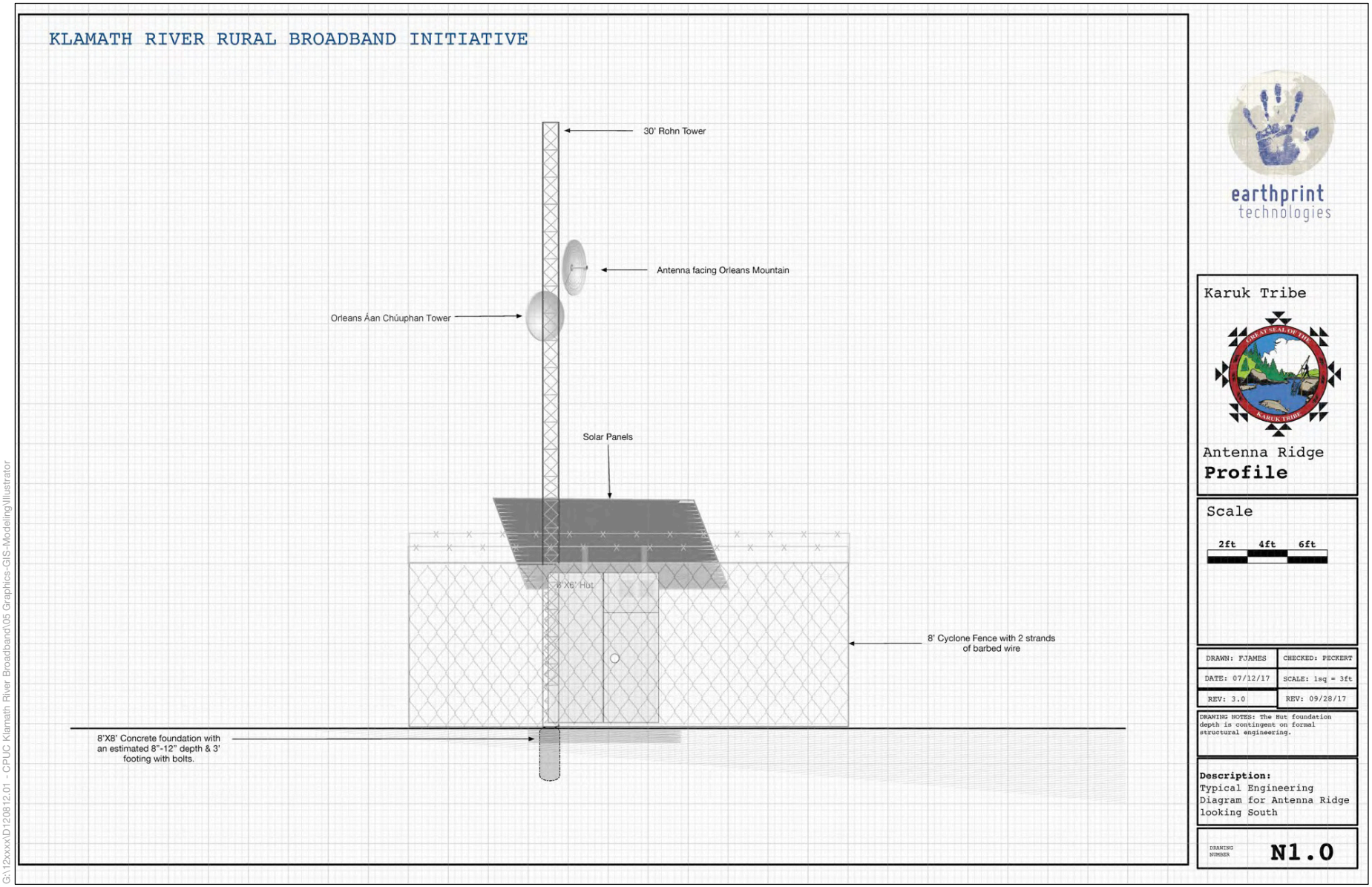
SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-15
Yurok Signal Connection, Antenna Ridge Plan

ESA



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SOURCE: Karuk Tribe, 2020

Klamath River Rural Broadband Initiative

Figure 2-16
Yurok Signal Connection, Antenna Ridge Profile

ESA

Highway 96 facing Southwest

Six Rivers National Forest, Klamath River

SOURCE: ESA, 2018

Klamath River Rural Broadband Initiative

Figure 4.1-1
Representative Photographs Segment 1

ESA

Highway 169 with existing overhead utilities facing West

Highway 169 at the Klamath River

SOURCE: ESA, 2018

Klamath River Rural Broadband Initiative

Figure 4.1-2
Representative Photographs Segment 2

ESA

Bald Hills Road at Lyons Ranch Trailhead facing Southeast

Bald Hills Road facing Northeast

SOURCE: ESA, 2018

Klamath River Rural Broadband Initiative

Figure 4.1-3
Representative Photographs Segment 3

ESA

Redwood National Park overlooking Bald Hills Road

Caltrans Storage Yard at Highway 101 in Orick

Klamath River Rural Broadband Initiative

SOURCE: ESA, 2018

Figure 4.1-4
Representative Photographs Segment 4

ESA

Green Diamond Resources Lands along Cranell Road

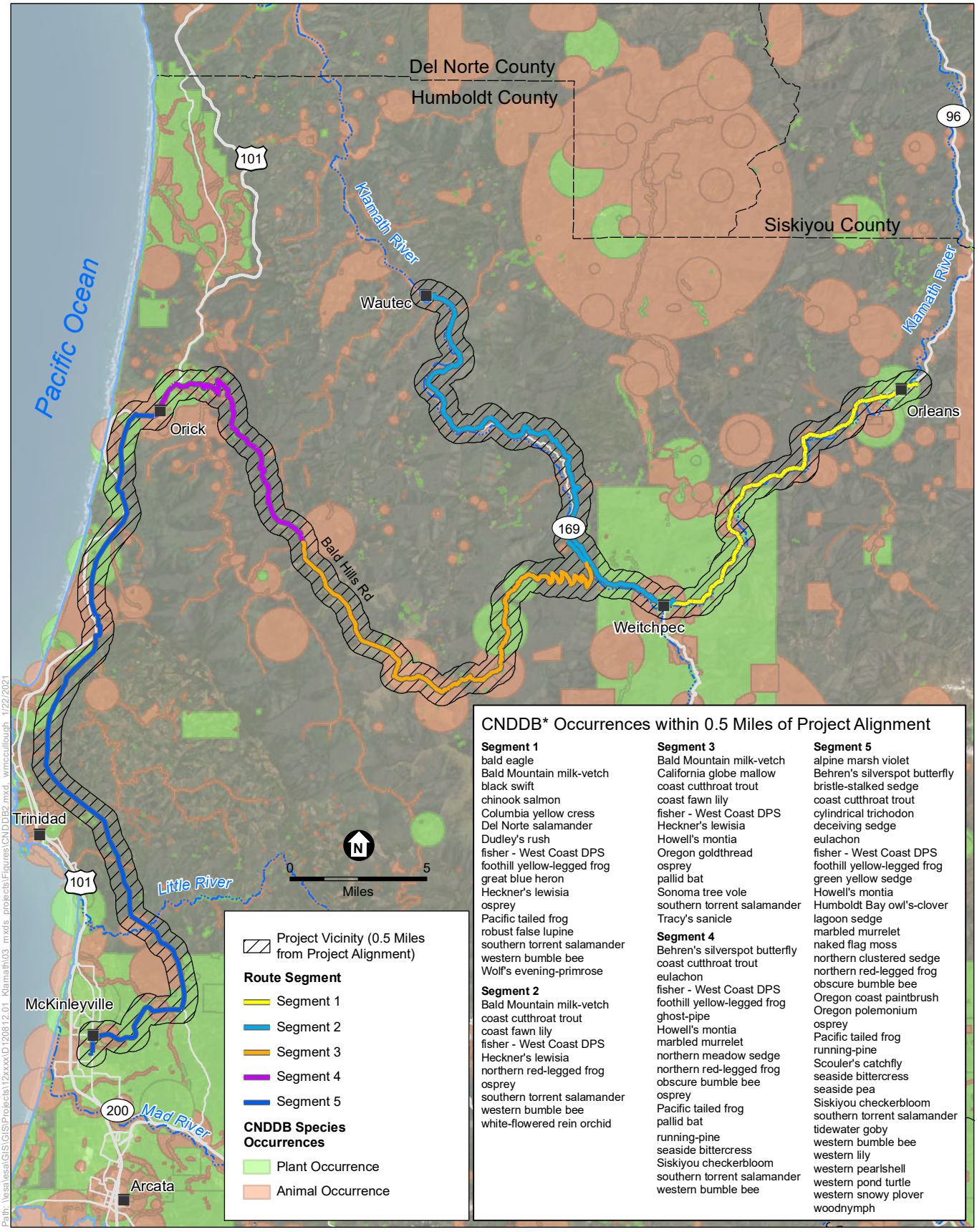
Existing PG&E Powerline

Klamath River Rural Broadband Initiative

SOURCE: ESA, 2018

Figure 4.1-5
Representative Photographs Segment 5

ESA



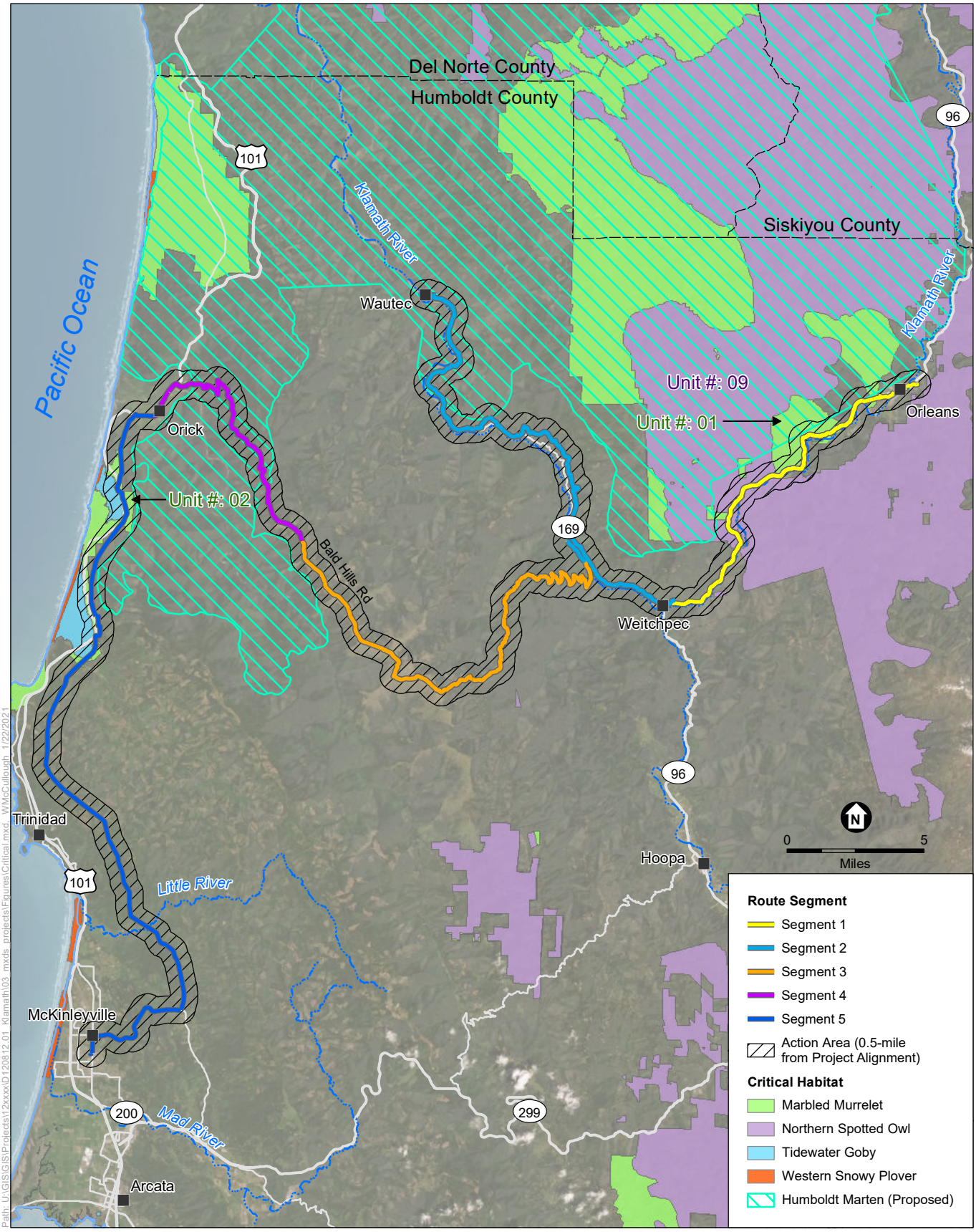
*California Natural Diversity Database

SOURCE: Karuk Tribe, 2020; CDFW, 2020

Klamath River Rural Broadband Initiative

Figure 4.4-1
CNDDB Occurrences within the Project Vicinity

ESA

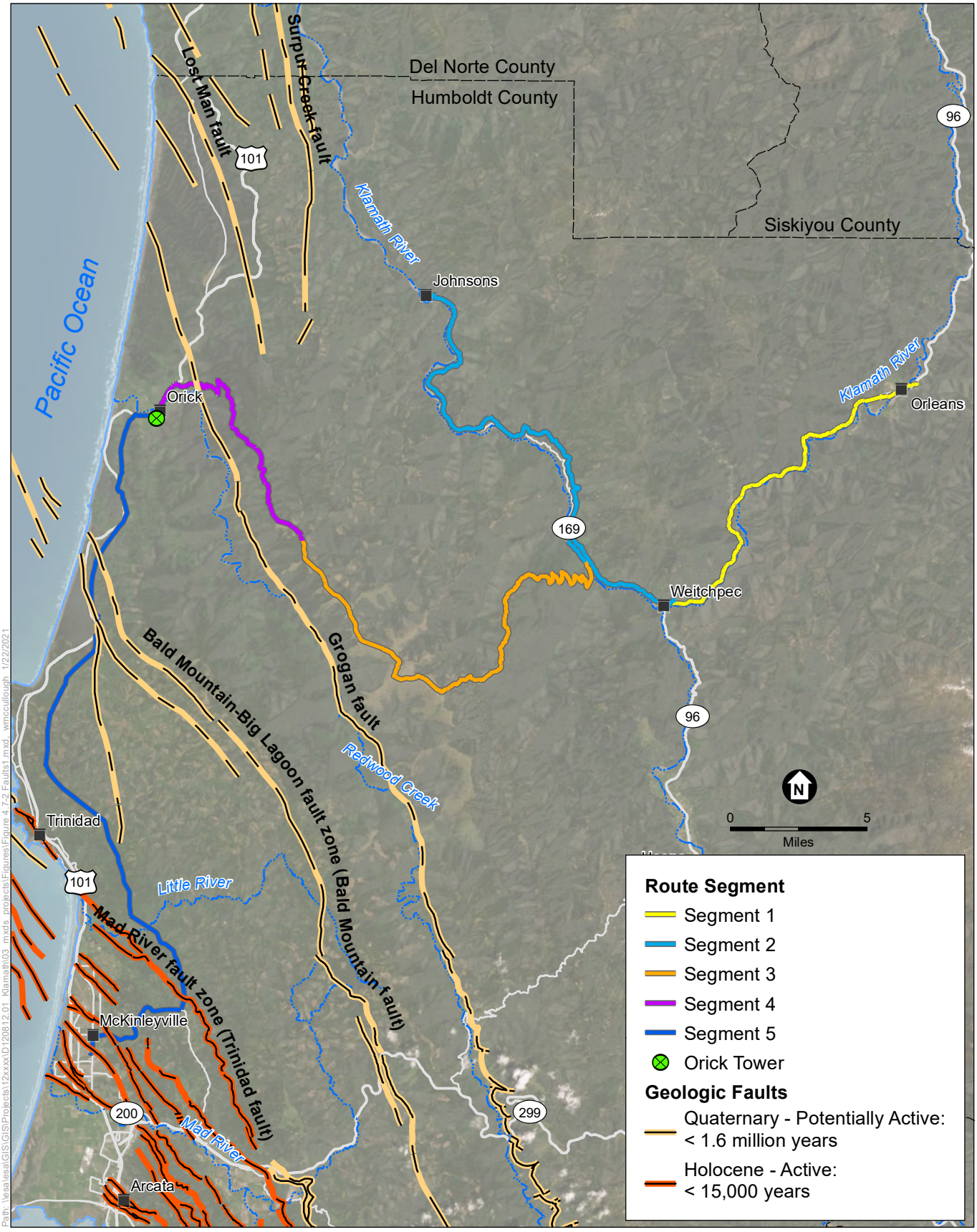


Klamath River Rural Broadband Initiative

SOURCE: Karuk Tribe, 2020; USFWS, 2022

Figure 4.4-2
Proposed and Designated Critical Habitat within the Project Vicinity

ESA

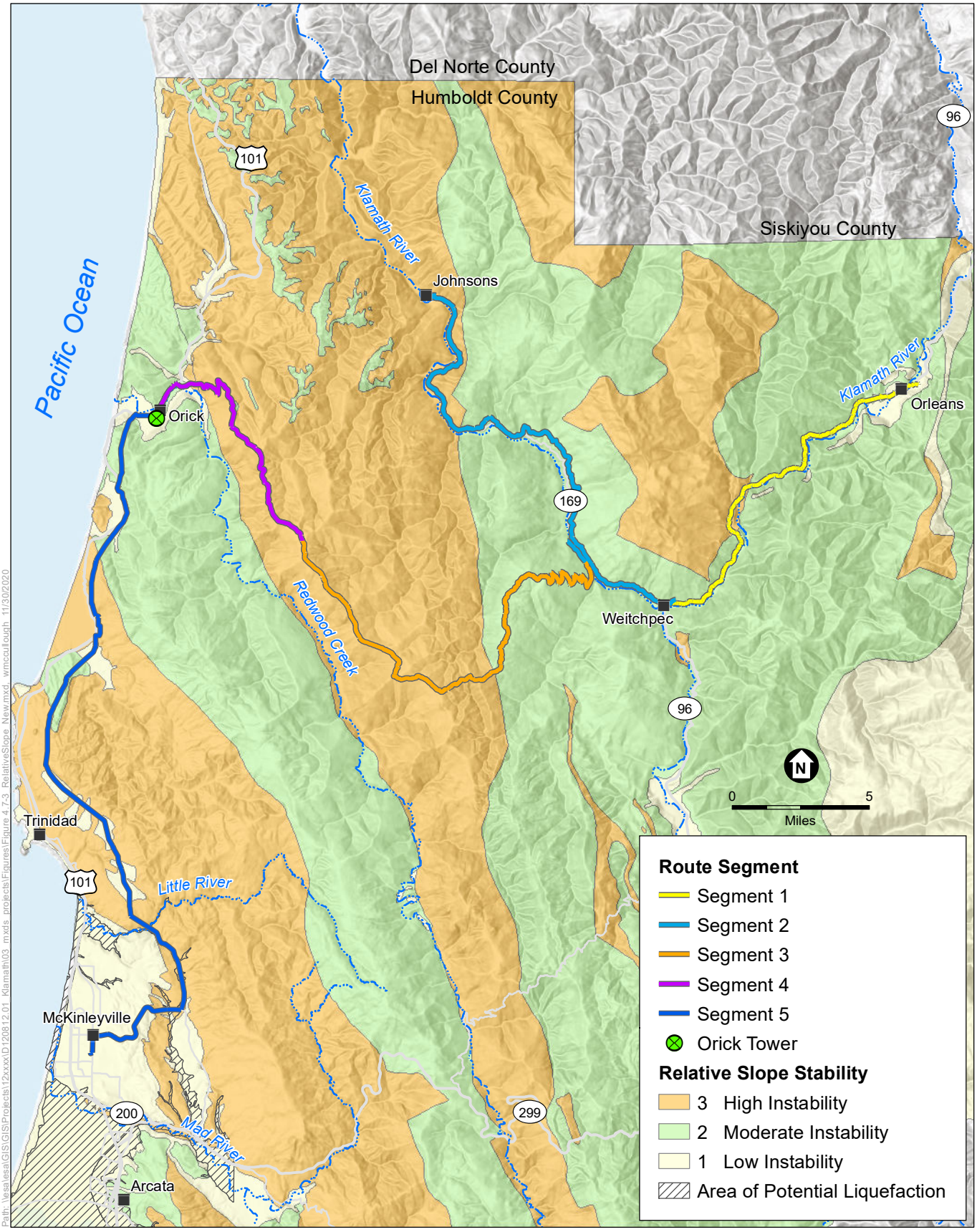


SOURCE: Karuk Tribe, 2020; USGS, 2010

Klamath River Rural Broadband Initiative

Figure 4.7-1
Geologic Faults in the Project Vicinity

ESA



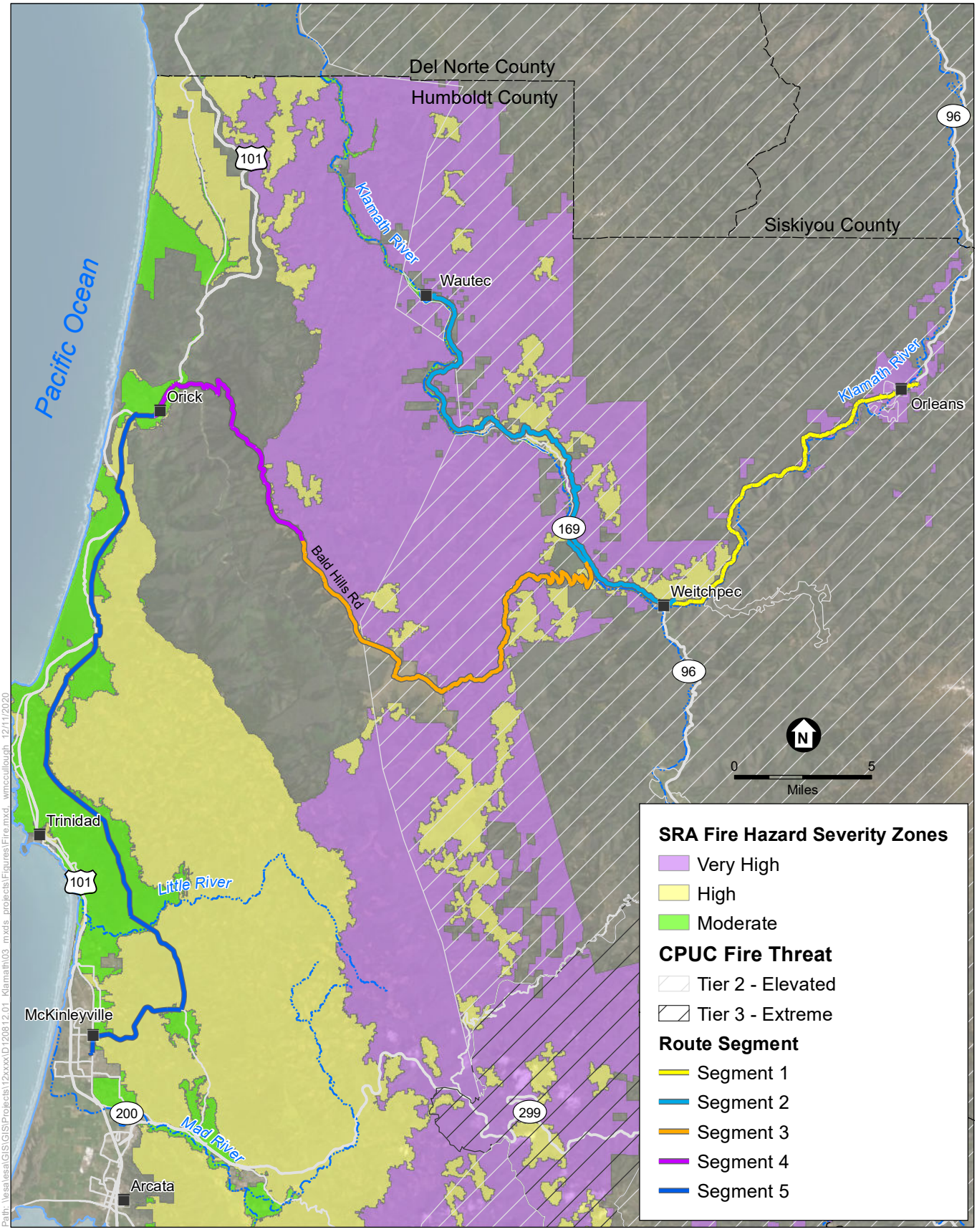
Path: \\esa\esa\GIS\GIS\Projects\12xxxx\D120812.01 Klamath\03 mxds projects\Figures\Figure 4.7-3 RelativeSlope New.mxd wmccullough 11/30/2020

Klamath River Rural Broadband Initiative

SOURCE: Karuk Tribe, 2020; Humboldt County, 2001

Figure 4.7-2
Relative Slope Stability

ESA

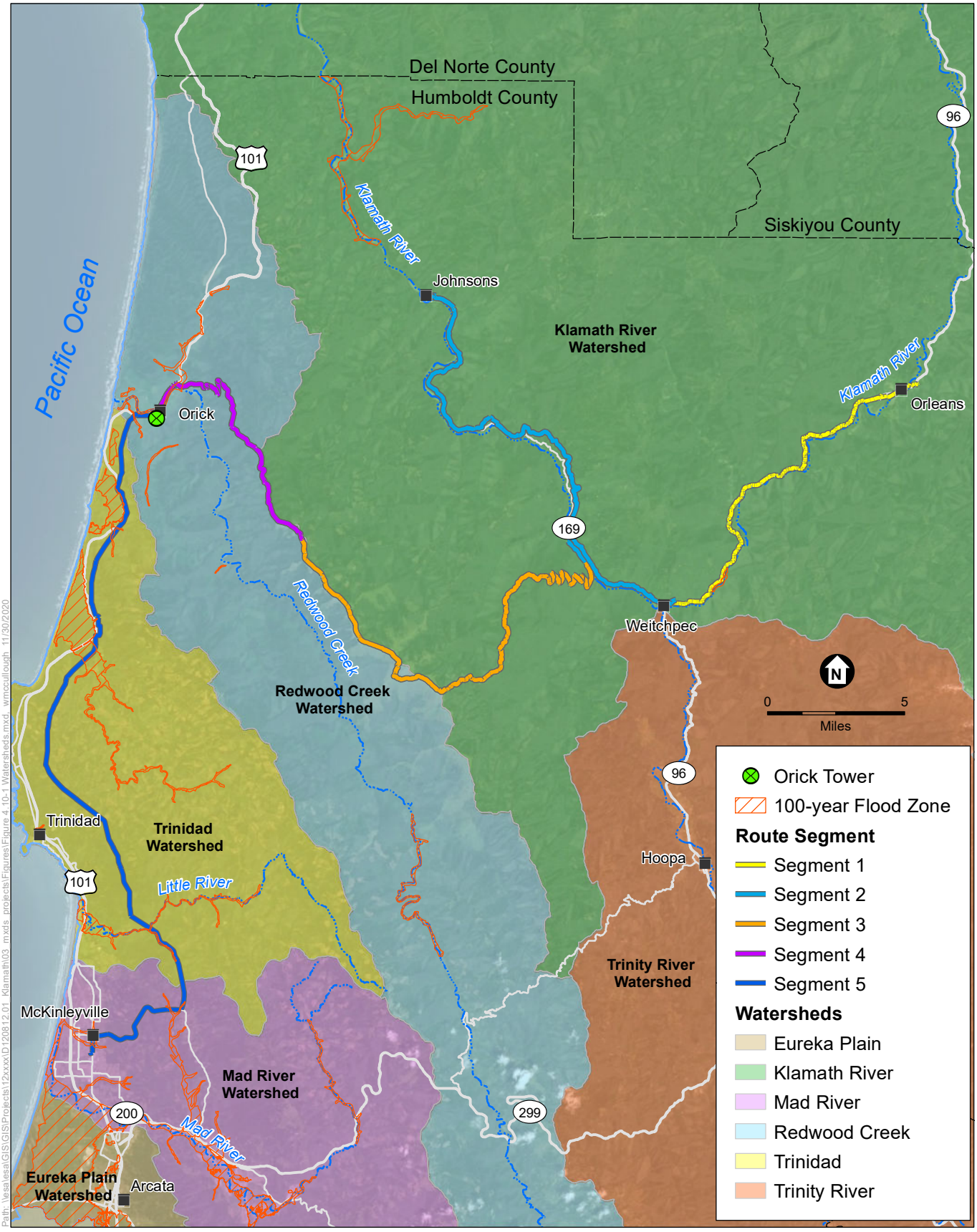


SOURCE: Karuk Tribe, 2020; CalFire, 2007

Klamath River Rural Broadband Initiative

Figure 4.9-1
Fire Hazard Zones

ESA

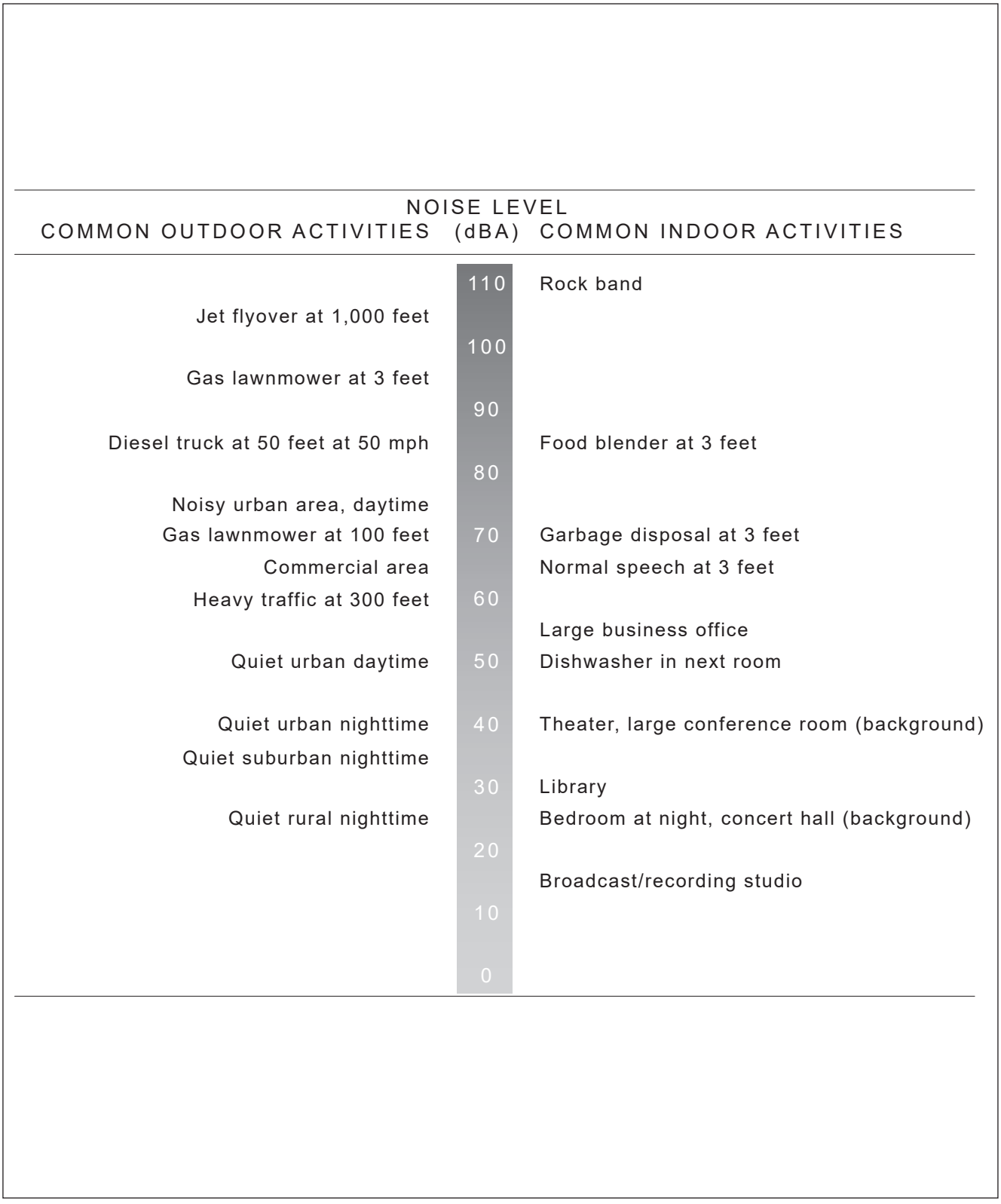


SOURCE: Karuk Tribe, 2020; CalWater 2.2.1, FEMA, 2018

Klamath River Rural Broadband Initiative

Figure 4.10-1
Watersheds in the Project Vicinity

ESA



SOURCE: Caltrans, 2013

Klamath River Rural Broadband Initiative

Figure 4.13-1

Typical Noise Levels

Appendix F
Regulatory Framework

APPENDIX F
Regulatory Framework

F.1 Aesthetics and Visual Resources

Federal

Because Project components would be constructed on federal land, including land within the SRNF managed by the USFS, and two parcels of public land in Segment 1 that are managed by the U.S. Bureau of Land Management, the following federal regulations are applicable to the Project:

- Federal Land Policy and Management Act of 1976, 43 United States Code (USC) 1701 et seq.:
  - Section 102(a)(8) states that "...the public lands be managed in a manner that will protect the quality of the...scenic...values...."
  - Section 103(c) identifies "scenic values" as one of the resources for which public land should be managed.
  - Section 201(a) states that "The Secretary shall prepare and maintain on a continuing basis an inventory of all public lands and their resources and other values (including...scenic values)."
  - Section 505(a) requires that "Each right-of-way shall contain terms and conditions which will... minimize damage to the scenic and aesthetic values...."
- National Environmental Policy Act (NEPA) of 1969, 43 USC 4321 et seq.:
  - Section 101(b) requires measures be taken to "…assure for all American...esthetically pleasing surroundings...."
  - Section 102 requires agencies to "Utilize a systematic, interdisciplinary approach which will ensure the integrated use of...Environmental Design Arts in the planning and decision making...."

National Wild and Scenic Rivers Act

The National Wild and Scenic Rivers Act was enacted in 1968 to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations (National Wild and Scenic Rivers System, 2018). This law seeks to preserve these designated rivers in their free-flowing condition, as well as to protect their immediate environments for the benefit and enjoyment of present and future

generations. Wild and Scenic Rivers are generally classified in three categories: wild,[1] scenic,[2] and recreational.[3] The SRNF Land and Resource Management Plan (1995) designated the Klamath River as a Wild and Scenic River (National Wild and Scenic Rivers System, 2018). Of the total 286 miles of the Klamath River, 251 miles are designated as Wild and Scenic: "Recreational," along the stretch from Orleans to Weitchpec (near Segment 1) and the stretch within the Yurok Reservation from Weitchpec to Wautec (near Segment 2).

National Scenic Byways Program

The National Scenic Byways Program was established in 1991 by the U.S. Department of Transportation to maintain the scenic, historic, recreational, cultural, archaeological, and natural qualities of scenic byways. The National Scenic Byways Program provides procedures for state designation of National Scenic Byways, in cooperation with local jurisdictions, as well as the designation of All-American Roads and Federal Agency Scenic Byways. Federal Agency Scenic Byways are roads or highways located on lands under federal ownership that have been officially designated by the responsible federal agency as a scenic byway (NPS, 2017b).

In Humboldt County, the Bigfoot Scenic Byway is a USFS Scenic Byway that begins in Willow Creek and follows SR 96 north through Hoopa, Weitchpec, and Orleans to Happy Camp in Siskiyou County. Segment 1 (from Orleans to Weitchpec) is located along SR 96 on the Bigfoot Scenic Byway (America's Scenic Byways, 2018).

National Park Service

The NPS Organic Act states that the purpose of establishing NPS is to "conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." NPS has developed a visual resource program to help address visual resource issues including a comprehensive inventory, planning, and park assistance program throughout NPS lands. NPS Director's Order 12 describes the NEPA-related roles and responsibilities of NPS staff and provides guidance to address specific NEPA-related topics for planning compliance (NPS, 2015).

RNP, established in 1968 (Public Law 90-545) and expanded in 1978, is now managed cooperatively by NPS and the California Department of Parks and Recreation. RNP provides significant examples of the primeval coastal redwood forests, woodlands, streams and seashores for the purposes of public inspiration and enjoyment and for the preservation of all related scenic historical, and recreational values (NPS and State Parks, 2000). Portions of Segments 3, 4, and 5 would be located within or adjacent to RNP.

1 *Wild* river areas are rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines representing vestiges of primitive America.

2 *Scenic* rivers are those free of impoundments with shorelines largely undeveloped but accessible by roads.

3 *Recreational* rivers or sections or rivers are those readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some diversion in the past.

State

California Wild and Scenic Rivers Act

The California Wild and Scenic Rivers Act (Public Resources Code Section 5093.50 et seq.), modeled after the National Wild and Scenic Rivers Act, was enacted in 1972 to preserve extraordinary scenic, recreation, fishery, and wildlife values of selected rivers including designated portions of the Klamath River that pass through the Segments 1 and 2 of the Study Area. The designated "Wild and Scenic" California segment of the Klamath River begins 3,600 feet below Iron Gate Dam (approximately 6 miles south of the Oregon border) and ends downstream at the Pacific Ocean.

California Department of Transportation Scenic Highway Program

In 1963, the California Legislature created the Scenic Highway Program to protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to the highways. A highway may be designated as "scenic" depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the travelers' enjoyment of the view. The Scenic Highway System includes highways that are either eligible for designation or have been designated as such. Although not officially designated, both U.S. 101 and SR 96 within the Study Area are eligible for official designation as California State Scenic Highways (Caltrans, 2018).

Local

Humboldt County General Plan

The Scenic Resources section of the Conservation and Open Space Element of the Humboldt County General Plan contains policies intended to protect outstanding scenic resources that may be otherwise adversely affected by land use and development in non-coastal zone areas (Humboldt County, 2017).

Goal SR-G1. Conservation of Scenic Resources. Protect high-value scenic forest, agriculture, river, and coastal areas that contribute to the enjoyment of Humboldt County's beauty and abundant natural resources.

Goal SR-G2. Support for a Designated Scenic Highway System. A system of scenic highways that increase the enjoyment of, and opportunities for, recreational and cultural pursuits and tourism in the County without detracting from allowed uses.

Policy SR-P1. Working Landscapes. Recognize the scenic value of resource production lands.

Policy SR-P2. Development in Mapped Scenic Areas. In mapped scenic areas, new discretionary and ministerial development shall be consistent with and subordinate to natural contours, hilltops, tree lines, bluffs and rock outcroppings. Visible disturbance and interruption of natural features shall be minimized to the extent feasible.

Policy SR-P3. Scenic Highway Protection. Protect the scenic quality of designated Scenic Highways for the enjoyment of natural and scenic resources, coastal views, landmarks, or points of historic and cultural interest.

Standard SR-S2. Scenic Highway Standards. The following standards apply to mapped Scenic Highways:

A. **Visual Buffer Width.** The width of the visual buffer along the road shall not exceed 200 feet from the edge of the traveled roadway.

B. **Permitted Uses.** Permitted uses shall be allowed except the construction of new off premise billboards is prohibited. Permitted uses that are within the visual buffer area measures may be required to protect scenic qualities of the site.

C. **Site Development.** Buildings and landscaping within the visual buffer shall be designed and located on the site to create a harmonious visual relationship with surrounding development and the natural terrain and vegetation.

   1. Existing topography, vegetation, and scenic features of the site shall be retained to the maximum extent possible and incorporated into the proposed development.

   2. Structures and signs shall be limited in height, bulk, and siting to be visually compatible with, and subordinate to, the character of surrounding areas.

D. **Consideration of Views**. Structures, signs, and plant materials within the visual buffer shall be constructed, installed, and planted to complement, enhance, and retain scenic views. Vegetative screening shall be used where needed to prevent significant intrusion or degradation of public views.

E. **Location and Screening of Unsightly Features.** Potentially unsightly features within the visual buffer area, such as parking lots etc., shall be located in areas not visible from the scenic highway. Where it is not feasible to locate such features out of view, features shall be screened from view by planting and/or fences, walls, or berms. Screening shall utilize primarily natural materials rather than solid fencing, preferably vegetation, in conjunction with low-earth berms.

F. **Site Grading**. Grading or earth-moving operations within the visual buffer area shall be planned and executed in such a manner that final contours appear to be consistent with the existing terrain both on, and adjacent to, the site.

   1. Vegetative cover shall be provided within a reasonable time after grading is completed to prevent visible scars remaining on the land from such operations.

   2. Contours altered by grading shall be restored by means of land sculpturing and a cover of topsoil in such a manner as to minimize runoff and erosion and prevent ponding of water.

   3. Finished contours shall be planted with native vegetation, so as to require minimum care and to be visually compatible with the existing landscaping.

G. **Access Roads**. The location and design of access roads within the visual buffer area shall not detract from the scenic quality of the road.

H. **Utilities**. New, relocated, or existing utility distribution lines within the visual buffer area shall be placed underground whenever feasible. When it is not feasible to place lines underground, they shall be located so as to be inconspicuous from the scenic route wherever feasible. Combined or adjacent rights-of-way and common poles shall be used wherever feasible.

Standard SR-S6. Scenic Highway Map. Until such time as a General Plan Scenic Highway Roadway Map is prepared and adopted, Humboldt County Highways listed in Sections 263.1 through 263.8 of the California Streets and Highways Code shall be considered to be Scenic Highways pursuant to Policy SR-P3, Scenic Highway

Protection, and the County shall address the potential for significant impacts to scenic resources during ministerial and discretionary permit review.

The McKinleyville Area Plan for the Local Coastal Program (Humboldt County, 2014) also contains policies regarding visual resources relevant to coastal scenic areas in the Study Area:

a. Consistency and compatibility with applicable elements of the County's general plan.

b. Alteration of natural landforms caused by cutting, filling, grading, or clearing necessary for a building site is minimized and, as appropriate, integrated with the project.

c. That setbacks from roads and property lines are appropriate to protect the scenic and visual qualities of the site.

d. Exterior lighting is compatible with the surroundings and is not directed beyond the boundaries of the parcel.

e. Vegetation common to the area should be used to integrate the manmade with the natural environment, to screen and soften the visual impact.

f. Where feasible, new existing utilities should be underground. When above-ground facilities are the only alternative, they should be as unobtrusive as possible.

The Orick Community Plan contains the following goals and policies related to visual resources relevant to the proposed Orick Tower and Segment 4 (Humboldt County, 1985).

5142 Goal: To increase visitor expenditures in the commercial businesses in Orick.

5143 Policies:

1. The community should encourage and assist property owners along the highway to use landscaping, fencing and painting to improve the appearance of the community.
2. The Orick Economic Development Corporation (OEDC) should consider commissioning a Design Plan to guide private beautification efforts.

F.2 Agriculture and Forestry Resources

Federal

No federal plans or policies regarding agriculture and forestry resources are applicable to the Project.

State

California Farmland Mapping and Monitoring Program

The California Farmland Mapping and Monitoring Program (FMMP) was established in 1982 in response to a critical need for assessing the location, quality, and quantity of agricultural lands and conversion of these lands over time. The FMMP is a non-regulatory program and analyzes agricultural land use and land use conversion trends throughout California.

Agricultural land is generally rated according to soil quality and irrigation status. As defined by the FMMP, "Prime Farmland" has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. To be classified as Prime Farmland, land must have been used for irrigated agricultural production at some time during the four years before the mapping date (DOC, 2019).

California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965, also known as the Williamson Act, is the state's primary program aimed at conserving private land for agricultural and open space uses (DOC, 2017). The Williamson Act provides a mechanism through which private landowners can contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. No lands in the Study Area are currently enrolled in this program.

California Government Code

Chapter 6.7 of the Government Code (Sections 51100–51155) regulates timberlands within the state. *Timberland production zone* is defined in Section 51104(g) as an area that has been zoned pursuant to Government Code Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses. In this context, *compatible uses* include any use that "does not significantly detract from the use of the property for, or inhibit, growing and harvesting timber" (Government Code Section 51104[h]). Watershed management, grazing, and the erection, construction, alteration, or maintenance of electric transmission facilities are examples of compatible uses. The general plans of cities and counties may use the term "timberland preserve zone," which Government Code Section 51104(g) defines as equivalent to "timberland production zone."

Local

Humboldt County General Plan

The Land Use Element of the Humboldt County General Plan contains the following goals and standard pertaining to agriculture and forest resources (Humboldt County, 2017a):

> **Goal AG-G2. Preservation of Agricultural Lands**. Agricultural land preserved to the maximum extent possible for continued agricultural use in parcel sizes that support economically feasible agricultural operations.
>
> > **Standard AG-S7. Prime Agricultural Land**. Prime Agricultural land per California Government Code Section 51201(c) means:
> >
> > A. All land which qualifies for rating as Class I or Class II in the Soil Conservation Service land use capability classifications;
> >
> > B. Land which qualifies for rating 80 through 100 in the Storie Index Rating;
> >
> > C. Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the U.S.D.A [U.S. Department of Agriculture].

D. Land planted with fruit or nut bearing trees, vines, bushes or crops which have a non-bearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than $200.00 per acre.

Goal FR-G1. Forest Resources. Public and private forests producing a wealth of multiple economic and natural resource values and ecosystem services. Constructive dialog and cooperation between state, federal and local agencies and private property owners and a regulatory framework that maximizes private and public interests and ecosystem services.

Humboldt County Zoning

The Humboldt County Zoning Code was adopted pursuant to Title 7 of the California Government Code and Section 30500 of the California Public Resources Code. The Zoning Code is intended to promote the welfare, orderly development, and economic stability of Humboldt County, and to help implement and remain consistent with the County's General Plan and Local Coastal Program (Humboldt County, 2017b).

Orick Community Plan

The Orick Community Plan provides land use and development guidelines for governmental agencies, local residents, and investors to identify potential development opportunities and constraints in the Orick area. The plan also represents a statement by local residents of their visions and hopes for the future of their community. The Orick Community Plan serves as an outline and focus for the community improvement efforts (Humboldt County, 1985). Portions of Segments 4 and 5 and the proposed Orick Tower would be located in the area covered by this community plan.

North Coast Area Plan

The North Coast Area Plan was prepared by the County Planning Department's Local Coastal Program and is administered by the California Coastal Commission. The plan was established in December 2014 and will be reviewed at least every five years by the California Coastal Commission to determine its effectiveness consistent with the California Coastal Act. This area plan, representing one of six county coastal planning areas, identifies land uses and standards by which development is evaluated within the Coastal Zone (Humboldt County, 2014a). Segment 5 would be located in the Coastal Zone.

F.3 Air Quality

Air quality in the NCAB is addressed through the efforts of various federal, state, and local government agencies. These agencies work jointly and individually to improve air quality through legislation, regulations, planning, policymaking, education, and a variety of programs. The air pollutants of concern and agencies primarily responsible for improving the air quality within the NCAB and the pertinent regulations are discussed below.

Regulation of air pollution is achieved through both the CAAQS and NAAQS and emissions limits for individual sources of air pollutants. As required by the federal Clean Air Act (CAA), EPA has identified criteria pollutants and has established NAAQS to protect public health and welfare.

NAAQS have been established for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare criteria.

To protect human health and the environment, EPA has set "primary" and "secondary" maximum ambient thresholds for all six criteria pollutants. Primary thresholds were set to protect human health, particularly sensitive receptors such as children, the elderly, and individuals suffering from chronic lung conditions such as asthma and emphysema. Secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings.

The NAAQS are defined as the maximum acceptable concentration that may be reached but not exceeded more than once per year. California has adopted more stringent ambient air quality standards (i.e., CAAQS) for most of the criteria air pollutants. **Table F-1** lists both sets of ambient air quality standards (i.e., national and state) and provides Humboldt County's attainment status for each. California has also established state ambient air quality standards for sulfates, hydrogen sulfide, and vinyl chloride; however, emissions of these pollutants are not expected under the Project and are not discussed further in this IS/EA. The Study Area is classified as a nonattainment area for the state 24-hour PM_{10} standard. For all other criteria pollutants, the Study Area is classified as either unclassified or as attainment with respect to the federal and state standards (NCUAQMD, 2017, 2018).

Federal

EPA is responsible for implementing programs developed under the federal Clean Air Act, such as establishing and reviewing the federal standards for CO, ozone, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. The federal CAA also requires EPA to designate areas (counties or air basins) as attainment or nonattainment with respect to each criteria pollutant, depending on whether the area meets the federal standards. If an area is designated as nonattainment, it does not meet a federal standard and is required to create and maintain a state implementation plan (SIP) for achieving compliance with the applicable federal standard. Conformity to the SIP is defined under the 1990 federal CAA amendments as conformity with the plan's purpose in eliminating or reducing the severity and number of violations of the federal standards and achieving expeditious attainment of these standards.

The CAA General Conformity Rule helps states improve air quality in areas that do not attain the federal standards by ensuring that federal actions conform to the SIP. The Project would not be subject to the General Conformity Rule because it would be located in an area that meets federal standards and is not subject to a maintenance plan with conformity requirements.

TABLE F-1
NATIONAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT STATUS FOR HUMBOLDT COUNTY

Criteria Pollutant	Averaging Time	State Standard	Humboldt County Attainment Status for California Standard	Federal Primary Standard	Humboldt County Attainment Status for Federal Standard
Ozone	8 Hours	0.070 ppm	Attainment	0.070 ppm	Unclassified/Attainment
	1 Hour	0.09 ppm	Attainment	–	–
Carbon Monoxide	8 Hours	9.0 ppm	Attainment	9 ppm	Unclassified/Attainment
	1 Hour	20 ppm	Attainment	35 ppm	Unclassified/Attainment
Nitrogen Dioxide	Annual Average	0.030 ppm	Attainment	0.053 ppm	Unclassified/Attainment
	1 Hour	0.18 ppm	Attainment	0.100 ppm	Unclassified/Attainment
Sulfur Dioxide	Annual Average	–	Attainment	0.030 ppm	Unclassified
	24 Hours	–	Attainment	0.14 ppm	Unclassified
	1 Hour	–	Attainment	0.075 ppm	
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 mg/m^3	Attainment	–	Unclassified
	24 Hours	50 mg/m^3	Non-Attainment	150 mg/m^3	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 mg/m^3	Attainment	12.0 mg/m^3	Unclassified/Attainment
	24 Hour	–	Attainment	35 mg/m^3	Unclassified/Attainment
Lead	3-Month Rolling Average	–	Attainment	0.15 mg/m^3	Unclassified/Attainment
Hydrogen Sulfide	1 Hour	0.03 ppm/ 42 $\mu g/m^3$	Attainment	–	–
Sulfates	24 Hour	25 mg/m^3	Attainment	–	–
Vinyl Chloride	24 Hour	0.01 ppm/ 26 $\mu g/m^3$	Attainment	–	–

NOTES: – = no applicable standard; $\mu g/m^3$ = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; PM_{10} = particulates of 10 microns or less; $PM_{2.5}$ = particulates of 2.5 microns or less; ppm = parts per million

SOURCES: CARB, 2016; NCUAQMD, 2017, 2018.

State

CARB is responsible for establishing and reviewing the state standards, compiling the California SIP and securing approval of that plan from EPA, conducting research and planning, and identifying TACs. CARB also regulates mobile sources of emissions in California, such as construction equipment, trucks, and automobiles, and oversees the activities of California's air quality districts, which are organized at the county or regional level. County or regional air quality management districts are primarily responsible for regulating stationary sources at industrial and commercial

facilities within their geographic areas and for preparing the air quality plans that are required under the federal CAA and California CAA.

California's Diesel Risk Reduction Plan/Diesel Fuel Regulations

As part of California's Diesel Risk Reduction Plan, CARB has issued numerous regulations to reduce diesel emissions from vehicles and equipment that are already in use. CARB combined these retrofit regulations with new engine standards for diesel-fueled vehicles and equipment with the intention of reducing DPM emissions by 85 percent from year 2000 levels by 2020. The California Diesel Fuel Regulations (Title 13, Sections 2281–2285, and Title 17, Section 93114 of the California Code of Regulations) provide standards for diesel motor vehicle fuel and nonvehicular diesel fuel.

CARB has also adopted a regulation for in-use off-road diesel vehicles that is designed to reduce emissions from diesel-powered construction and mining vehicles by imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The regulation requires an operator of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to no more than five minutes.

Rule 104, Section D, Fugitive Dust Emissions

NCUAQMD Rule 104, Section D, identifies minimum best management practices required to control fugitive dust. The following Section D measures would be applicable to construction of the Project:

1. No person shall allow handling, transporting, or open storage of materials in such a manner which allows or may allow unnecessary amounts of particulate matter to become airborne.
2. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions:
    a. Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust. …
    d. The use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
    e. The application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts.
    g. The prompt removal of earth or other track out material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.

Rule 110, Section E, Part 1, Best Available Control Technology

An applicant must apply Best Available Control Technology (BACT) to any new emissions unit or modification of an existing emissions unit, if the change would result in an increase in the potential to emit from the new unit or modification of existing equipment. BACT is to be applied to each new unit or modification only for the pollutant(s) emitted in excess of the threshold(s) listed in **Table F2**. The Project would not be subject to BACT, but based on NCUAQMD's recommendation, the

thresholds are used to evaluate the Project's emissions under the California Environmental Quality Act (CEQA) (see Section 4.3.4, *Environmental Impacts and Mitigation Measures*).

TABLE F-2
NCUAQMD RULE 110 BEST AVAILABLE CONTROL TECHNOLOGY THRESHOLDS

Pollutant	Best Available Control Technology Significance Thresholds	
	Daily (pounds per day)	Annual (tons per year)
Carbon Monoxide	500.0	100.0
Fluorides	15.0	3.0
Hydrogen Sulfide	50.0	10.0
Lead	3.2	0.6
Oxides of Nitrogen	50.0	40.0
Particulate Matter	80.0	15.0
Fine Particulate Matter	50.0	10.0
Reactive Organic Compounds	50.0	40.0
Reduced Sulfur Compounds	50.0	10.0
Oxides of Sulfur	80.0	40.0
Sulfuric Acid Mist	35.0	7.0
Total Reduced Sulfur Compounds	50.0	10.0

NOTE: NCUAQMD = North Coast Unified Air Quality Management District

SOURCE: Davis, pers. comm., 2018

Local

Humboldt County General Plan

As mentioned above, local policies are not applicable to the Project; however, the Air Quality Element of the Humboldt County General Plan contains the following policies that would otherwise be relevant to the Project (Humboldt County, 2017b):

> **Policy AQ-P4. Construction and Grading Dust Control.** Dust control practices on construction and grading sites shall achieve compliance with NCAQMD [NCUAQMD] fugitive dust emission standards.
>
> **Policy AQ-P5. Air Quality Impacts from New Development.** During environmental review of discretionary permits, reduce emissions of air pollutants from new commercial and industrial development by requiring feasible mitigation measures to achieve the standards of the NCAQMD.
>
> **Policy AQ-P6. Buffering Land Uses.** During environmental review of discretionary commercial and industrial projects, consider the use of buffers between new sources of emissions and adjacent land uses to minimize exposure to air pollution.
>
> **Policy AQ-P7. Interagency Coordination.** Coordinate with the NCAQMD early in the permit review process to identify expected regulatory outcomes and minimize delays for projects involving:
>
> A. CEQA environmental review;

B. Building demolition projects that may involve removal of asbestos-containing material subject to National Emission Standards for Hazardous Air Pollutants (NESHAP); and

C. Grading and mining operations subject to State Airborne Toxic Control Measures (ATCM) for naturally occurring asbestos.

D. Reliance on the air quality standards, permitting processes, and enforcement capacity of the NCAQMD to define thresholds of significance and set adequate mitigations under CEQA to the maximum extent allowable.

F.4 Biological Resources

Federal

Federal Endangered Species Act

The Secretary of the Interior (represented by USFWS) and the Secretary of Commerce (represented by the National Marine Fisheries Service [NMFS]) oversee the ESA. ESA Section 7 mandates that all federal agencies consult with USFWS and NMFS to ensure that federal agencies actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species. The federal agency is required to consult with USFWS and NMFS if it determines a "may effect" situation will occur in association with its action(s). The ESA prohibits the unlawful take[4] of any fish or wildlife species listed as threatened or endangered, including the destruction of habitat that could hinder species recovery.

Under ESA Section 9, the take prohibition applies only to wildlife and fish species. However, Section 9 does prohibit the removal, possession, damage, or destruction of any endangered plant from federal land. Section 9 also prohibits acts to remove, cut, dig up, damage, or destroy an endangered plant species in nonfederal areas in knowing violation of any state law or in the course of criminal trespass. Candidate species and species that are proposed or under petition for listing receive no protection under Section 9 of the ESA.

ESA Section 10 requires the issuance of an "incidental take" permit before any public or private action may be taken that would potentially harm, harass, injure, kill, capture, collect, or otherwise hurt (i.e., take) any individual of an endangered or threatened species. The permit requires preparation and implementation of a habitat conservation plan (HCP) to offset the take of individuals that may occur incidental to project implementation by providing for the overall preservation of the affected species through specific mitigation measures.

Under the ESA, USFWS designates critical habitat for listed species. *Designated critical habitat* is a specific area within a geographic region that is occupied by a species and determined to be critical to its survival in accordance with the ESA. A federal entity issuing a permit or acting as a lead agency must show that its actions do not negatively affect the critical habitat to the extent that it impedes the recovery of the species. Within designated critical habitat, USFWS protects habitat that provides the primary constituent elements for survival of the listed species. *Primary*

4 *Take* is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such conduct.

constituent elements are the physical and biological functions considered essential to species conservation that require special management considerations or protection.

Federal Migratory Bird Treaty Act

The federal MBTA (United States Code Title 16, Section 703 [16 USC 703], Supp. I, 1989) is the domestic law that affirms and implements a commitment by the United States for the protection of shared migratory bird resources. Except as permitted by regulations, the MBTA makes it unlawful to intentionally pursue, hunt, take, capture, or kill migratory birds anywhere in the United States. The law also applies to the intentional disturbance and removal of nests occupied by migratory birds or their eggs during the breeding season. In December 2017, the U.S. Department of the Interior issued Memorandum M-37050, which redefined *incidental take* under the MBTA to state that, "the MBTA's prohibition on pursuing, hunting, taking, capturing, killing, or attempting to do the same applies only to direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control." The current interpretation of the MBTA's definition of take does not prohibit or penalize take of migratory birds that results from actions that are not intentional.

Rivers and Harbors Act and Clean Water Act

The Secretary of the Army (represented by the U.S. Army Corps of Engineers) has permitting authority over activities affecting waters of the United States under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Clean Water Act (CWA) Section 404 (33 USC 1344). Waters of the United States are defined in Code of Federal Regulations Title 33, Part 328.3(a) (33 CFR 328.3[a]) and include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. Section 10 of the Rivers and Harbors Act requires a federal license or permit before accomplishing any work in, over, or under navigable[5] waters of the United States, or which affects the course, location, condition or capacity of such waters. Section 404 of the CWA requires a federal license or permit before discharging dredged or fill material into waters of the United States, unless the activity is exempt (33 CFR 324.4) from Section 404 permit requirements (e.g., certain farming and forestry activities).

CWA Section 401 (33 USC 1341) requires the project proponent for a federal license or permit to conduct any activity (including the creation or operation of facilities) that may result in a discharge into navigable waters of the United States to obtain a certification that the discharge will comply with applicable effluent limitations and water quality standards. The certification must be obtained from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency with jurisdiction over the navigable waters at the point where the discharge originates or would originate. A certification obtained for the creation of any facility must also pertain to the subsequent operation of the facility. In California, responsibility for the protection of water quality rests with the State Water Resources Control Board and its nine regional water quality control boards.

5 *Navigable waters of the United States* (33 CFR 329) are defined as waters that have been used in the past, are now used, or are susceptible to use as a means to transport interstate or foreign commerce up to the head of navigation.

State

California Endangered Species Act

California implemented its own endangered species act in 1970. The CESA prohibits the take of endangered and threatened species; however, habitat destruction is not included in the state's definition of take. CESA Section 2090 requires state agencies to comply with endangered species protection and recovery and to promote conservation of these species. CDFW administers the act and authorizes take through Section 2081 agreements (except for designated "fully protected species").

State-listed plants are protected mainly in cases where state agencies are involved in projects under CEQA. In this case, plants listed as rare under the California Native Plant Protection Act are not protected under CESA but can be protected under CEQA.

California Fully Protected Species and Species of Special Concern

The classification of *fully protected* was CDFW's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibian and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or ESA. The California Fish and Game Code sections that address "fully protected" species (Section 5515 for fish, Section 5050 for amphibians and reptiles, Section 3511 for birds, and Section 4700 for mammals) states that these species "…may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species," although take may be authorized for necessary scientific research. This language makes the "fully protected" designation the strongest and most restrictive regarding the take of these species. In 2003, the code sections dealing with fully protected species were amended to allow CDFW to authorize take resulting from recovery activities for state-listed species.

Species of Special Concern are animals that are not listed under the ESA or CESA, but that are nonetheless of concern because they are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by CDFW, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under the ESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate the collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration in CEQA during project review.

Protection for rare plant species under CESA is afforded by the California Native Plant Protection Act of 1977 (California Fish and Game Code Sections 1900–1913), which prohibits importing rare and endangered plants into California and either taking or selling rare and endangered plants. CNPS also identifies rare or endangered plants and ranks their rarity as CRPR 1A, 1B, 2, 3, and 4 species. CRPR 1A, 1B, or 2 plant species are considered to meet CEQA significance criteria and Fish and Game Code Sections 1901, 2062 and 2067 criteria as rare or endangered species.

California Fish and Game Code Section 3503

Section 3503 of the California Fish and Game Code establishes that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the code or any regulation made pursuant thereto. In addition, birds of prey are protected under Fish and Game Code Section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes (diurnal birds of prey) or Strigiformes (owls) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. CDFW considers any disturbance that causes nest abandonment and/or loss of reproductive effort to be taking.

California Department of Fish and Game Code Sections 1600–1616

CDFW regulates activities that would interfere with the natural flow of, or substantially alter, the channel, bed, or bank of a lake, river, or stream. These activities are regulated under Fish and Game Code Sections 1600–1616. Requirements to protect the integrity of biological resources and water quality are often conditions of streambed alteration agreements. Requirements may include avoidance or minimization of the use of heavy equipment, limitations on work periods to avoid impacts on wildlife and fisheries resources, and measures to restore degraded sites or compensate for permanent habitat losses. CDFW may require a streambed alteration agreement for construction activities that have the potential to result in an accidental release into a jurisdictional area.

State Water Resources Control Board

The federal CWA requires that the discharge of dredged or fill material into waters of the United States not violate state water quality standards. Applicants for Section 404 or Section 10 permits must obtain a certification from the state.

Under the Porter-Cologne Water Quality Control Act, each of California's nine regional water quality control boards must prepare and periodically update water quality control plans, or basin plans. These plans set forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to achieve wetlands protection based on water quality standards. Water quality for the Project area is under the jurisdiction of the North Coast Regional Water Quality Control Board.

Local

Humboldt County

The Conservation and Open Space Elements of the Humboldt County General Plan contain the following policies and standards related to biological resources that are relevant to the Project:

> **Policy BR-P1. Compatible Land Uses.** Area containing sensitive habitats shall be planned and zoned for uses compatible with the long-term sustainability of the habitat. Discretionary land uses and building activity in proximity to sensitive habitats shall be conditioned or otherwise permitted to prevent significant degradation of sensitive habitat,

to the extent feasible consistent with California Department of Fish and Wildlife guidelines or recovery strategies.

Policy BR-P2. Critical Habitat. Discretionary projects which use federal permits or federal funds on private lands that have the potential to impact critical habitat shall be conditioned to avoid significant habitat modification or destruction consistent with federally adopted Habitat Recovery Plans or interim recovery strategies.

Policy BR-P4. Development within Stream Channels. Development within stream channels shall be permitted when there is no lesser environmentally damaging feasible alternative, and where the best feasible mitigation measures have been provided to minimize adverse environmental effects. Development shall be limited to essential, non-disruptive projects as listed in Standard BR-S6 - Development within Stream Channels.

Policy BR-P5. Streamside Management Areas. To protect sensitive fish and wildlife habitats and to minimize erosion, runoff, and interference with surface water flows, the County shall maintain Streamside Management Areas, along streams including intermittent streams that exhibit in-channel wetland characteristics and off-channel riparian vegetation.

Policy BR-P6. Development within Streamside Management Areas. Development within Streamside Management Areas shall only be permitted where mitigation measures (Standards BR-S8 - Required Mitigation Measures, BR-S9 - Erosion Control, and BR-S10 - Development Standards for Wetlands) have been provided to minimize any adverse environmental effects, and shall be limited to uses as described in Standard BR-S7 - Development within Streamside Management Areas.

Policy BR-P7. Wetland Identification. The presence of wetlands in the vicinity of a Project shall be determined during the review process for discretionary projects and for ministerial building and grading permit applications, when the proposed building development activity involves new construction or expansion of existing structures or grading activities. Wetland delineation by a qualified professional shall be required when wetland characterization and limits cannot be easily inventoried and identified by site inspection.

Policy BR-P8. Wetlands Banking. The County supports the development of a wetlands banking system that minimizes potential conversion of prime agriculture lands to wetlands.

Policy BR-P9. Oak Woodlands. Oak woodlands shall be conserved through the review and conditioning of discretionary projects to minimize avoidable impacts to functional capacity and aesthetics, consistent with state law.

Policy BR-P10. Invasive Plant Species. The County shall cooperate with public and private efforts to manage and control noxious and exotic invasive plant species. The County shall recommend measures to minimize the introduction of noxious and exotic invasive plant species in landscaping, grading and major vegetation clearing activities.

Policy BR-P11. Biological Resource Maps. Biological resource maps shall be consulted during the ministerial and discretionary permit review process in order to identify habitat concerns and to guide mitigation for discretionary projects that will reduce biological resource impacts to below levels of significance, consistent with CEQA.

Policy BR-P12. Agency Review. The County shall request the California Department of Fish and Wildlife, as well as other appropriate trustee agencies and organizations, to review plans for development within Sensitive Habitat, including Streamside Management Areas. The County shall request NOAA [National Oceanic and Atmospheric Administration] Fisheries or U.S. Fish and Wildlife Service to review plans for development within critical habitat if the project includes federal permits or federal

funding. Recommended mitigation measures to reduce impacts below levels of significance shall be considered during Project approval, consistent with CEQA.

Policy BR-P13. Landmark Trees. Establish a program to identify and protect landmark trees, including trees that exhibit notable characteristics in terms of their size, age, rarity, shape or location.

Sensitive and Critical Habitats

Standard BR-S1. Development Excluded from Sensitive Habitat Policies. Proposed development occurring within areas containing sensitive habitats shall be subject to the conditions and requirements of this chapter except for these exclusions (which do not preempt other County regulations or those of other agencies):

A. Timber management and harvest activities conducted under the California Forest Practice Act (Z'Berg-Nejedly) and Rules or activities exempt from local regulation as per California Public Resources Code 4516.5(d). These standards shall not be used to reduce buffers specified under the State Forest Practice Rules and mining activities pursuant to Surface Mining and Reclamation Act.

B. Any area proposed for development, which upon examination of the biological resource maps and field inspection is not actually within or does not contain the indicated habitat.

C. Agricultural practices which are principally permitted within the zone shall not be considered development for the purposes of this standard.

Standard BR-S2. Agency Consultation. For discretionary projects with potential to impact critical, or sensitive habitats, the County will seek specific recommendations from the appropriate agencies, as applicable to the specific project location, class of development, or natural resource involved.

Standard BR-S3. Critical Habitat Defined. Critical habitats are habitats necessary for the protection of threatened or endangered species listed under the Federal Endangered Species Act. Designation, mapping and enforcement of critical habitat is the responsibility of federal agencies.

Standard BR-S4. Sensitive Habitat Defined. Sensitive habitats are defined as a biologically unique, limited, or an especially valuable habitat type for a species whose habitat requirements, if significantly changed, would cause a threatening change to the species population across its range and may include the following:

A. Habitat necessary for the protection of rare, threatened and endangered species as listed under the ESA or CESA

B. Migratory deer winter range

C. Roosevelt elk range

D. Sensitive avian species rookery and nest sites (e.g. osprey, great blue heron and egret)

E. Streams and streamside areas

F. Wetlands

G. Protected vascular plant communities as listed by the US Fish & Wildlife Service or the California Department of Fish and Wildlife.

H. Other sensitive habitats and communities as may be currently, correctly and accurately listed in the California Department of Fish and Wildlife's California Natural Diversity Data Base, as amended periodically.

Standard BR-S5. Streamside Management Areas Defined. Streamside Management Areas (SMA) are identified and modified as follows:

A. Areas specifically mapped as SMA and Wetland (WR) Combining Zones, subject to verification and adjustment pursuant to site -specific biological reporting and review procedures.

B. For areas along streams not specifically mapped as SMA and Wetland (WR) Combining Zones, the outer boundaries of the SMA shall be defined as:

   1. 100 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of perennial streams.

   2. 50 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of intermittent streams.

   3. The width of Streamside Management Areas shall not exceed 200 feet measured as a horizontal distance from the top of bank.

C. The width of Streamside Management Areas shall be expanded to up to 200 feet measured as a horizontal distance from the top of bank as necessary to include slides, or areas with visible evidence of slope instability.

D. The Streamside Management Area may be reduced or eliminated where the County determines, based on specific factual findings, that the mapping of the SMA is not accurate, there are no in-channel wetland characteristics or off-channel riparian vegetation, the reduction will not significantly affect the biological resources of the SMA on the property. When the prescribed buffer would prohibit development of the site for the principal use for which it is designated, measures shall be applied that result in the least environmentally damaging feasible project.

E. SMAs do not include watercourses consisting entirely of a man-made drainage ditch, or other man-made drainage device, construction, or system.

Stream Channels

Standard BR-S6. Development within Stream Channels. Development within stream channels may be approved where consistent with Policy BR-P4, Development within Stream Channels, and is limited to the following projects.

A. Fishery, wildlife, and aquaculture enhancement and restoration projects.

B. Road crossings consistent with Standard BR-S9, Erosion Control, of this section.

C. Flood control and drainage channels, levees, dikes, and floodgates.

D. Mineral extraction consistent with other County regulations.

E. Small-scale hydroelectric power plants in compliance with applicable County regulations and those of other agencies.

F. Wells and spring boxes, and agricultural diversions.

G. New fencing, so long as it would not impede the natural drainage or wildlife movement and would not adversely affect the stream environment or wildlife movement.

H. Bank protection, provided it is the least environmentally damaging alternative.

I. Other essential projects, including municipal groundwater pumping stations, provided they are the least environmentally damaging alternative, or necessary for the protection of the public's health and safety.

Streamside Management Areas

Standard BR-S7. Development within Streamside Management Areas. Development within Streamside Management Areas may be approved where consistent with Policy BR-P6, Development within Streamside Management Areas, and shall be limited to the following uses:

A. Development permitted within stream channels per BR-S6, Development within Stream Channels.

B. Timber management and harvest activities under a timber harvesting plan or non-industrial timber management plan, or activities exempt from local regulation as per California Public Resources Code 4516.5 (d).

C. Road, bridge, and trail replacement or construction, when it can be demonstrated that it would not degrade fish and wildlife resources or water quality, and that vegetative clearing is kept to a minimum.

D. Removal of vegetation for disease control or public safety purposes.

E. Normal, usual and historical agricultural practices and uses which are principally permitted within the SMA shall not be considered development for the purposes of this standard.

F. Normal, usual and historical agricultural and surface mining practices and uses which are principally permitted within the SMA shall not be considered development for the purposes of this standard.

Standard BR-S8. Required Mitigation Measures. Mitigation measures for development within Streamside Management Areas shall, at a minimum, include:

A. Retaining snags unless felling is required by CAL-OSHA [California Occupational Safety and Health Administration], by CAL FIRE [California Department of Forestry and Fire Protection] forest and fire protection regulations or for public health and safety reasons. The felling must be approved by the Planning Director. Felled snags shall be left on the ground if consistent with fire protection regulations and the required treatment of slash or fuels.

B. Retain live trees with visible evidence of current or historical use as nesting sites by hawks, owls, eagles, osprey, herons, kites or egrets.

C. Erosion control measures (as per Standard BR-S9-Erosion Control).

D. Maximum feasible retention of overstory canopy in riparian corridors.

Standard BR-S9. Erosion Control. Erosion control measures for development within Streamside Management Areas shall include the following:

A. During construction, land clearing and vegetation removal will be minimized, following the provisions of the Water Resources Element and the standards listed here.

B. Consistent with BR-S8, construction sites with at least 100 square feet of exposed soil will be planted or seeded as appropriate per mitigations as recommended in writing by the lead agency with native or non-invasive vegetation and mulched with natural or chemical stabilizers to aid in erosion control and ensure revegetation.

C. Long slopes will be minimized to increase infiltration and reduce water velocities down cut slopes by such techniques as soil roughing, serrated cuts, selective grading, shaping, benching, and berm construction.

D. Concentrated runoff will be controlled by the construction and continued maintenance of culverts, conduits, non-erodible channels, diversion dikes, interceptor ditches, slope drains, or appropriate mechanisms. Concentrated runoff will be carried to the nearest drainage course. Energy dissipaters may be installed to prevent erosion at the point of discharge, where discharge is to natural ground or channels.

E. Runoff shall be controlled to prevent erosion by on-site or off- site methods. On-site methods include, but are not limited to, the use of infiltration basins, percolation pits, or trenches. On-site methods are not suitable where high groundwater or slope stability problems would inhibit or be aggravated by on-site retention or where retention will provide no benefits for groundwater recharge or erosion control. Off-site methods include detention or dispersal of runoff over non-erodible vegetated surfaces where it would not contribute to downstream erosion or flooding.

F. Disposal of silt, organic, and earthen material from sediment basins and excess material from construction will be disposed of out of the Streamside Management Area to comply with California Department of Fish and Wildlife and the North Coast Regional Water Quality Control Board requirements.

   Winter operations (generally October 15 thru April 15) shall employ the following special considerations:

   1. Slopes will be temporarily stabilized by stage seeding and/or planting of fast germinating seeds, such as barley or rye grass, and mulched with protective coverings such as natural or chemical stabilizations, and

   2. Runoff from the site will be temporarily detained or filtered by berms, vegetated filter strips, and/or catch basins to prevent the escape of sediment from the site. Drainage controls are to be maintained as long as necessary to prevent erosion throughout construction.

Wetlands and Other Wet Areas

Standard BR-S10. Development Standards for Wetlands. Development standards for wetlands shall be consistent with the standards for Streamside Management Areas, as applicable except that the widths of the SMA for wetlands are as follows: seasonal wetlands = 50 ft. [feet] perennial wetlands = 150 ft. and the setback begins at the edge of the delineated wetland. Buffers may be reduced based on site specific information and consultation with the California Department of Fish and Wildlife. No buffer shall be required for man-made wetlands except wetlands created for mitigation purposes.

Standard BR-S11. Wetlands Defined. The County shall follow the US Army Corps of Engineers Wetland Delineation manual in the identification and classification of wetlands which considers wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

Other Sensitive and Critical Habitats

Oak Woodlands

Standard BR-S12. Discretionary Review within Oak Woodlands. Discretionary projects which may result in a significant effect on oak woodlands shall evaluate and

mitigate any impacts, consistent with the provisions of CEQA, specifically Public Resources Code Section 21083.4.

Invasive Plant Species

Standard BR-S13. Principally Permitted Accessory Use. Invasive plant species management and control measures shall be considered a principally permitted accessory use in all zones, except in the Coastal Zone.

F.5 Cultural Resources

Federal

National Historic Preservation Act

Effects of federal undertakings on architectural and archaeological resources are considered through the NHPA and its implementing regulations. Before an undertaking (e.g., federal funding or issuance of a federal permit) is implemented, Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties (i.e., properties listed in or eligible for listing in the National Register) and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register. Under the NHPA, a property is considered significant if it meets the National Register listing Criteria A through D, at 36 CFR 60.4, as follows:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and that:
>
> a) Are associated with events that have made a significant contribution to the broad patterns of our history, or
>
> b) Are associated with the lives of persons significant in our past, or
>
> c) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
>
> d) Have yielded, or may be likely to yield, information important in prehistory or history.

For a resource to be eligible for the National Register, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. Resources that are less than 50 years old are generally not considered eligible for the National Register.

Federal review of the effects of undertakings on significant cultural resources is carried out under Section 106 of the NHPA and is often referred to as the Section 106 review. This process is the responsibility of the federal lead agency. The Section 106 review typically involves a four-step procedure, which is described in detail in the implementing regulations of the NHPA:

- Define the APE in which an undertaking could directly or indirectly affect historic properties.
- Identify historic properties in consultation with the SHPO and interested parties.

- Assess the significance of effects of the undertaking on historic properties.
- Consult with the SHPO, other agencies, and interested parties to develop an agreement that addresses the treatment of historic properties and notify the ACHP and proceed with the project according to the conditions of the agreement.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) (United States Code Title 23, Sections 3001–3013) and its implementing regulations (43 CFR 10) specify, among other topics, the procedures federal agencies must follow in the treatment, repatriation, and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony. NAGPRA requires that Native Americans be consulted when Native American human remains and associated material are unexpectedly discovered on lands under federal jurisdiction (43 CFR 10). NAGPRA requires that when such a discovery is made, the federal agency with jurisdiction over the land turn over control of the remains and/or cultural items according to the chain of custody described in 43 CFR 10.5. NAGPRA applies to the Project because the Project would partially occur on land owned or managed by NPS, BLM, and USFS. If human remains are discovered on lands under federal jurisdiction during Project implementation and are determined to be Native American in origin, the relevant federal agency would be required to comply with NAGPRA.

State

The State of California consults on implementation of the NHPA, and also oversees statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of State Parks, implements the policies of the NHPA statewide. The OHP also maintains the California Historical Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the State's jurisdictions.

California Environmental Quality Act

CEQA, as codified in Public Resources Code (PRC) Section 21000 et seq., is the principal statute governing the environmental review of projects in the state. CEQA requires lead agencies to determine whether a project would have a significant effect on historical resources, including archaeological resources. The State CEQA Guidelines, codified at 14 CCR Section 15000 et seq., define a historical resource as: (1) a resource in the California Register; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

CEQA requires lead agencies to determine whether a project would have a significant effect on important archaeological resources, either historical resources or unique archaeological resources. If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 would apply and 14 CCR Sections 15064.5(c) and 15126.4 and the limits in PRC Section 21083.2 would not apply. If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and 14 CCR Section 15064.5 would apply. If an archaeological site does not meet the State CEQA Guidelines' criteria for a historical resource, the site may meet the threshold of PRC Section 21083 regarding unique archaeological resources. A *unique archaeological resource* is defined as follows (PRC Section 21083.2[g]):

> [A]n archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria.
>
> - Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
> - Has a special and particular quality such as being the oldest of its type or the best available example of its type.
> - Is directly associated with a scientifically recognized important prehistoric or historic event or person.

The State CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the Project on that resource shall not be considered a significant effect on the environment (14 CCR Section 15064.5[c][4]).

Public Resources Code Section 21074

In September 2014, the California Legislature enacted Assembly Bill (AB) 52, which added provisions to the Public Resources Code regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze project impacts on tribal cultural resources separately from archaeological resources (PRC Sections 21074 and 21083.09). AB 52 defines tribal cultural resources in a new code section, PRC Section 21074. AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC Sections 21080.3.1, 21080.3.2, and 21082.3).

Specifically, PRC Section 21084.3 states:

a) Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.

b) If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process provided in [PRC] Section 21080.3.2, the following are examples of mitigation measures that, if feasible, may be considered to avoid or minimize the significant adverse impacts:

   1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

2) Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

   A. Protecting the cultural character and integrity of the resource.

   B. Protecting the traditional use of the resource.

   C. Protecting the confidentiality of the resource.

3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

4) Protecting the resource.

In addition, the Governor's Office of Planning and Research updated Appendix G of the State CEQA Guidelines to provide sample questions regarding impacts on tribal cultural resources (PRC Section 21083.09).

Local

Humboldt County General Plan

The following goal and policies in the Conservation and Open Space Elements of the Humboldt County General Plan (2017) apply to the Project.

Goal CU-G1. Protection and Enhancement of Significant Cultural Resources. Protected and enhanced significant cultural resources, providing heritage, historic, scientific, educational, social and economic values to benefit present and future generations.

Policy CU-P1. Identification and Protection. The potential for impacts to significant cultural resources shall be identified during ministerial permit and discretionary project review, impacts assessed as to significance, and if found to be significant, protected from substantial adverse change per PRC Section 5020.1.

Policy CU-P2. Native American Tribal Consultation. Native American Tribes shall be consulted during discretionary project review for the identification, protection and mitigation of adverse impacts to significant cultural resources. Consultation on ministerial permits shall be initiated if it has been determined the project may create a substantial adverse change to a significant cultural resource. At their request, Tribes shall be afforded the opportunity to review and provide comments to the County early in project review and planning (screening) about known or potential Tribal cultural resources located in project areas within their respective tribal geographical area of concern.

Policy CU-P3. Consultation with Other Historic Preservation Agencies and Organizations. Historic preservation agencies and organizations shall be consulted during discretionary project review for the identification, protection and mitigation of adverse impacts to significant cultural resources. These include, but may not be limited to, the County's Cultural Resources Advisory Committee, Humboldt County Public Works Department and the Planning and Building Divisions, the NWIC of the CHRIS, the OHP, the NAHC, local historical societies, museums, colleges and universities, and incorporated cities historic preservation commissions or committees for their respective Local Agency Formation Commission sphere of influence, and local historians, cultural resources consultants and historic preservation staff affiliated with various state and federal agencies.

Policy CU-P4. Avoid Loss or Degradation. Projects located in areas known, or suspected to be Archaeological sites or Native American burial sites shall be conditioned and designed to avoid significant impacts to significant sites, or disturbance or destruction to Indian burial grounds. Preserving Native American remains undisturbed and in place shall be selected as the preferred alternative unless substantial factual evidence is presented demonstrating that no alternative(s) are feasible. Conditions of approval shall include standard provisions for post-review inadvertent archaeological discoveries and discovery and respectful treatment and disposition of Native American remains with or without funerary objects in accordance with State law (Health and Safety Code [HSC] Section 7050.5 and PRC Section 5097.98).

Policy CU-P5. Findings Necessary for Loss or Destruction. Substantial adverse changes to significant cultural resources shall not be allowed through a ministerial or discretionary action unless: a. The cultural resource has been found not to be significant based on consultation with culturally affiliated Native American Tribe(s) and other historic preservation agencies and organizations as required by CU-P2 and CU-P2x; or b. There is an overriding public benefit from the project, and compensating mitigation to offset the loss is made part of the project.

Policy CU-P6. Mitigation. Mitigation measures shall be required for any permitted project or County action that would adversely impact significant cultural resources.

F.6 Energy Conservation

Federal

National Energy Conservation Policy Act

The National Energy Conservation Policy Act (Title 42, Section 8201 et seq. of the United States Code [42 USC 8201 et seq.]) serves as the underlying authority for federal energy management goals and requirements and is the foundation of most federal energy requirements. This law established energy-efficiency standards for consumer projects and includes, among other things, energy-efficiency standards for new construction.

National Energy Policy Act of 2005

The National Energy Policy Act of 2005 (42 USC 13201 et seq.) sets equipment energy efficiency standards and seeks to reduce reliance on nonrenewable energy resources and provide incentives to reduce current demand on these resources. For example, under this law, consumers and businesses can attain federal tax credits for purchasing fuel-efficient appliances and products, including hybrid vehicles; and constructing energy-efficient buildings. Additionally, the National Energy Policy Act includes incentives for production of renewable energy.

Energy and Independence Security Act of 2007

The Energy and Independence Security Act of 2007 (42 USC 17001) sets federal energy management requirements in several areas. These include energy reduction goals for federal buildings, facility management and benchmarking, performance and standards for new buildings and major renovations, high-performance buildings, energy-savings performance contracts, metering, procurement of energy-efficient products. The law also includes goals for the reduction of petroleum use, including through the establishment of automobile efficiency standards and an

increase in the use of alternative fuels. This law also amends portions of the National Energy Policy Conservation Act, described above.

Corporate Average Fuel Economy Standards

Section 4.8, *Greenhouse Gas Emissions*, details federally established fuel economy standards by the U.S. Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA). NHTSA's Corporate Average Fuel Economy standards regulate how far vehicles must be able to travel on a gallon of fuel. NHTSA sets Corporate Average Fuel Economy standards for passenger cars and light trucks (collectively known as "light-duty vehicles"), and sets separate fuel consumption standards for medium- and heavy-duty trucks and engines. In the course of more than 30 years, this regulatory program has resulted in improved fuel economy throughout the United States' vehicle fleet (NHTSA, 2019).

State

Warren-Alquist Act

The 1975 Warren-Alquist Act (Public Resources Code Section 25000 et seq.) established the California Energy Resources Conservation and Development Commission, now known as CEC. The Warren-Alquist Act established a state policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. This law also was the driving force behind the creation of Appendix F to the State CEQA Guidelines.

State of California Integrated Energy Policy

Public Resources Code Section 25301(a) requires CEC to develop an integrated energy plan at least every two years for electricity, natural gas, and transportation fuels. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. An overarching goal of the resulting Integrated Energy Policy Report is to achieve the statewide targets for greenhouse gas emission reduction, while improving overall energy efficiency. See, for example, CEC's 2019 Integrated Energy Policy Report Update, which includes integrating renewable energy, including wind, as a key component (CEC, 2019b).

Construction Equipment Idling

To reduce emissions from diesel-powered construction and mining vehicles, the California Air Resources Board adopted a regulation (California Code of Regulations Title 13, Section 2449 et seq.) for in-use off-road diesel vehicles that imposes idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The regulation requires an operator of applicable off-road vehicles (self-propelled diesel-fueled vehicles 25 horsepower and up that were not designed to be driven on-road) to limit idling to no more than five minutes.

Local

Humboldt County General Plan

The Energy Element of the Humboldt County General Plan was drafted with the intention of promoting self-sufficiency, independence, local control in energy management, diversity and creativity in energy development, and energy conservation and efficiency. The Redwood Coast Energy Authority is a joint-powers authority, representing seven cities, Humboldt Bay Municipal Water District, and Humboldt County. The Humboldt County Board of Supervisors designated RCEA to implement the Energy Element's strategies through a Comprehensive Action Plan for Energy (Humboldt County, 2017). The following policy is applicable to the Project:

> **Policy E-c:** The County should develop energy thresholds and standards which assist applicants for development projects in designing conservation features into their proposals. Energy threshold standards could also be used to assist in the evaluation of potential energy consumption impacts which may be environmentally significant.

RePower Humboldt Comprehensive Action Plan for Energy

In 2019, RCEA updated the RePower Humboldt Comprehensive Action Plan for Energy, which provided a comprehensive strategy to improve energy efficiency and develop local renewable energy systems in Humboldt County. The plan identifies the following goals pertaining to energy efficiency, and broadband infrastructure that may be applicable to the Project (RCEA, 2019).

> **LTS2. Aggressively pursue cost-effective energy efficiency and demand response opportunities.** The number one RePower Humboldt priority should be to increase energy efficiency. This is consistent with state energy policy, which lists efficiency as the first choice in meeting energy needs and has set aggressive goals for energy efficiency improvement. Energy efficiency simultaneously saves money for consumers, reduces negative environmental impacts, increases energy security, creates jobs, and increases local economic activity. We should expand existing energy efficiency programs in the county, including increased incentives and other strategies to overcome market barriers, across multiple customer segments including residential single family, residential multifamily, small and large commercial, municipal, institutional, and industrial. Efforts should be made for both existing and new construction applications. Demand response measures that can reduce peak demand and match demand to intermittent renewable resources should also be pursued.
>
> **2.2.6 Promote Smart Technologies and Smart Controls**. Support the replacement of existing plug load devices with smart technology devices that are programmed to save energy, shift energy use outside of peak hours, and/or provide automated demand response using utility signaling. Examples include internet-of-things enabled lighting, water and space conditioning, dish and clothes washing, and refrigeration. Promote control technologies that adjust the use of equipment based on environmental input or demand. Examples include variable speed fans and ventilation, variable speed pumps and motors, daylighting controls, occupancy sensor controls, smart thermostats, and building management systems.
>
> **3.1.1 Strengthen Broadband Infrastructure.** Support efforts to strengthen rural regional broadband infrastructure to facilitate remote access to educational and business opportunities, and deploy advanced, resilient grid management technology and integrated energy efficiency and demand response solutions.

F.7 Geology, Soils, and Paleontological Resources

Federal

Federal regulations that apply directly to addressing the seismic and geotechnical aspects of the Project have been delegated to the state level.

Paleontological Resources Preservation Act

The Paleontological Resources Protection Act, as provided in Title VI, Subtitle D, Paleontological Resources Preservation of the Omnibus Public Land Management Act of 2009 (Public Law 111-011), requires the preservation, management, and protection of paleontological resources on lands administered by the U.S. Bureau of Land Management, the U.S. Bureau of Reclamation, the National Park Service, and the U.S. Fish and Wildlife Service and ensure that these federally owned resources are available for current and future generations to enjoy as part of America's national heritage. The Act address the management, collection, and curation of paleontological resources from federal lands using scientific principles and expertise, including collection in accordance with permits; curation in an approved repository; and maintenance of confidentiality of specific locality data. The Paleontological Resources Preservation Act authorizes civil and criminal penalties for illegal collecting, damaging, otherwise altering or defacing, or for selling paleontological resources, and the proposed rule further details the processes related to the civil penalties, including hearing requests and appeals of the violation or the amount of the civil penalties.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was enacted in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. In accordance with this act, the State Geologist established regulatory zones, called "Earthquake Fault Zones," around the surface traces of active faults and published maps showing these zones. Within these zones, buildings for human occupancy cannot be constructed across the surface trace of active faults. Each earthquake fault zone extends approximately 200 to 500 feet on either side of the mapped fault trace, because many active faults are complex and consist of more than one branch. There is the potential for ground surface rupture along any of the branches.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was enacted in 1990 to reduce threats to public health and safety and to minimize property damage caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones, and cities, counties, and other local permitting agencies to regulate certain development projects within these zones. For projects that would locate structures for human occupancy within designated Zones of Required Investigation, the Seismic Hazards Mapping Act requires project applicants to perform a site-specific geotechnical investigation to identify the potential site-specific seismic hazards and corrective

measures, as appropriate, prior to receiving building permits. To date, the CGS has completed delineations for the Trinidad and Arcata North quadrangles, in which Segment 5 would be located.

California Building Code

The California Building Code (CBC), codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress to facilities (entering and exiting), and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction.

While the Project does not include any components that would propose to erect any buildings or structures that would be occupied by people for any substantial length of time, the Project remains under the purview of the CBC as the towers and poles associated with this Project are considered structures under the Code. The design of the Project is required to comply with CBC requirements, in order to be granted the necessary permits and approvals to construct the Project. This would make the Project consistent with the CBC.

California Public Utilities Commission General Orders 95 and 128

California Public Utilities Commission (CPUC) General Orders (GOs) 95 and 128 apply to construction and reconstruction of overhead electric lines in California, which include requirements for communication lines. The replacement of poles, towers, or other structures is considered reconstruction and requires adherence to all strength and clearance requirements of these orders. For the purpose of recognizing relative hazards, lines are segregated into classes defined in CPUC Rule 20.6. These classes of lines and the relation of lines to each other and to objects over which they are constructed determine construction requirements.

Codes to which design of transmission lines must adhere include the National Electric Safety Code. Guidance documents are published by the Institute of Electrical and Electronics Engineers and ASCE. Including ASCE 74, Guidelines for Electrical Transmission Line Structural Loading, which states, “Transmission structures are not typically designed for vibration caused by earthquakes because these loads are less than that of wind/ice combinations.” The exception to this general rule occurs if the tower is built in liquefiable materials, in which case the materials may not support the weight of the tower and tower foundation during a seismic event.

California Public Resources Code Section 5097.5 and Section 30244

Other state requirements for paleontological resource management are included in PRC Section 5097.5 and Section 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, district) lands.

Local

Humboldt County General Plan

The Safety Element of the Humboldt County General Plan includes the following policies and standards relevant to the Project related to geology (Humboldt County, 2017b):

> **Policy S-P7. Structural Hazards**. The County shall protect life and property by applying and enforcing state adopted building codes and Alquist-Priolo requirements to new construction.
>
> **Policy S-P11. Site Suitability**. New development may be approved only if it can be demonstrated that the proposed development will neither create nor significantly contribute to, or be impacted by, geologic instability or geologic hazards.
>
> > **Standard S-S1. Geologic Report Requirements.** Site specific reports addressing geologic hazards and geologic conditions shall be required as part of the review of discretionary development and ministerial permits. Geologic reports shall be required and prepared consistent with land use regulations (Title III, Land Use and Development, Division 3, Building Regulations, Chapter 6—Geologic Hazards.)
> >
> > **Standard S-S2. Landslide Maps.** Utilize California Division of Mines and Geology, North Coast Watersheds landslide mapping as information to assist in review of developments.
> >
> > **Standard S-S3. Alquist-Priolo Fault Hazard Zones**. Utilize California Mines and Geology Board Policies and Criteria for Alquist-Priolo Fault Hazard Zones (Special Publication #42) as standards of implementation within zones.

F.8 Greenhouse Gas Emissions

Federal

Clean Air Act

On April 2, 2007, in *Massachusetts v. USEPA* (549 US 497), the Supreme Court found that GHGs are air pollutants covered by the Clean Air Act. The Court held that the U.S. Environmental Protection Agency (EPA) must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making such decisions, EPA is required to follow the language of Section 202(a) of the Clean Air Act, which obligates it to prescribe (and from time to time revise) standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines. The Supreme Court decision resulted from a petition for rulemaking under Section 202(a) filed by more than a dozen environmental, renewable energy, and other organizations.

On April 17, 2009, the EPA Administrator signed proposed "endangerment" and "cause or contribute" findings for GHGs under Section 202(a) of the Clean Air Act. EPA found that six GHGs, taken in combination, endanger both the public health and the public welfare of current and future generations. EPA also found that the combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the greenhouse effect as air pollution

that endangers public health and welfare under Clean Air Act Section 202(a). Pursuant to Code of Federal Regulations Title 40, Part 52*, Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule*, EPA has mandated that Prevention of Significant Deterioration (PSD) and Title V requirements apply to facilities whose stationary-source CO_2e emissions exceed 100,000 tons per year (EPA, 2019). The Project would not trigger PSD or Title V permitting under this regulation because it would generate less than 100,000 tons of CO_2e emissions per year.

On October 30, 2009, the EPA published a rule for the mandatory reporting of GHG emissions from sources that in general emit 25,000 metric tons or more of CO_2e per year in the United States. Smaller sources and certain sectors such as the agricultural sector and land use changes are not included in the Greenhouse Gas Reporting Program. Implementation of 40 CFR Part 98 is referred to as the Greenhouse Gas Reporting Program (GHGRP) (USEPA, 2013). The Project would not trigger reporting under this regulation because it would generate less than 25,000 metric tons of CO_2e emissions per year.

U.S. Supreme Court Decision in Utility Air Regulatory Group v. USEPA

On June 23, 2014, the U.S. Supreme Court held that EPA may not treat GHG emissions as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT).

In accordance with the Supreme Court decision, on April 10, 2015, the D.C. Circuit issued an amended judgment in *Coalition for Responsible Regulation, Inc. v. U.S. Environmental Protection Agency*, which vacated the PSD and Title V regulations under review in that case to the extent that they require a stationary source to obtain a PSD or Title V permit solely because the source emits or has the potential to emit GHGs above the applicable major-source thresholds. The D.C. Circuit also directed EPA to consider whether any further revisions to its regulations are appropriate, and if so, to undertake to make such revisions. In response to the Supreme Court decision and the D.C. Circuit's amended judgment, EPA intends to conduct future rulemaking action to make appropriate revisions to the PSD and operating permit rules (EPA, 2019).

State

A variety of statewide rules and regulations mandate the quantification and, if emissions exceed established thresholds, the reduction of GHGs. CEQA requires lead agencies to evaluate project-related GHG emissions and the potential for projects to contribute to climate change and to provide appropriate mitigation in cases where the lead agency determines that a project would result in a significant addition of GHGs to the atmosphere.

Executive Order S-3-05

In June 2006, Governor Arnold Schwarzenegger signed Executive Order S-3-05, which established the following statewide emission-reduction targets through the year 2050:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

This executive order does not contain any requirements that directly pertain to the Project; however, as discussed below, the 2020 reduction target was codified in 2006 as Assembly Bill (AB) 32. With regard to the 2050 reduction target, it has not been codified and the California Supreme Court has ruled that CEQA lead agencies are not required to use it as a significance threshold. (*Cleveland National Forest Foundation v. San Diego Association of Governments* [2017] 3 Cal.5th 497.)

Assembly Bill 32

AB 32, the Global Warming Solutions Act of 2006, required the California Air Resources Board (CARB) to establish a statewide GHG emissions cap for 2020 based on 1990 emission levels. AB 32 required CARB to adopt regulations that identify and require selected sectors or categories of emitters of GHGs to report and verify their statewide GHG emissions, and CARB is authorized to enforce compliance with the program.

Under AB 32, CARB also was required to adopt a statewide GHG emissions limit equivalent to the statewide GHG emissions levels in 1990, which must be achieved by 2020. CARB established this limit in December 2007 at 427 million metric tons of CO_2e. This is approximately 30 percent below forecasted "business-as-usual" emissions of 596 million metric tons of CO_2e in 2020, and about 10 percent below average annual GHG emissions during the period of 2002 through 2004 (CARB, 2009).

In the interest of achieving the maximum technologically feasible and cost-effective GHG emission reductions, AB 32 permits the use of market-based compliance mechanisms and requires CARB to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism that it adopts. The AB 32 emissions reduction limit was achieved in 2017, three years prior to the 2020 goal.

Climate Change Scoping Plan (AB 32 Scoping Plan)

In December 2008, CARB approved the AB 32 Scoping Plan, outlining the state's strategy to achieve the 2020 GHG emissions limit. The Scoping Plan estimates a reduction of 174 million metric tons CO_2e (about 191 million tons) from the transportation, energy, agriculture, forestry, and high climate-change-potential sectors, and proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California's energy sources, save energy, create new jobs, and enhance public health. Appendices C and E of the adopted 2008 AB 32 Scoping Plan include a list of 39 recommended action measures to reduce GHG emissions (CARB, 2009). Of these measures, none are directly relevant to the Project.

The AB 32 Scoping Plan must be updated every five years to evaluate the adopted mix of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal. CARB

released its first Scoping Plan Update in May 2014 (CARB, 2014). No recommended actions identified in the 2014 Scoping Plan Update are directly applicable to the Project. CARB released a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 (see below).

Mandatory Reporting Requirements

Pursuant to California Code of Regulations Title 17, Sections 95100–95158, operations of large industrial stationary combustion and process emissions sources that emit 10,000 metric tons CO_2e or more per calendar year are required to report and verify their GHG emissions to CARB. As indicated in Table 4.8-3 in the impact discussion, the total amortized GHG emissions for the Project would be 21 metric tons CO_2e per year, which would be well below the AB 32 reporting threshold; therefore, the Project would not be subject to the AB 32 mandatory reporting requirements.

Market-Based "Cap-and-Trade" Compliance Mechanism

AB 32 allows the use of market-based compliance mechanisms to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 also requires CARB to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism that it adopts. In response, CARB adopted a cap-and-trade program that covers major sources of GHG emissions such as refineries and power plants. The program includes an annual emissions cap that declines over time. CARB's cap-and-trade program applies to facilities that would emit 25,000 metric tons or more of CO_2e per year. Because the total amortized GHG emissions for the Project are estimated at 21 metric tons per year, the cap-and-trade program would not apply to the Project. (See Section 4.8.4 for a discussion and breakdown of the construction-related and operational GHG emissions associated with the Project.)

Senate Bill 97

In 2007, the California Legislature enacted SB 97, which required amendment of the State CEQA Guidelines to incorporate analysis of, and mitigation for, GHG emissions from projects subject to CEQA. The amendments took effect March 18, 2010. The amendments added Section 15064.4 to the State CEQA Guidelines, specifically addressing the potential significance of GHG emissions. Section 15064.4 calls for a "good faith effort" to "describe, calculate or estimate" GHG emissions and indicates that the analysis of the significance of any GHG impacts should include consideration of the extent to which the project would do any of the following:

- Increase or reduce GHG emissions.
- Exceed a locally applicable threshold of significance.
- Comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions."

The State CEQA Guidelines also state that a project may be found to have a less-than-significant impact related to GHG emissions if it complies with an adopted plan that includes specific measures to sufficiently reduce GHG emissions (California Code of Regulations Title 14, Section 15064[h][3]). Importantly, however, the State CEQA Guidelines do not require or recommend a

specific analytical methodology or provide quantitative criteria for determining the significance of GHG emissions.

Executive Order B-30-15 and SB 32

In April 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Reaching this emission reduction target will make it possible for California to reach its ultimate goal of reducing emissions 80 percent under 1990 levels by 2050, as identified in Executive Order S-3-05. Executive Order B-30-15 also specifically addresses the need for climate adaptation and directs state government to do all of the following (Office of Governor Edmund G. Brown Jr., 2015):

- Incorporate climate change impacts into the state's Five-Year Infrastructure Plan.
- Update the *Safeguarding California Plan*, the state climate adaption strategy to identify how climate change will affect California infrastructure and industry and what actions the state can take to reduce the risks posed by climate change.
- Factor climate change into state agencies' planning and investment decisions.
- Implement measures under existing agency and departmental authority to reduce GHG emissions.

Executive Order B-30-15 required CARB to update the AB 32 Climate Change Scoping Plan to incorporate the 2030 target. Subsequently, SB 32, which codifies the executive order's 2030 emissions reduction target, was approved by the Governor on September 8, 2016. SB 32 requires CARB to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions to ensure that statewide GHG emissions are reduced to at least 40 percent below the 1990 statewide GHG emissions limit no later than December 31, 2030, the target established by Executive Order B-30-15.

On December 14, 2017, CARB adopted the 2017 Scoping Plan for achieving this goal. The plan takes into account the key programs associated with implementation of the AB 32 Scoping Plan—such as GHG reduction programs for cars, trucks, fuels, industry, and electrical generation—and builds upon, in particular, existing programs related to the Cap-and-Trade Regulation; the Low Carbon Fuel Standard; much cleaner cars, trucks, and freight movement; power generation for the state using cleaner renewable energy; and strategies to reduce methane emissions from agricultural and other wastes by using it to meet the state's energy needs. The 2017 Scoping Plan also addresses, for the first time, GHG emissions from natural and working lands, including the agriculture and forestry sectors (CARB, 2017).

Local

Humboldt County General Plan

The Humboldt County General Plan's Air Quality Element contains the following policies that are relevant to the Project (Humboldt County, 2017).

> **Policy AQ-P11. Review of Projects for Greenhouse Gas Emission Reductions.** The County shall evaluate the GHG emissions of new large scale residential, commercial and

industrial projects for compliance with state regulations and require feasible mitigation measures to minimize GHG emissions.

Policy AQ-P14. Solar Electric System Capacity. Encourage and provide incentives to increase solar-electric capacity in residential, commercial, and industrial sectors.

F.9 Hazards and Hazardous Materials

Federal

Hazardous Materials Management

The primary federal agencies with responsibility for hazardous materials management are the U.S. Environmental Protection Agency (EPA), U.S. Occupational Safety and Health Administration (OSHA), and U.S. Department of Transportation. With respect to hazardous materials, state and local agencies often have either parallel or more stringent regulations than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the state or local agency section.

Resource Conservation and Recovery Act

Under the Resource Conservation and Recovery Act (RCRA), individual states may implement their own hazardous waste programs in lieu of the RCRA as long as the state program is at least as stringent as federal RCRA requirements and is approved by EPA. EPA approved California's RCRA program, referred to as the Hazardous Waste Control Law, in 1992.

Toxic Substances Control Act

The Toxic Substances Control Act of 1976 was enacted by Congress to give EPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United States. EPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental or human-health hazard. EPA can ban the manufacture and import of those chemicals that pose an unreasonable risk.

Occupational Safety

OSHA is the agency responsible for assuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in Title 29 of the Code of Federal Regulations (CFR), as authorized in the Occupational Safety and Health Act of 1970. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. At sites known or suspected to have soil or groundwater contamination, construction workers must receive training in hazardous materials operations and a site health and safety plan must be prepared. The health and safety plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) was developed to protect the water, air, and land resources from the risk created by past chemical disposal practices. This act is also referred to as the Superfund Act, and the sites listed under it are referred to as Superfund sites. Under CERCLA, the EPA maintains a list, known as the Superfund Enterprise Management System (SEMS) (formerly the Comprehensive Environmental Response, Compensation, and Liability Information System [CERCLIS]), of all contaminated sites in the nation that have in part or are currently undergoing cleanup activities. CERCLIS contains information on current hazardous waste sites, potential hazardous waste sites, and remediation activities. This includes sites that are on the National Priorities List (NPL) or being considered for the NPL.

Copper Bluff Mine and Celtor Chemical Works, located in Hoopa, are included on the Superfund NPL map. Copper Bluff Mine is inactive and Celtor Chemical Works has since been removed from the NPL in 2003 by the EPA (EPA, 2020).

49 CFR Part 77

The Federal Aviation Administration (FAA) is the federal agency that identifies potential impacts related to air traffic and related safety hazards. 49 CFR Part 77 establishes standards and notification requirements for objects affecting navigable airspace. This notification serves as the basis for evaluating the effect of the proposed construction or alteration on operating procedures; determining the potential hazardous effect of the proposed construction on air navigation; identifying mitigation measures to enhance safe air navigation; and charting new objects. FAA Federal Aviation Regulations Part 77 includes the establishment of imaginary surfaces (airspace that provides clearance of obstacles for runway operation) that allows the FAA to identify potential aeronautical hazards in advance, thus preventing or minimizing adverse impacts on the safe and efficient use of navigable airspace. The regulations identify three-dimensional imaginary surfaces through which no object should penetrate.

State

California Code of Regulations

The California Code of Regulations (22 CCR Sections 66261.20–66261.24) contains technical descriptions of characteristics that would classify wasted material, including soil, as hazardous waste. When excavated, soils with concentrations of contaminants higher than certain acceptable levels must be handled and disposed as a hazardous waste.

California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) regulates the use, storage, transport, and disposal of hazardous substances in the state. DTSC maintains a Hazardous Waste and Substances Site List for site cleanup. This list is commonly referred to as the Cortese List. Government Code Section 65962.5 requires the California Environmental Protection Agency to update the Cortese List at least annually. DTSC is responsible for a portion of the information

contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List.

Fire Protection

The California Fire Code is contained within 24 CCR Chapter 9. Based on the International Fire Code, the California Fire Code is created by the California Buildings Standards Commission and regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. Similar to the International Fire Code, the California Fire Code and the California Building Code use a hazards classification system to determine the appropriate measures to incorporate to protect life and property.

The California Public Resources Code includes fire safety regulations that apply to State Responsibility Areas during the time of year designated as having hazardous fire conditions. During the fire hazard season, these regulations restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire-suppression equipment that must be provided on-site for various types of work in fire-prone areas. Additional codes require that any person who owns, controls, operates, or maintains any electrical transmission or distribution line must maintain a firebreak clearing around and adjacent to any pole, tower, and conductors that carry electric current as specified in Sections 4292 and 4293. The state's Fire Prevention Standards for Electric Utilities (14 CCR Sections 1250–1258) provides specific exemptions from clearance standards for electric poles, tower firebreaks, and electric conductors and specifies when and where standards apply.

State Water Resources Control Board

The SWRCB and the RWQCBs administer the requirements of the federal Clean Water Act that regulate pollutant discharges into waters of the United States.

Project construction would disturb more than 1 acre of land surface, affecting the quality of stormwater discharges into waters of the United States. The Project would therefore be subject to the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). This Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the United States from construction sites that disturb 1 or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than 1 acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines. For additional details of the NPDES Construction General Permit, see Section 4.10, *Hydrology and Water Quality*.

Local

Humboldt County General Plan

The Project site is located within Humboldt County. The following goals and policies from the Safety Element of the Humboldt County General Plan address hazards and hazardous materials (Humboldt County, 2017a).

Goal S-G1. Minimize Loss. Communities designed and built to minimize the potential for loss of life and property resulting from natural and manmade hazards.

Goal S-G2. Prevent Unnecessary Exposure. Areas of geologic instability, floodplains, tsunami run-up areas, high risk wildland fire areas, and airport areas planned and conditioned to prevent unnecessary exposure of people and property to risks or damage or injury.

Goal S-G3. Natural Drainage and Watershed Protection. Natural drainage channels and watersheds that are managed to minimize peak flows in order to reduce the severity and frequency of flooding.

Goal S-G4. Fire Risk and Loss. Development designed to reduce the risk of structural and wildland fires supported by fire protection services that minimize the potential for loss of life, property, and natural resources.

Goal S-G6. Industrial Safety. Industrial development regulated by performance standards, monitored by the appropriate agencies, and supported by land use plans that minimizes risk and exposure of the population to industrial hazards.

Goal S-G7. Response Preparedness. Interagency readiness and capacity to respond to emergencies to reduce loss of life and property, support the population, and facilitate recovery.

Goal S-G8. Cascadia Even Preparation. A community prepared to withstand and recover from a high magnitude, long-duration local earthquake along the Cascadia subduction zone.

Policy S-P1. Reduce the Potential for Loss. Plan land uses and regulate new development to reduce the potential for loss of life, injury, property damage, and economic and social dislocations resulting from natural and manmade hazards, including but not limited to, steep slopes, unstable soils areas, active earthquake faults, wildland fire risk areas, airport influence areas, military operating areas, flood plains, and tsunami run-up areas.

Policy S-P2. Coastal Zone Hazards. Development within the coastal zone shall minimize risk to life and property in areas of high geologic, tsunami, flood, and fire hazard; assure stability and structural integrity; and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding areas or in any way require the construction of protective devices that would substantially alter natural landforms along buffs and cliffs.

Policy S-P3. Hazard Education. Encourage the education of the community regarding the nature and extent of hazards and community disaster preparation and response.

Policy S-P4. Disaster Response Plans. The County shall prepare and maintain current disaster response plans. The County shall support and participate in the preparation of disaster response plans by community organizations, companies, cities, and state and federal agencies.

Policy S-P5. Hazard Mitigation. The County shall actively seek opportunities to reduce the impact of disasters through hazard mitigation planning.

Geologic/Seismic

Policy S-P7. Structural Hazards. The County shall protect life and property by applying and enforcing state adopted building codes and Alquist-Priolo requirements to new construction.

Policy S-P8. Improved Information. Encourage and support more detailed scientific analysis of Cascadia Subduction Zone earthquake risks, probabilities, and anticipated effects.

Policy S-P9. Earthquake Mitigation Planning. The potential for a local earthquake in excess of magnitude 9.0 (Richter scale) shall be considered in disaster planning, risk assessment, and pre disaster mitigation efforts.

Policy S-P10. Cascadia Event Disaster Response. The County shall maintain readiness for a comprehensive response to a major earthquake consistent with the nationwide emergency management hierarchy and the adopted Emergency Response Plan for the Humboldt Operation Area.

Policy S-P11. Site Suitability. New development may be approved only if it can be demonstrated that the proposed development will neither create nor significantly contribute to, or be impacted by, geologic instability or geologic hazards.

Flooding

Policy S-P12. Federal Flood Insurance Program. The County shall participate in the Federal Flood Insurance Program and maintain Flood Damage Prevention regulations in the County Code to regulate land uses in flood hazard areas in order to minimize loss of life and property and public flood-related expense.

Policy S-P13. Flood Plains. Agricultural lands that are in mapped floodplains shall be retained for use in agriculture.

Policy S-P14. Prohibition of Residential Subdivisions within Floodplain. The creation of new parcels that increase residential density wholly within the 100-year floodplain, as identified in the most recent FEMA [Federal Emergency Management Agency] flood insurance rate maps, shall be prohibited unless the Board Supervisors makes specific findings that the potential for loss of life and property can be reduced to less than significant levels.

Policy S-P15. Construction within Special Flood Hazard Areas. Construction within a floodplain identified as the 100-Year Flood Boundary on FEMA's Flood Insurance Rate Map shall comply with County's Flood Damage Prevention Regulations. Fill in the floodplain shall only be allowed if it can be demonstrated. That the fill will not have cumulative adverse impacts on or off site and such fill shall not be detrimental to productive farm land, and is otherwise in conformance with the County's Flood Damage Prevention Regulations.

Policy S-P16. Development on, or Adjacent to, Costal Bluffs and Beaches. Allow development in areas immediately adjacent to costal bluff and beaches only if it can be demonstrated by a certified engineering geologist that wave action, storm swell, tsunami inundation, and projected sea level rise using the best available scientific information and at the time of review, are not a hazard to the proposed development.

Fire Hazards

Policy S-P17. Joint Planning and Implementation. The County shall plan collaboratively with local fire agencies and companies, CAL FIRE [California Department of Forestry and Fire Protection], and federal fire organizations on

countywide fire prevention and response strategies. Implementation shall be coordinated to maximize efficiency and ensure efforts are complimentary.

Policy S-P18. Subdivision Design in High and Very High Fire Hazard Zones. Subdivisions with State Responsibility Area (SRA) high very high fire severity classification areas shall explicitly consider designs and layout to reduce wildfire hazards and improve defensibility; for example, through clustering of lots in defensible areas, irrigated green belts, water storage, perimeter roads, roadway layout and design, slope development constraints, fuel modification plans, and vegetation setbacks.

Policy S-P19. Conformance with State Responsibility Areas (SRA) Fire Safe Regulations. Development shall conform to Humboldt County SRA Fire Safe Regulations.

Policy S-P20. Level-of-Service Standards. Support the development of a level of service standard by the Humboldt County Fire Chief's Association for all emergency response services (fire, EMS [emergency medical service], HazMat, and rescue) and make such information public so that landowners and residents understand the distribution and quality of service.

Policy S-P21. Fire District Boundary Maps. The County shall maintain and publish fire district boundary maps.

Policy S-P22. Prescribed Burning. Encourage the use of prescribed burning as a management tool for hazardous fuels reduction, timber management purposes, livestock production, and enhancement of wildlife habitat.

Policy S-P23. Hazardous Fuel Reduction. Encourage land management activities that result in the reduction of hazardous fuels and also support timber management, livestock production, and the enhancement of wildlife habitat, though the use of prescribed burning, hand or mechanical methods, firewise plants, biomass utilization, and animal grazing.

Policy S-P24. Fire Safe Education. Expand fire prevention and mitigation education capacity in the county.

Policy S-P25. Fire Services Provider Support. Make information available to fire service providers about creating districts, increasing organizational capacity, developing funding streams, and improving Insurance Services Office (ISO) ratings for reduced insurance costs.

Policy S-P26. Protection of Native Plants. The County shall promote fire-safe practices that encourage conservation and use of native plants and native plant ecosystems, while protecting citizens, firefighters, and property.

Policy S-P27. Alternative Owner Builder High and Very High Severity Zones. Alternative Owner Builder (AOB) permits for construction of new dwelling in high and very high fire severity zones shall be required to comply with the materials and construction methods for exterior wildfire exposures of the California Residential Code (CRC) and chapter 7-A of the California Building Code (CBC) as amended, unless the construction materials can be found to be in substantial conformance with the California Building Codes by the Humboldt County Building Official.

Airport Safety

Policy S-P28. Development Compatibility. Encourage the Airport Land Use Commission to review the Airport Land Use Compatibility Plan (ALUCP) at least every five years to ensure that the ALUCP accurately defines planning areas around airports and establish land use policies and standards appropriate for the public safety and

protection airport operations. Amend the General Plan Safety Element to be consistent with changes to the ALUCP.

Policy S-P29. Airport Land Use Compatibility Criteria. Regulate and plan land use around airports according to the Airport/Land Use Safety Compatibility Criteria (Table 14-A), which shall be consistent with the ALUCP.

Policy S-P30. Obstruction-free Approach Surfaces. The maintenance of obstruction-free approach surfaces at all airports identified on the Approach and Clear Zone plans consistent with FAA requirements shall be principally permitted.

Policy S-P31. Airport Safety Combining Zone. Utilize an airport safety combining zone within airport influence areas to ensure consistent application of the Airport/Land Use Safety Compatibility Criteria matrix.

Industrial Hazards

Policy S-P32. Hazardous Industrial Development. Hazardous industrial development may be permitted when:

- It includes mitigation measures sufficient to offset increased risks to adjacent human populations and the environment; and
- Increased risk to adjacent human populations and the environment have been adequately mitigated by approved disaster response plans. (See definition of "hazardous industrial development" in Standard S-S16, Hazardous materials Handling and Emergency Response).

Policy S-P33. Hazardous Industrial. Eliminate the use of toxic materials within Humboldt County, where feasible, and require the reduction, recycling, and reuse of such materials, to the greatest extent possible, where complete elimination of their use if not feasible. Require new development which may generate significant quantities of hazardous wastes to be consistent with all the foals and policies of the Hazardous Waste Management Plan (Appendix H).

Emergency Management

Policy S-P34. Pre-disaster Planning and Mitigation. The County shall proactively reduce known hazards through pre-disaster planning and mitigation efforts.

Policy S-P35. Hazard Mitigation Plan. The County incorporates by reference into this Safety Element the Humboldt Operational Area Hazard Mitigation Plan unincorporated areas (Volume I and the Humboldt County Annex and the Appendices of Volume II) as adopted and amended by the Board of Supervisors, in accordance with the Federal Disaster Mitigation Act of 2000 and California Government Code, Section 65302.6.

Policy S-P35. Hazard Mitigation Plan. The County incorporates by reference into this Safety Element the Humboldt Operational Area Hazard Mitigation Plan unincorporated areas (Volume I and the Humboldt County Annex and the Appendices of Volume II) as adopted and amended by the Board of Supervisors, in accordance with the Federal Disaster Mitigation Act of 2000 and California Government Code, Section 65302.6.

Policy S-P36. Emergency Operations Capability. The County shall maintain the ability to implement the nationwide National Incident Management System (MINS), statewide Standardized Emergency Management System (SEMS), activate the Operational Area Emergency Operations Center (EOC), coordinate responders, and implement other tactical response measures as required. Emergency shall conform to the Humboldt County Operational Area Emergency Operations Plan.

Policy S-P37. Tsunami Ready Program. The County shall support efforts of low-lying coastal communities to attain Tsunami Ready status, as developed by the National Weather Service.

Emergency Operations Plan

The Humboldt County Emergency Operations Plan (EOP) addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and human-caused disasters in or affecting Humboldt County. This plan accomplishes the following (Humboldt County, 2015):

- Establishes the emergency management organization required to mitigate any significant emergency or disaster affecting Humboldt County.
- Identifies the policies, responsibilities, and procedures required to protect the health and safety of Humboldt County communities, public and private property, and the environmental effects of natural and technological emergencies and disasters.
- Establishes the operational concepts and procedures associated with field response to emergencies, County Emergency Operations Center (EOC) activities, and the recovery process. This Plan is designed to guide each phase of an emergency, such as preparedness, response, recovery, and mitigation.

Hazardous Waste Management Plan

The Hazardous Waste Management Plan is a long-range statement of policy for public and private lands in Humboldt County. The Plan should be used in concert with the County Framework Plan and Community Plans. Together, these plan elements include all of the relevant goals, policies, and standards for managing hazardous wastes generated in Humboldt County (Humboldt County, 1989).

F.10 Hydrology and Water Quality

Federal

Clean Water Act

The statutes that govern the construction and operational/maintenance activities related to the Project that could affect water quality are the federal Clean Water Act (CWA) (United States Code Title 33, Section 1251) and the state Porter-Cologne Water Quality Control Act (Porter-Cologne Act) (Water Code Section 13000 et seq.).

The CWA, enacted by Congress in 1972 and amended several times since its inception, is the primary federal law regulating water quality in the United States and forms the basis for several state and local laws throughout the country. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. The CWA authorizes EPA to implement federal water pollution control programs such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry

categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the CWA is administered by the EPA and U.S. Army Corps of Engineers.

Under Section 303(d) of the CWA, states are required to identify water bodies or reaches of streams that are impaired (i.e., do not meet one or more of the water quality standards established by the State of California). EPA must approve the 303(d) list before it is finalized. Inclusion of a water body on the Section 303(d) List of Impaired Water Bodies triggers development of a total maximum daily load (TMDL) for that water body and a plan to control the associated pollutant/stressor on the list. The TMDL is the maximum amount of a pollutant/stressor that a water body can assimilate and still meet the water quality standards. Typically, a TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. Once a water body is placed on the 303(d) List of Water Quality Limited Segments, it remains on the list until a TMDL is adopted and the water quality standards are attained or there are sufficient data to demonstrate that water quality standards have been met and delisting should take place.

Table F-3 lists the impaired waterways in the Study Area along with water quality TMDL stressors (SWRCB, 2017).

TABLE F-3
303(D) LIST OF IMPAIRED WATER BODIES IN THE STUDY AREA

Watershed/Water Body	Basin	TMDL Stressor	TMDL Completion Date(s)
Klamath River	Lower Klamath	Nutrients/Organics/ Low Dissolved Oxygen/ Sedimentation/ Siltation/ Temperature	2010 and 2019
Redwood Creek	Mad- Redwood	Sedimentation/ Siltation/ Temperature	1998
Mad River	Mad-Redwood	Sedimentation/Siltation/ Temperature	2007

NOTE: TMDL = total maximum daily load

SOURCE: SWRCB, 2017

The Lower Klamath River is listed on the 303(d) list as impaired for sediments, and sedimentation/siltation, with a TMDL for the following pollutants: nutrients, organic enrichment/low dissolved oxygen, water temperature, and cyanobacteria hepatoxic microcystins (SWRCB, 2017). Segments 1, 2, and portions of Segments 3, and 4 would be constructed in the Lower Klamath River watershed.

Redwood Creek is also listed on the 303(d) list for water temperature (TMDL required); and listed for sedimentation/siltation (being addressed with an EPA-approved TMDL) (SWRCB, 2017). Sources of sedimentation/siltation pollutants include construction, land development, logging roads, removal or riparian vegetation, streambank modification/destabilization, and natural sources, among others (NCRWQCB, 2018a). Portions of Segments 3, and 4, a portion of Segment 5, and the Orick Tower would be constructed in the Redwood Creek watershed, with

subsurface construction within the Mad River watershed. The Porter-Cologne Act is described in detail below.

Federal Antidegradation Policy

The federal Antidegradation Policy, established in 1968 under CWA Section 303, is designed to protect existing uses and water quality and national water resources. Implementation of the Antidegradation Policy by the states is based on a set of procedures to be followed when evaluating activities that may affect the quality of the waters of the United States, and is a comprehensive approach to protecting and enhancing surface water and groundwater quality. The state implements this policy through the Porter-Cologne Act's beneficial use and water quality objectives (described below and shown in **Table F-4**) as a means of maintaining high-quality waters in California. The Project's storm water pollution prevention plan (SWPPP) would be designed to maintain water quality throughout the construction duration with respect to beneficial uses and water quality objectives described below.

TABLE F-4
BENEFICIAL USES OF WATER BODIES AT THE PROJECT SITES AND IN SURROUNDING AREAS

Surface Water Body	Existing Beneficial Uses
Lower Klamath River	AGR, AQUA, COLD, COMM, EST, FRSH, GWR, IND, MIGR, MUN, NAV, PROC, RARE, REC1, REC2, SPWN, WARM, WILD
Redwood Creek	AGR, AQUA, COLD, COMM, EST, IND, MIGR, MUN, RARE, REC1, REC2, SPWN, WILD
Mad River	AQUA, AGR, COLD, COMM, FRSH, GWR, IND, MIGR, MUN, IND, PROC, RARE, REC1, REC2, SPWN, WILD

NOTES:

Beneficial Uses Key:

AQUA (Aquaculture) AGR (Agricultural Supply); COLD (Coldwater Habitat); COMM (Commercial and Sport fishing); EST (Estuarine Habitat); FRSH (Freshwater Replenishment); GWR (Groundwater Recharge); IND (Industrial Service Supply); MIGR (Migration of Fish or Aquatic Organisms); MUN (Municipal and Domestic Supply); NAV (Navigation); PROC (Industrial Process Water Supply); RARE (Preservation of Rare and Endangered Species); REC-1 (Body Contact Recreation); REC-2 (Non-contact Recreation); SPWN (Spawning, Reproduction and/or Early Development); WARM (Warm Freshwater Habitat); WILD (Wildlife Habitat).

SOURCE: NCRWQCB, 2018b

State

Beneficial Use and Water Quality Objectives (Clean Water Act Section 303)

The Project would be located within the jurisdiction of the North Coast Regional Water Quality Control Board (NCRWQCB) (Region 1). Region 1 is responsible for protecting the beneficial uses of waters within the coastal watersheds from the Russian River Basin in northern Sonoma County north to the Oregon border. Region 1 implements the adopted *Water Quality Control Plan for the North Coast Region* (Basin Plan) through planning, permitting, and enforcement of established water quality objectives (Table F-4).

In accordance with state policy for water quality control, Region 1 employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The

Basin Plan has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. As shown in Table F-4, the existing beneficial uses designated in the Basin Plan for surface and groundwater in the Study Area include: freshwater replenishment, groundwater recharge, preservation of rare and endangered species, recreation, spawning habitat, and multiple other beneficial uses.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act provides the basis for water quality regulation in California and assigns primary responsibility for protection and enhancement of water quality to the SWRCB and the nine regional water quality control boards (RWQCBs). The Project would be located within the jurisdiction of the NCRWQCB (Region 1).

Under the Porter-Cologne Act, the SWRCB and RWQCBs also are responsible for granting CWA National Pollutant Discharge Elimination System (NPDES) permits and waste discharge requirements for certain point-source and non-point discharges to waters, as described in more detail below. The Porter-Cologne Act allows the SWRCB to adopt statewide water quality control plans and basin water quality control plans (basin plans), which serve as the legal, technical, and programmatic basis of water quality regulation statewide or for a particular region. The basin plans limit impacts on water quality from a variety of sources.

National Pollutant Discharge Elimination System Program

The NPDES Program is regulated by the SWRCB and implemented by the RWQCBs for regulation of discharges. Construction activities disturbing 1 acre or more of land, or that disturb less than 1 acre but are part of a larger common plan of development of 1 or more acres, are subject to the permitting requirements of the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit requires that stormwater discharges and authorized non-stormwater discharges not contain pollutants that cause or contribute to an exceedance of any applicable water quality objective or water quality standards (identified in the basin plan).

The Construction General Permit requires the preparation and implementation of a SWPPP, which must be developed for the specific project type, location, and characteristics, and must be submitted to the SWRCB along with the permit application (a notice of intent) before construction begins (SWRCB, 2018). A SWPPP for linear and underground/overhead projects (such as the Project) is designed to ensure that all of the following occurs:

- All pollutants and their sources are controlled.
- All non-stormwater discharges are identified and either eliminated, controlled, or treated.
- Site best management practices (BMPs) result in the reduction or elimination of pollutants in storm water and authorized non-stormwater discharges.
- Post-construction stabilization BMPs are completed.

A SWPPP includes specific construction-related BMPs to limit or otherwise prevent soil erosion and loss of topsoil, which could otherwise occur as a result of soil-disturbing construction

activities. Such BMPs could include physical barriers to prevent erosion and sedimentation (site boundary protection); dewatering procedures; the use of swales; protection of stockpiled materials; demolition waste management; limitations on the timing of work (such as seasonal restrictions or prohibiting work during storm events); and a variety of other measures that would substantially reduce or prevent erosion and runoff from occurring during construction.

Because the Project would include disturbance of more than 1 acre of soil, a SWPPP would be required to be prepared and implemented as part of the construction general permitting process.

Local

Humboldt County General Plan

The Water Resources Element of the Humboldt County General Plan (Humboldt County, 2017) includes goals and policies related to water resources, watershed planning, stormwater management, erosion control, and multiple water quality objectives for Humboldt County water resources.

F.11 Land Use and Planning

Several of the federal agencies with land management responsibility for portions of the Project (NPS, USFS, and BLM) have land management plans (see below). Lands within the Yurok Reservation are managed by the Applicant and the Yurok Tribe, and are guided by the Yurok Land Use Plan. Private and public lands outside the Yurok Reservation are regulated by the Humboldt County General Plan. Timberland and road maintenance programs within Project timberlands are regulated by GDR and their joint agreements with federal and state agencies.

Federal

National Park Service, Redwood National Park

RNP is a federal park under the jurisdiction of NPS. A general management plan has been prepared for RNP to clearly define and coordinate direction for resource protection, preservation, and restoration. Requirements established by the plan include management zones, goals, strategies, and actions that serve to provide general guidance for land use, facilities, concessions, and operation (National Park Service, 2000). The Project alignment traverses 17.6 miles of RNP.

U.S. Forest Service, Six Rivers National Forest

The SRNF Land and Resource Management Plan (Forest Plan) directs management of the SRNF and sets the forest's goals and objectives for the following 10–15 years. The purpose of the Forest Plan is to guide the integrated protection and use of the SNRF's resources, meet legislative requirements, and address local, regional, and national issues. The SRNF Recreation program was established to provide a wide range of quality outdoor recreation opportunities, emphasizing the unique character of SRNF by providing access, facilities, and information necessary to meet public demand (USDA, 1995).

The Project alignment traverses approximately 9 miles of the SRNF, of which approximately 7.8 miles are within the Wild and Scenic River corridor along the Klamath River. The boundary of the corridor is designated as one-quarter mile on either bank of the designated Wild and Scenic River (USFWS, 2018). See Section 4.16, *Recreation*, for more details on the Wild and Scenic Rivers Act and the applicable approvals required for the Project.

U.S. Bureau of Land Management

BLM is currently revising the Northwest California Integrated Resource Management Plan, which consists of two existing resource management plans: Arcata Resource Area Resource Management Plan (1992) and the Redding Resource Management Plan (1993). The Project would be located within the boundaries of the Arcata Resource Area Management Plan. The purpose of the Northwest California Integrated Resource Management Plan is to make land use decisions to guide the management of BLM-managed lands within the planning area. The Arcata Resource Management Plan would be in accordance with the Federal Land Policy and Management Act, discussed in more detail below, and is intended to resolve issues related to increasing human population and changing use patterns, climate change, special status species and land tenure (BLM, 2017).

The Project would pass through two parcels of land managed by BLM along State Route 96, for which the Arcata Resource Area Resource Management Plan provides general guidance. The Arcata Resource Management Plan would hold river management authority for the portion of the Klamath River that flows over the two isolated tracts of land in Segment 1 that are managed by BLM.

Federal Land Policy and Management Act

The Federal Land Policy and Management Act of 1976, as amended (found in Title 43 of the United States Code), guides management of public lands administered by BLM. The law, enacted by Congress in 1976, allows USFS, NPS, and BLM to permit a variety of uses on federal land, while simultaneously preserving resource values. The Secretary of Agriculture also coordinates land use plans for the National Forest System (NFS) lands by (among other actions) considering the policies for approval of tribal land resource management programs (BLM, 2016).

Tribal

Yurok Tribe

The Yurok Tribe Land Use Plan (YLUP) describes current and planned land uses relative to the Tribe's long-range goals. The YLUP prioritizes management of all Yurok land within Yurok ancestral territory. As such, the YLUP evaluates growth patterns and serves as a guide for future growth related to community development, resource management and conservation. Current residential, commercial, and open spaces are mapped to illustrate patterns of community resources with the addition of planned areas of development in residential, commercial, and open space. Overall, the YLUP outlines current land use patterns, community goals, and tribal government policies to guide the development and resource protection of the Yurok Reservation lands (Yurok Tribe, 2015).

State

California Timberlands Forest Management Plan

The California Timberlands Forest Management Plan discusses timberland owned and managed by Green Diamond Resource Company (GDR). The intent of the management plan is to give an overview of GDR's management objectives, land and resource base, forest planning and operation practices, conservation strategies, and other issues that affect forest management. GDR lands are also managed through a series of timber harvest plans (THPs), regulated by the California Department of Forestry and Fire Protection, and through a series of agreements with federal and state wildlife management agencies called habitat conservation plans (HCPs). The THPs and HCPs specify when and where timber harvest, roadbuilding, road maintenance, and other activities may take place and under what conditions (GDR, 2017). See Section 4.4, *Biological Resources*, for more details pertaining to THPs and HCPs.

Local

Humboldt County General Plan

The Land Use Element of the Humboldt County General Plan identifies the following goals regarding land use that pertain to the Project (Humboldt County, 2017b):

> **Goal GP-G1. Land Inventory and Service Availability**. An adequate supply of vacant land with readily available urban services to accommodate a wide variety of industrial, commercial and residential development opportunities necessary for growth.
>
> **Goal GP-G3. Timed Development and Infrastructure Investments.** Development policies and financing mechanisms that support economically viable commercial, industrial and residential developments timed with infrastructure improvements and expansion of urban services.
>
> **Goal FR-G1. Forest Resources**. Public and private forests producing a wealth of multiple economic and natural resource values and ecosystem services. Constructive dialog and cooperation between state, federal and local agencies and private property owners and a regulatory framework that maximizes private and public interests and ecosystem services.
>
> **Goal FR-G2. Forestland Timber Production.** A prosperous timber industry managing a stable inventory of productive forest lands for timber production. Ranches and rural homesteads making full use of the timber production potential of their lands.

Humboldt County Code Zoning Regulations

The Humboldt County Zoning Code has been adopted pursuant to Title 7 of the California Government Code and Section 30500 of the California Public Resources Code. The purpose of the zoning code is to promote and protect the public health, safety, comfort, convenience, and general welfare of Humboldt County. The code is intended to assure social and economic stability with the various zones established and is consistent with the Humboldt County General Plan and Local Coastal program. Zoning designations applicable to the Project are located in Table 4.11-1.

Humboldt County North Coast Area Plan

This area plan identifies land uses and standards by which development will be evaluated within the Coastal Zone. The indicated uses and standards adopted by Humboldt County and certified by the California Coastal Commission are in conformance and satisfy the policies and requirements for coastal land use contained in the California Coastal Act of 1976 (Humboldt County, 2014).

The Humboldt County North Coast Area Plan contains the following goals applicable to land use and the Project.

> (b) Assure orderly, balanced utilization and conservation of coastal zone resources, taking into account the social and economic needs of the people of the state
>
> (e) Encourage state and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses, including educational uses, in the coastal zone.

Orick Community Plan

The Orick Community Plan provides land use and development guidelines for governmental agencies, local residents, and investors to identify potential development opportunities and constraints in the Orick Area. The plan also represents a statement by local residents of their visions and hopes for the future of their community. The plan serves as an outline and focus for community growth and improvement (Humboldt County, 1985).

F.12 Mineral Resources

Federal

No federal regulations currently in place apply to mineral resources in the Study Area.

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act of 1975 (SMARA) (Public Resources Code Sections 2710–2796) and its implementing regulations (California Code of Regulations Title 14, Section 3500 et seq.) establish a comprehensive state policy for the conduct of surface mining operations and for the reclamation of mined lands to a usable condition that is readily adaptable for alternative land uses. SMARA encourages the production, conservation, and protection of the state's mineral resources and recognizes that "the state's mineral resources are vital, finite, and important natural resources and the responsible protection and development of these mineral resources is vital to a sustainable California" (Public Resources Code Section 2711). Under SMARA, the term "minerals" includes "any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances, including, but not limited to, coal, peat, and bituminous rock, but excluding geothermal resources, natural gas, and petroleum" (California Code of Regulations Title 14, Section 3501).

CGS maps and regulates the locations of potential mineral resources in California consistent with SMARA. To protect these potential mineral resources, CGS has classified the regional significance of mineral resources in mapped Mineral Resource Zones. The Project would not be located in a Mineral Resource Zone.

Local

Humboldt County General Plan

The following goal and policies from the Conservation and Open Space Element of the Humboldt County General Plan related to mineral resources are applicable to the Project (Humboldt County, 2017).

> **Goal MR-G1. Long-Term Supply of Mineral Resources.** A geographically distributed inventory of mining sites protected from incompatible land uses, permitted and operated to prevent or minimize to the extent feasible significant environmental impacts and to satisfy long-term demand for mineral resources and construction materials. Mining permits may be issued for any term consistent with the resource and subject to ongoing regulatory review.
>
> **Policy MR-P2. Production and Conservation**. Encourage the production and conservation of minerals, while preserving to the maximum extent feasible the values relating to recreation, watershed, wildlife, timber management and agriculture, science, and aesthetic enjoyment.
>
> **Policy MR-P8. Future Development Planning**. Plan future development such that it will not interfere with the utilization of identified mineral deposits.

F.13 Noise and Vibration

Federal

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under Code of Federal Regulations Title 40, Part 205, Subpart B. The federal truck pass-by noise standard is 80 dBA at 15 meters (approximately 50 feet) from the vehicle pathway centerline. These controls are implemented through regulatory requirements on truck manufacturers.

State

The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the state pass-by standard is consistent with the federal limit of 80 dBA at approximately 50 feet from the centerline. The state pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dBA at approximately 50 feet from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by state and local law enforcement officials.

Local

Humboldt County General Plan

The following noise and vibration–related policies identified in the Noise Element of the *Humboldt County General Plan (Humboldt County, 2017)* are relevant to the Project.

> **Policy N-P1. Minimize Noise from Stationary and Mobile Sources.** Minimize stationary noise sources and noise emanating from temporary activities by applying appropriate standards for average and short-term noise levels during permit review and subsequent monitoring.
>
> **Policy N-P4. Protection from Excessive Noise.** Protect persons from existing or future excessive levels of noise which interfere with sleep, communication, relaxation, health or legally permitted use of property.
>
> **Policy N-S7. Short-term Noise Performance Standards (L_{max}).** The following noise standards (see **Table F-5**), unless otherwise specifically indicated, shall apply to all property within their assigned noise zones and such standards shall constitute the maximum permissible noise level within the respective zones.

TABLE F-5
HUMBOLDT COUNTY SHORT-TERM NOISE STANDARDS (L_{MAX})

Zoning Classification	Daytime 6:00 a.m. to 10:00 a.m.	Nighttime 10:00 p.m. to 6:00 a.m.
MG, MC, AE, TPZ,TC, AG, FP, FR, MH	80	70
CN, MB, ML, RRA, CG, CR C-1, C-2. C-3	75	65
RM, R-3, R-4	65	60
RS, R-1, R-2, NR	65	60

NOTES:

MG = General Industrial; MC = Industrial Costal Dependent; AE = Agricultural Exclusive; TPZ = Residential Uses on Timberland Production Zone; AG = Agricultural Grazing; MB = Business Park; CG = Commercial General; RM = Residential Medium Density; NR = Natural Resources

SOURCE: Humboldt County, 2017.

> Exceptions. The Short Term Noise levels shown in [Table F-5] shall not apply to uses such as, but not limited to, the following:
>
> - Portable generator uses in areas served by public electricity when electrical service is interrupted during emergencies as determined by the Planning Director.
> - Temporary events in conformance with an approved Conditional Use Permit.
> - Use of chainsaws for cutting firewood and power equipment used for landscape maintenance when accessory to permitted on-site uses.
> - Heavy equipment and power tools used during construction of permitted structures when conforming to the terms of the approved permit.
> - Emergency vehicles.

Humboldt County Municipal Code

Section 313-103 of the Humboldt County Zoning Regulations establishes performance standards for industrial developments. For development that affects residential zones, noise emissions must be limited, so they do not exceed the exterior ambient noise level by more than 5 dB and vibration must be limited so that no vibrations are perceptible off the site. For development impacting nonresidential zones, noise emissions must be limited to 70 dBA anywhere off the site, and vibration must be limited, as to not interfere with adjacent land uses. Humboldt County has established performance standards for industrial uses, but Humboldt County Zoning Regulations does not contain quantitative or qualitative standards for construction activities.

F.14 Population and Housing

Federal/State

No federal or state regulations apply to population and housing in the Study Area.

Local

Humboldt County

The Housing Element of the Humboldt County General Plan was updated and approved in 2019. The Housing Element includes numerous goals (Goals H-G1 through H-G7) that address objectives, policies, and programs for maintaining an adequate housing supply in the county (Humboldt County, 2019).

F.15 Public Services

Federal

National Cohesive Wildland Fire Management Strategy

USFS and its other federal, tribal, state, and local partners have developed and are implementing the National Cohesive Wildland Fire Management Strategy as an effort to work collaboratively among stakeholders and across landscapes, using the best available science to make progress toward three goals (USDA, 2018):

- Resilient Landscapes—landscapes across all jurisdiction are resilient to fire related disturbances in accordance with management objectives.
- Fire Adapted Communities—human populations and infrastructure can withstand wildfire without loss of life or property.
- Safe and Effective Wildfire Response—all jurisdictions participate in developing and implementing safe, effective, and efficient risk-based wildfire management decisions.

State

No state laws, regulations, or policies pertaining to public services would be applicable to the Project.

Local

Humboldt County General Plan

The Community Infrastructure and Services Element of the Humboldt County General Plan contains the following goals relevant to public services for the Project area (Humboldt County, 2017c).

Goal IS-G1. Adequate Infrastructure and Services. Well maintained public infrastructure and services supporting existing development.

Goal IS-G2. Sustainable Funding. Adequate and sustainable revenue sources for capital improvements and maintenance of infrastructure and services.

Goal IS-G3. Interagency Coordination. Coordinated planning, prioritization, funding, and implementation of infrastructure and public service projects across jurisdictional boundaries.

Humboldt County Community Wildfire Protection Plan

The Community Wildfire Protection Plan (CWPP) was updated in 2019. The CWPP is intended to serve as the guiding document for reducing the risk of potential wildfire loss in vulnerable communities within Humboldt County (Humboldt County and Humboldt County Fire Safe Council, 2019b). Some of the applicable goals and policies are provided below (Humboldt County, 2017c):

Goal S-G2. Prevent Unnecessary Exposure. Areas geologic instability, floodplains, tsunami run-up areas, high risk wildland fire areas, and airport areas planned and conditioned to prevent unnecessary exposure of people and property to risk of damage or injury.

Goal S-G4. Fire Risk and Loss. Development designed to reduce the risk of structural and wildland fires supported by fire protection services that minimize the potential for loss of life, property, and natural resources.

Goal S-G4. Fire Risk and Loss. Development designed to reduce the risk of structural and wildland fires supported by fire protection services that minimize the potential for loss of life, property, and natural resources.

Policy S-P17. Joint Planning and Implementation. The County shall plan collaboratively with local fire agencies and companies, CAL FIRE, and federal fire organizations on countywide fire prevention and response strategies. Implementation shall be coordinated to maximize efficiency and ensure efforts are complimentary.

Policy S-P20. Level-of-Service Standards. Support the development of a level of service standard by the Humboldt County Fire Chief's Association for all emergency response services (fire, EMS, Hazmat, and rescue) and make such information public so that landowners and residents understand the distribution and quality of service.

Policy S-P21. Fire District Boundary Maps. The County shall maintain and publish fire district boundary maps.

Policy S-P24. Fire Safe Education. Expand fire prevention and mitigation education capacity in the county.

Policy S-P25. Fire Service Provider Support. Make information available to fire service providers about creating district, increasing organizational capacity, developing funding streams, and improving Insurance Services Office (ISO) ratings for reduced insurance costs.

F.16 Recreation

Federal

Six Rivers National Forest Land and Resource Management Plan

Recreational management of Six Rivers National Forest consists of oversight and maintenance of recreation sites, administration of special-use permits, development of partnerships, environmental education, recreation programming, and annual recreation site monitoring. The overall goal for the National Forest's Recreation Program is to provide a wide range of quality outdoor recreation opportunities, emphasizing the unique character of the Six Rivers by providing access, facilities, and information necessary to meet public demand. The goal of Recreational and Scenic Rivers management is to maintain and enhance the outstanding remarkable values for which the rivers are designated and provide recreational opportunities that do not adversely impact or degrade those values (USFS, 1995; USFS, 2009).

Wild and Scenic Rivers Act

The National Wild and Scenic Rivers System was created by Congress in 1968 to "preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations" (Wild and Scenic Rivers Act, October 2, 1968) (National Wild and Scenic Rivers System, 2017). The Six Rivers National Forest Land and Resource Management Plan, published by USFS in 1995, designated the Klamath River as a Wild and Scenic River. For more information on the Klamath River and water crossings proposed in the Project, see Section 4.16.1.

Redwood National Park Public Law 90-545

RNP was established "to preserve significant examples of the primeval coastal redwood (*Sequoia sempervirens)* forests and the streams and seashores with which they are associated, for purposes of public inspiration, enjoyment, and scientific study, there is hereby established a Redwood National Park in Del Norte and Humboldt Counties, California" (Public Law 90-545, October 2, 1968). Together, NPS and State Parks cooperatively manage these lands in perpetuity for the inspiration, enjoyment, and education of all people. RNP would include Segments 3, 4, and 5 of the Project.

State

No state plans or policies regarding recreation apply to the Project.

Local

Humboldt County General Plan

The Conservation and Open Space Elements of the Humboldt County General Plan identify goals and policies regarding parks and recreation that pertain to the Project (Humboldt County, 2017).

Goal CO-G1. Conservation of Open Spaces. Open spaces that distinguish and showcase the county's natural environment for the enjoyment of residents and visitors, including working resource lands that provide livelihoods and profitable economic returns while maintaining open space and ecological values.

Goal CO-G3. **Conservation and Open Space Program**. An Open Space and Conservation Program that implements this Element's policies and is complimentary *[sic]* to the conservation and open space lands and programs of cities, tribes, and state and federal agencies while respecting property rights.

Goal CO-G4. Parks and Recreation. Well maintained and accessible parks offering a range of popular recreation opportunities and a countywide trail system that meets future recreational and non-motorized transportation demands.

Policy CO-P1. Conservation and Open Space Program. The County shall inventory and appropriately zone conservation and open space lands and work to protect these lands through development review; Williamson Act programs; TPZ [Timber Production Zone] zoning designations; conservation easement and recreation programs; and support for continued resource production.

Policy CO-P8. Planning for Recreational Needs within Communities. Policies addressing community recreational needs shall be prepared as part of planning efforts within each community. Implement park in-lieu fee programs in major communities.

Policy CO-P6. Develop and Maintain County Parks. Secure, develop, and maintain county parks and recreation areas that are highly accessible to the public in order to serve the present and future needs of county residents.

Policy CO-P11. Public Recreation. Support acquisition, development and management of parklands and trails primarily in locations that are highly accessible to the public in order to serve the outdoor recreation and ADA [Americans with Disabilities Act] needs of current and future residents, and where such uses do not reduce the agricultural capability, timber productivity and ecological services on open space lands.

F.17 Socioeconomics and Environmental Justice

Federal

U.S. Bureau of Indian Affairs NEPA Guidebook

Last updated in August 2012, the *Indian Affairs National Environmental Policy Act (NEPA) Guidebook* (59 IAM 3-H) provides some suggested variables to consider when analyzing the "human environment," including employment and income, demographic trends, lifestyle and cultural values, community infrastructure (public services, utilities), and environmental justice (BIA, 2012). Public services and utilities are evaluated in Sections 4.15 and 4.19, respectively; all others are addressed in this section.

U.S. Bureau of Land Management Environmental Justice and Socioeconomics Guidance

Appendix D, Section IV, "Environmental Justice Requirements," of BLM's *H-1601-1: BLM Land Use Planning Handbook* provides guidance for assessing potential impacts on population, housing, and employment as they relate to environmental justice. Additionally, this handbook

contains guidance regarding integrating social science information into the planning process (BLM, 2005).

National Park Service NEPA Handbook

The NPS NEPA Handbook requires that either an analysis or specific dismissal of issues related to environmental justice be conducted in an EA.

U.S. Forest Service Environmental Justice and Socioeconomics Guidance

USFS relies on regulations and guidance produced by the USDA to implement NEPA and other directives. USDA Departmental Regulation 5600-002 provides direction to agencies for integrating environmental justice considerations into USDA programs and activities. Forest Service Handbook FSH 1909.17 contains guidance with regard to conducting social and economic analyses for forest service activities in accordance with NEPA.

Executive Order 12898

EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," directs federal agencies to develop strategies to address and achieve environmental justice. Federal agencies are required to identify and address any disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and/or low-income populations.

The Council on Environmental Quality (CEQ), in consultation with EPA and other agencies, has developed guidance to assist federal agencies to ensure that environmental justice concerns are effectively identified and addressed under NEPA. The 1997 guidance established that agencies should consider the composition of the affected area to determine whether minority populations or low-income populations are present in the area affected by the proposed action, and if so whether there may be disproportionately high and adverse human health or environmental impacts (CEQ, 1997).

Executive Order 13045

EO 13045, "Protection of Children from Environmental Health Risks and Safety Risks," acknowledges that children may suffer disproportionately from environmental health risks and safety risks, and stipulates that to the extent permitted by law and consistent with the agency's mission, each Federal agency shall prioritize the identification and assessment of environmental health risks and safety risks that may disproportionately affect children; and shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

State

There are no specific state statutes or regulations that require the analysis of social, economic, or environmental justice impacts under CEQA. State CEQA Guidelines Sections 15131(a) through 15131(c) do state that economic and social effects *may* be included in an EIR but "shall not be treated as significant effects on the environment." An EIR (or MND) may trace a cause and effect

chain from a decision on a project through expected economic and social changes resulting from the project to physical changes caused in turn by the economic and social changes. In addition, economic and social effects may be used to determine the significance of physical changes caused by the project. Further, public agencies are required to consider economic, social, and particularly housing factors, together with technological and environmental factors, in deciding whether changes in a project (including mitigation measures) are feasible to reduce or avoid significant effects on the environment. If information on these factors is not included in the CEQA analysis, the information must be added to the record in some other manner to allow the agency to consider the factors in reaching a decision on the project. The CPUC may use information presented in this section when making its decision about whether to approve, approve with changes, or deny the project. In particular, the CPUC may use information in this section to inform its consideration of community values under Public Utilities Code Section 1002.

Local

Humboldt County General Plan

The Housing Element of the Humboldt County General Plan includes objectives, policies, and programs related to governance, and environmental justice (Humboldt County, 2017):

> **Goal ED-G5. Economic Development Assistance Programs.** Financial and technical assistance programs that support wage growth, full employment, and business inclusive of disadvantaged communities.
>
> > **Policy ED-P16. Revitalization.** Promote strategies such as infrastructure and/or economic development to revitalize disadvantaged communities.
> >
> > > **Standard ED-S3. Disadvantaged Communities.** Communities shall be considered disadvantaged based on one or more of the following factors: disproportionately lower median incomes, higher unemployment rates, deteriorated housing conditions, or high commercial and industrial land vacancy rates.
> > >
> > > > **Implementation Measure ED-IM3.** Disadvantaged Community Assistance Programs. Operate economic development programs that promote and seek funding for development assistance to disadvantaged communities.

F.18 Transportation and Traffic

Federal

Federal Aviation Administration

All airports and navigable airspace not administered by the U.S. Department of Defense are under the jurisdiction of the Federal Aviation Administration (FAA). Title 14, Section 77 of the Code of Federal Regulations (14 CFR 77) establishes the standards and required notification for objects affecting navigable airspace. In general, projects involving features exceeding 200 feet in height above ground level or extending at a ratio greater than 50:1 (horizontal to vertical) from a public or military airport runway less than 3,200 feet long out to a horizontal distance of 20,000 feet are considered potential obstructions, and require notification to the FAA. In addition, the FAA

requires a congested-area plan for operating a helicopter (with external load) near residential dwellings.

Transportation of Hazardous Materials

The U.S. Department of Transportation is the administering agency for the following regulations:

- 49 CFR 171–177, governing the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of transportation vehicles.
- 49 CFR 350–399 and Appendices A–G, Federal Motor Carrier Safety Regulations, which address safety considerations for the transport of goods, materials, and substances over public highways.
- 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, which directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

State

California Department of Transportation

Caltrans owns the rights-of-way for state highways, including any on- and off-ramps that provide access to the Project area. Any Project-related work within the state rights-of-way requires a ministerial encroachment permit from Caltrans. Caltrans is also the administrating agency for regulations related to traffic safety, including the licensing of drivers, limitations on oversized (weight and load) vehicles, transportation of hazardous and combustible materials, and safe operation of vehicles.

Local

Humboldt County General Plan

The Circulation Element of the Humboldt County General Plan contains the following goals and policies related to transportation and traffic that are relevant to the Project:

> **Goal C-G1. Circulation System Safety and Functionality.** A safe, efficient, accessible and convenient circulation system in and between cities, communities, neighborhoods, hamlets, and adjoining regions taking into consideration the context-specific needs of all users, consistent with urban, suburban, rural or remote community character.
>
> > **Policy C-P4. Mitigation Measures.** Development with potentially significant circulation impacts as determined by CEQA [California Environmental Quality Act] review shall be conditioned to proportionally mitigate such impacts through payment of impact fees, construction of on- and off-site improvements and dedication of rights-of-way or a combination of impact fees, improvements and dedications.
> >
> > **Policy C-P5. Level of Service Criteria.** The County shall strive to maintain Level of Service C operation on all roadway segments and intersections, except for U.S. 101, where Level of Service D shall be acceptable. Level of Service improvements for automobiles should not adversely affect Level of Service and/or Quality of Service for other modes of transportation, if possible.

F.19 Utilities and Service Systems

Federal

No federal regulations governing utilities and service systems apply to the Project.

State

Porter-Cologne Water Quality Control Act

The State of California's Porter-Cologne Water Quality Control Act (Porter-Cologne Act) provides the basis for water quality regulation in California and assigns primary responsibility for the protection and enhancement of water quality to the State Water Resources Control Board (SWRCB) and the nine regional water quality control boards (RWQCBs). Under the Porter-Cologne Act, the SWRCB and RWQCBs also are responsible for granting Clean Water Act National Pollutant Discharge Elimination System (NPDES) permits and establishing waste discharge requirements for certain point-source and nonpoint-source discharges to waters. The Porter-Cologne Act allows the SWRCB to adopt statewide water quality control plans and basin water quality control plans (basin plans) that serve as the basis of water quality regulation statewide or for a particular region. The basin plans designate beneficial uses and water quality objectives for "waters of the state," including surface waters and groundwater, and include implementation programs to achieve the water quality objectives.

The SWRCB also allocates water rights, adjudicates water right disputes, and develops statewide water protection plans, and it establishes water quality standards, which are implemented at the regional level by the RWQCBs (SWRCB, 2018). The North Coast RWQCB (Region 1) implements the regulations of the SWRCB through the North Coast Basin Plan, which is applicable to the Study Area and the surrounding North Coast watersheds from the Russian River basin to the Oregon border.

National Pollutant Discharge Elimination System General Permit for Discharges of Storm Water Associated with Construction Activities (Order 2009-0009-DWQ)

Stormwater discharges in California are regulated through the NPDES permits as implemented by the RWQCBs. Unincorporated Humboldt County is within the North Coast RWQCB (Region 1), which regulates wastewater discharges under the mandates carried forward by the SWRCB.

Construction activities that disturb 1 acre or more of land, or that disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the NPDES General Construction Activity Permit for Discharges of Storm Water Runoff Associated with Construction and Land Disturbing Activities (Construction General Permit). This permit requires that stormwater discharges and authorized non-stormwater discharges not contain pollutants that cause or contribute to an exceedance of any applicable water quality objective or water quality standards (as identified in the basin plan). To meet this objective, the permit also requires the development of a storm water pollution prevention plan (SWPPP) by a certified Qualified SWPPP Developer. Typical construction activities subject to this permit include clearing, grading, and ground disturbances such as soil stockpiling and

excavation, but do not include regular maintenance activities performed to restore a facility to its original grade. The SWPPP specifies that construction-related best management practices (BMPs) are to be implemented to prevent erosion of soils and/or delivery of sediment-laden stormwater into surface waters through runoff.

California Integrated Waste Management Act and Assembly Bill 341

The California Integrated Waste Management Act of 1989 established an integrated waste management program to oversee, manage, and track waste generated in California. The law, administered by the California Department of Resources Recycling and Recovery (CalRecycle) (formerly known as the Integrated Waste Management Board), requires implementation of various state programs designed to encourage the reduction of solid waste. Assembly Bill (AB) 939 required every city and county in California to divert 50 percent of its solid waste from landfills by the year 2000.

AB 75, enacted in 1999, requires that each state agency and each large state facility develop and adopt an integrated waste management plan to implement solid waste diversion strategies including source reduction, recycling, and composting programs, as well as requirements for collection and storage of recyclable materials. The existing law requires each city, county, and regional agency to submit a report summarizing solid waste diversion progress (CalRecycle, 2018).

AB 341, which amended the Integrated Waste Management Act of 1989 and was enacted by the California Legislature in October 2011, directed CalRecycle to adopt a state policy actively seeking to achieve a goal of diverting 75 percent of solid waste from landfills by 2020. The legislation focused largely on commercial waste generators, as this sector was identified as the most in need of improved waste management.

Title 22 California Code of Regulations Division 4.5

California Code of Regulations (CCR) Title 22 contains specific standards and requirements for the identification, collection, transport, disposal, and recycling of hazardous wastes. Additional standards are included for the collection, transport, disposal, and recycling of *universal wastes*, defined as those wastes identified in 22 CCR Section 66273.9, including batteries, electronic devices, mercury-containing equipment, lamps, cathode ray tubes, and aerosol cans. Requirements include recycling, recovery, the return of spent items to the manufacturer, or disposal at a permitted facility. Division 4.5 of Title 22 also contains restrictions and standards relevant to waste destination facilities, and provides authorization requirements for waste handlers. Hazards and hazardous materials are described in detail in Section 4.9, *Hazards and Hazardous Materials*.

Utility Notification Requirements

Utility notification requirements in 8 CCR Section 1541 require excavators to determine the approximate locations of subsurface installations such as sewer, telephone, fuel, electricity, and water lines (or other installations that may reasonably be encountered during excavation work) before opening an excavation. Excavations shall not commence until the excavator has marked

the excavated area as specified in Government Code Section 4216.2; the excavator has received a positive response from all known owner/operators of subsurface installations within the boundaries of a project; those responses confirm that the owner/operators have located their installations; and those responses either advise the excavator of those locations, or advise the excavator that the owner/operator does not operate a subsurface installation that would be affected by a proposed excavation.

The Project would register with the Underground Service Alert (USA) 811 program, so that specific locations for underground utilities would be marked to avoid future damage to the cables.

Local

Humboldt County General Plan

The Community Infrastructure and Services Element of the Humboldt County General Plan contains the following goals that pertain to utilities (Humboldt County, 2017).

IS-G1. Adequate Infrastructure and Services. Well maintained public infrastructure and services supporting existing development.

IS-G3. Interagency Coordination. Coordinated planning, prioritization, funding, and implementation of infrastructure and public service projects across jurisdictional boundaries.

WM-G1. Comprehensive System. A flexible system for the management of solid wastes and waste resources on a countywide basis, which encompasses storage, collection, separation, processing, reduction, reuse and repair, recycling, recovery, marketing, and, when necessary, landfill disposal.

WM-G2. Environment, Health, and Safety. A solid waste management system that protects and improves the county's environment, public health, safety, and economy.

WM-G3. Reduce Waste Toxicity. A low toxicity waste stream that reduces risk of exposure to residents, solid waste and recycling industry workers, and the environment.

F.20 Wildfire

Federal

No federal laws, regulations, or policies related to wildfire are relevant to the Project.

State

California Public Utilities Commission General Order 95

CPUC GO 95 applies to the construction and reconstruction and inspection of overhead electric and communication lines. The order outlines strength, clearance, and inspection requirements for overhead communication lines and requirements for jointly used power lines. Portions of the Project are located in a Tier 2 High Fire-Threat District (HFTD); therefore, the enhanced inspection requirements identified in Rule 80.1A(1), and enhanced minimum clearance requirements identified in Rule 38, would apply to the Project (CPUC, 2018).

General Order 165

GO 165 establishes requirements for the inspection of electric distribution and transmission facilities that are not contained within a substation. Utilities must perform "patrol" inspections, simple visual inspections of utility equipment and structures that are designed to identify obvious structural problems and hazards, at least once per year for each piece of equipment and structure. "Detailed" inspections, where individual pieces of equipment and structures are carefully examined, are required every five years for all overhead conductor and cables, transformers, switching/protective devices, and regulators/capacitors. By July 1 of each year, each utility subject to GO 165 must submit an annual report of its inspections for the previous year under penalty of perjury (CPUC, 2017b).

General Order 166

GO 166 Standard 1.E requires investor owned utilities (IOUs)[6] to develop a fire prevention plan, which describes measures that the electric utility will implement to mitigate the threat of power line fires generally. Additionally, this standard requires that IOUs outline a plan to mitigate power line fires when wind conditions exceed the structural design standards of the line during a Red Flag Warning[7] in a high-fire-threat area. Fire prevention plans created by IOUs are required to identify specific parts of the utility's service territory where the conditions described above may occur simultaneously. Standard 1 also requires that utilities prepare an emergency response plan. Pacific Gas and Electric Company's (PG&E's) emergency response plan, prepared in compliance with Standard 1, is described below.

Standard 11 requires that utilities report annually to the CPUC regarding compliance with GO 166 (CPUC, 2017c). In compliance with Standard 1.E of GO 166, PG&E adopted a fire prevention plan on September 30, 2017.

Senate Bill 1028

Senate Bill (SB) 1028 (2016) requires each electrical corporation to construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by those electrical lines and equipment, and makes a violation of these provisions by an electrical corporation a crime under state law. The bill also requires each electrical corporation to annually prepare a wildfire mitigation plan and submit to CPUC for review. The plan must include a statement of objectives, a description of preventive strategies and programs focused on minimizing risk associated with electric facilities, and a description of the metrics that the electric corporation uses to evaluate the overall performance of the wildfire mitigation plan and the assumptions that underlie the use of the metrics. PG&E developed the 2017 Fire Prevention Plan in response to the requirements of SB 1028.

6 *Investor-owned utilities* (IOUs) are private electricity and natural gas providers. CPUC oversees IOUs.

7 A Red Flag Warning is issued by the National Weather Service to alert fire departments of the onset, or possible onset, of critical weather and dry conditions that could lead to rapid or dramatic increases in wildfire activity.

Senate Bill 901

SB 901 (2018) expands on the wildfire mitigation plan requirements of SB 1028 and includes a number of provisions related to wildfire risk and management in California, such as:

- Budget adjustments for emergency response and readiness.
- The creation of a CAL FIRE Wildfire Resilience Program.
- Changes to the requirements of the Forest Practice Act.
- Increases in the maximum penalties that CPUC can impose on a public utility that fails to comply with CPUC requirements.

The legislation also requires that utilities prepare wildfire mitigation plans that include elements specified in the bill, such as:

- A description of the preventive strategies and programs to be adopted by the electrical corporation to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks.
- Protocols for disabling reclosers[8] and deenergizing portions of the electrical distribution system that consider the associated impacts on public safety; and protocols for mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure.
- Particular risks and risk drivers associated with topographic and climatological risk factors throughout the different parts of the electrical corporation's service territory.

These wildfire mitigation plans must be reviewed by an independent evaluator.

Pacific Gas and Electric Company Wildfire Safety Plan

Pursuant to SB 901 and SB 1028, PG&E's Wildfire Safety Plan was approved by CPUC on May 3, 2019. The Wildfire Safety Plan describes PG&E's approach to mitigating wildfire risk and is accompanied by the expansion of its Public Safety Power Shutoff program. To address wildfire risk, PG&E has included the following wildfire reduction measures:

- Enhanced vegetation management and tree removal in HFTDs.
- Transmission, distribution, and substation inspections in HFTDs.
- System hardening (including replacing conductors, undergrounding lines where appropriate, replacing equipment and upgrading or replacing transformers, and installing more resilient poles) in HFTDs.
- Situational awareness (installing weather stations, cameras, and fire spread models).
- Establishment of Resilience Zones.
- The Public Safety Power Shutoff program.

[8] Reclosing devices, such as circuit breakers, are used to isolate circuit segments when abnormal system conditions are detected.

The objective of this plan is to address differentiated fire risks across California, reduce ignition drivers, and reduce the frequency of risk events associated with overhead electric facilities (PG&E, 2019).

2019 Strategic Fire Plan for California

Developed by the Board of Forestry and Fire Protection, the Strategic Fire Plan outlines goals and objectives to implement CAL FIRE's overall policy direction and vision. The 2019 Strategic Fire Plan demonstrates CAL FIRE's focus on improving internal and external communication and improving core CAL FIRE competencies. Through the Strategic Plan, CAL FIRE implements and enforces the policies and regulations set forth by the Board of Forestry and Fire Protection and carries forth the mandates of the Governor and the Legislature (CAL FIRE, 2019). The goals and objectives of the plan would not be directly applicable to the Project.

Unit plans are developed and updated to implement the programs and goals of the 2019 Strategic Fire Plan. The 2020 Humboldt–Del Norte Unit Strategic Fire Plan outlines strategies for how the Humboldt–Del Norte Unit will implement and meet the goals in the overall Strategic Fire Plan (CAL FIRE, 2020). The Humboldt–Del Norte Unit's objectives focus on implementing pre-fire management strategies, coordinating with relevant stakeholders, increasing communication and planning coordination within communities, and improving the prescribed burning program. The goals and objectives would not be directly applicable to the Project.

California Emergency Response Plan

Pursuant to the Emergency Services Act (Government Code Section 8550 et seq.), California has developed an emergency plan to coordinate emergency services provided by federal, state, and local governmental agencies and private persons. The plan is administered by the Governor's Office of Emergency Services (OES). OES coordinates the responses of other agencies, including the U.S. Environmental Protection Agency, California Highway Patrol, California Department of Fish and Wildlife, the regional water quality control boards (RWQCBs) (in this case, the North Coast RWQCB), the local air districts (in this case, the North Coast Unified Air Quality Management District), and local agencies. The State Emergency Plan defines the "policies, concepts, and general protocols" for proper implementation of the California Standardized Emergency Management System, an emergency management protocol that agencies in California must follow during multi-agency response efforts.

Fire Protection in California Fire Code and Public Resources Code

The California Fire Code is contained in California Code of Regulations (CCR) Title 24, Chapter 9. Based on the International Fire Code, the California Fire Code is created by the California Buildings Standards Commission and regulates use, handling, and storage requirements for hazardous materials at fixed facilities. Similar to the International Fire Code, the California Fire Code and the California Building Code use a hazards classification system to determine the appropriate measures to incorporate to protect life and property.

The California Public Resources Code (PRC) includes fire safety provisions that apply to SRAs during the time of year designated as having hazardous fire conditions. During the fire hazard season,

these regulations restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire-suppression equipment that must be provided on-site for various types of work in fire-prone areas.

Additional codes require that any person who owns, controls, operates, or maintains any electrical transmission or distribution line must maintain a firebreak clearing around and adjacent to any pole, tower, and conductors that carry electric current as specified in PRC Sections 4292 and 4293. PRC Section 4292 requires that a 10-foot zone around the base of poles be cleared of all flammable vegetation. The State's Fire Prevention Standards for Electric Utilities (14 CCR Sections 1250–1258) provide specific exemptions from the electric pole and tower firebreak and electric conductor clearance standards and specifies when and where standards apply.

Local

Humboldt County General Plan

The Safety Element of the Humboldt County General Plan addresses fire hazards and emergency management in the county. The following goals and standards guide Humboldt County's planning with regard to wildfire hazards (Humboldt County, 2017).

Goal S-G4. Fire Risk and Loss. Development designed to reduce the risk of structural and wildland fires supported by fire protection services that minimize the potential for loss of life, property, and natural resources.

Standard S-S9. SRA Fire Safe Regulations. Development within SRA shall conform to SRA Fire Safe Regulations (Humboldt County Code, Division 11 of Title III as amended).

Standard S-S10. California Building Codes. New construction shall conform to the most recently adopted California building codes.

Standard S-S11. California Fire Code. The California Fire Code shall be applied to all applicable development.

Standard S-S12. Fire Hazard Severity Zone Maps. The County shall use the most recently adopted CALFIRE Fire Hazard Severity Zone Maps for fire planning and local land use and development review purposes.

Standard S-S13. Community Wildfire Protection Plan. Utilize the Community Wildfire Protection Plan for countywide fire prevention and response strategy and implementation.

Humboldt Operational Area Hazard Mitigation Plan

This plan serves as a coordinating document for risk reduction efforts for Humboldt County and incorporated cities in the Humboldt Operation Area. The plan includes a risk assessment for Humboldt County, identifies hazards in the county, identifies vulnerable assets within municipalities and unincorporated Humboldt County, and mitigation alternatives for each hazard. The goals, objectives, and mitigation alternatives in the plan do not apply to the Project (Humboldt County, 2020).

Humboldt County Community Wildfire Protection Plan

The goal of the Humboldt County CWPP is to prevent human-caused wildfire ignition, increase community resiliency and preparedness for wildfire, support fire protection, restore beneficial fire, and maximize planning efforts to improve community resiliency to fire. The CWPP includes action plans that outline priority actions to meet the goals and objectives of the HCFSC. The CWPP includes a county-wide action plan and planning unit action plans. The County-wide Action Plan identifies potential projects to reduce ignition hazards such as the following: (1) coordinating and initiating communication between the HCFSC and PG&E regarding plans to depower lines during high-wind or Red Flag conditions; and (2) identifying locations where lines may be relocated or buried (HCFSC, 2019). The County-wide Action Plan contains the following priority action relevant to the Project:

> **Priority Action 3.2.6-2:** Engage PG&E to actively reduce fuels and potential ignitions along power lines through collaborative efforts to implement risk-reduction projects.

Appendix G
Mailing List

Felix Kitto
2800 Cottage Way
Sacramento, CA 95825

Dan Hall
Lead Archaeologist, BIA
2800 Cottage Way
Sacramento, CA 95825

USDI National Park Service (NPS)
Peter Dederich
Realty and Land Use Specialist, National Park Service, Columbia Cascades Land Resource Program Center
168 S. Jackson
Seattle, WA 98104

USDI National Park Service (NPS)
David M. Roemer
Chief of Resource Management and Science, Redwood National and State Parks
South Operations Center, 121200 Highway 101 S. (PO Box 7)
Orick, CA 95555

USDI National Park Service (NPS)
Lionel Arguello
South Operations Center, 121200 Highway 101 S. (PO Box 7)
Orick, CA 95555

USDI National Park Service (NPS)
Steven Mietz
South Operations Center, 121200 Highway 101 S. (PO Box 7)
Orick, CA 95555

USDI National Park Service (NPS)
Karin Grantham
Cultural Resources Program Manager, Redwood National Park
South Operations Center, 121200 Highway 101 S. (PO Box 7)
Orick, CA 95555

USDI National Park Service (NPS)
Aida Parkinson
Supvy. Environmental Specialist, Redwood National Park
South Operations Center, 121200 Highway 101 S. (PO Box 7)
Orick, CA 95555

USDI National Park Service (NPS)
Saylor Moss
South Operations Center, 121200 Highway 101 S. (PO Box 7)
Orick, CA 95555

USDI Bureau of Land Management (BLM)
Clara Sander-McDonald
Realty Specialist
1695 Heindon Road
Arcata, CA 95521

US Department of Agriculture, Forest Service (USFS)
George Frey
Forester, Lands and Minerals Specialist
Six Rivers National Forest, Supervisors Office, 1330 Bayshore Way
Eureka, CA 95501

US Department of Defense, Army Corps of Engineers, San Francisco District (USACE)
Keith D. Heff
North Section Staff, Eureka Field Office
601 Startare Drive Box 14
Eureka, CA 95501

U.S. Fish and Wildlife Service
John Peters
1655 Heindon Road
Arcata, CA 95501

U.S. Fish and Wildlife Service
John E. Hunter
1655 Heindon Road
Arcata, CA 95501

California Department of Forestry and Fire Protection (CalFIRE)
Jerry Leong
Capital Outlay Lands Analyst
1300 U Street
Sacramento, CA 95818

California State Parks
NaTonya Forbes
Associate Land Agent, Acquisition and Real Property Services Division
One Capitol Mall, Suite 410
Sacramento, CA 95814

California Department of Transportation (CalTrans)
Jason Price
Associate Transportation Planner, CalTrans District 1
1656 Union Street
Eureka, CA 95501

California Department of Fish and Wildlife
Neil Manji
Regional Manager
619 Second St
Eureka, CA 96001

California State Lands Commission (CSLC)
Sandra Kreutzburg
Public Land Management Specialist, Northern Region
100 Howe Ave., Ste. 100-S
Sacramento, CA 0

California Department of Parks and Recreation Office of Historic Preservation Officer
Julianne Polanco
SHPO Officer
1725 23rd Street, Ste 100
Sacramento, CA 95816

Regional Water Quality Control Board
Stephen Bargsten
401 Certification Review
5550 Skylane Blvd., Ste A
Santa Rosa, CA 0

Board of Supervisors
Ryan Sundberg
5th District Supervisor
825 5th Street, Room 111
Eureka, CA 95501

Public Works
Robert Bronkall
Deputy Director
Clark Complex | 3033 "H" Street, Room 17
Eureka, CA 95501

Planning and Building
John Ford
Director Planning Division
3015 H St.
Eureka, CA 95501

C/O GEORGE M. BOWLES & AMY S.
LAWRENCE CO SUC TR
or Current Occupant
60 JENNIFER LN
ALAMO CA 94507

Current Occupant
7242 BOHN BLVD
ANDERSON CA 96007

Current Occupant
PO BOX 206
ARCATA CA 95518

Current Occupant
PO BOX 458
ARCATA CA 95518

Current Occupant
PO BOX 4840
ARCATA CA 95518

Current Occupant
PO BOX 570
ARCATA CA 95518

Current Occupant
PO BOX 354
ARCATA CA 95518-0354

Current Occupant
PO BOX 617
ARCATA CA 95518-0617

Current Occupant
PO BOX 619
ARCATA CA 95518-0619

Current Occupant
PO BOX 621
ARCATA CA 95518-0621

DBA STATION #160
or Current Occupant
1125 16TH ST
ARCATA CA 95521

Current Occupant
1264 SUNSET AVE
ARCATA CA 95521

Current Occupant
1290 I ST
ARCATA CA 95521

C/O ROGER @ LITL HOUSE
or Current Occupant
1445 PENINSULA
ARCATA CA 95521

Current Occupant
1487 I ST
ARCATA CA 95521

Current Occupant
1635 A HEINDON RD
ARCATA CA 95521

DBA BEAU PRE GOLF COURSE
or Current Occupant
1738 IVERSON AVE
ARCATA CA 95521

Current Occupant
1951 PARTON LN
ARCATA CA 95521

Current Occupant
1981 FICKLE HILL RD
ARCATA CA 95521

Current Occupant
247 NICOLOS DR
ARCATA CA 95521

DBA REDWOOD BARK CO
or Current Occupant
251 BOYNTON PRAIRIE RD
ARCATA CA 95521

Current Occupant
288 F STREET
ARCATA CA 95521

DBA AGRICULTURAL OPERATION
or Current Occupant
295 JACKSON RANCH ROAD
ARCATA CA 95521

Current Occupant
3330 RIBEIRO LN
ARCATA CA 95521

Current Occupant
5251 ERICSON WY
ARCATA CA 95521

Current Occupant
5460 ERICSON WAY
ARCATA CA 95521

Current Occupant
5460 ERICSON WY
ARCATA CA 95521

Current Occupant
600 F ST STE 3 #939
ARCATA CA 95521

Current Occupant
6360 WEST END RD
ARCATA CA 95521

Current Occupant
700 SOUTH G ST
ARCATA CA 95521

Current Occupant
2274 EASTERN AVE
ARCATA CA 95521-5324

Current Occupant
936 J ST
ARCATA CA 95521-6134

Current Occupant
432 4TH ST
ARCATA CA 95521-6305

C/O DAN JOHNSON
or Current Occupant
5251 ERICSON WAY STE A
ARCATA CA 95521-9274

Current Occupant
12016 186TH ST
ARTESIA CA 90701

Current Occupant
202 NUECES ST UNIT 1401
AUSTIN TX 78701

Current Occupant
24210 E EAST FORK RD SPC 24
AZUSA CA 91702

Current Occupant
4549 JACOBY CREEK RD
BASIDE CA 95524

C/O BRITTANY BAUSERMAN
or Current Occupant
1669 HYLAND ST
BAYSIDE CA 95524

Current Occupant
1871 GOLF COURSE RD
BAYSIDE CA 95524

Current Occupant
PO BOX 554
BAYSIDE CA 95524

C/O JON STOCUM, TRUSTEE
or Current Occupant
PO BOX 723
BAYSIDE CA 95524

Current Occupant
PO BOX 729
BAYSIDE CA 95524

Current Occupant
PO BOX 594
BAYSIDE CA 95524-0594

Current Occupant
PO BOX 787
BAYSIDE CA 95584

Current Occupant
24716 BACKBONE RD
BELLA VISTA CA 96008

DBA LES SCHWAB TIRE CENTER #616
MCKINLEYVILLE
or Current Occupant
PO BOX 5350
BEND OR 97708-5350

Current Occupant
1460 KANE RIDGE RD
BIG LAGOON CA 95570

Current Occupant
1471 KANE RIDGE RD
BIG LAGOON CA 95570

Current Occupant
1650 KANE RD
BIG LAGOON CA 95570

Current Occupant
PO BOX 170
BLOCKSBURG CA 95514-0170

Current Occupant
PO BOX 24
BLUE LAKE CA 95525

Current Occupant
PO BOX 897
BLUE LAKE CA 95525

C/O DONALD J MASKILL
or Current Occupant
PO BOX 1334
BLUE LAKE CA 95525-1334

C/O MARSHA L BAND
or Current Occupant
3829 N BROOKSIDE LN
BOISE ID 83714

Current Occupant
PO BOX 50
BURNT RANCH CA 95527-0050

Current Occupant
22033 JEANNE DRIVE
CALDWELL ID 83607

Current Occupant
2540 DUVALL RD
CAMARILLO CA 93012

Current Occupant
46 CATALPA LN
CAMPBELL CA 95008

Current Occupant
300 PLUM ST #35
CAPITOLA CA 95010

C/O PETER J. JOHNSON
or Current Occupant
8 SUMMERWOOD CT
CHICO CA 95926

C/O KATHY MITCHELL
or Current Occupant
652 MT DUNCAN DR
CLAYTON CA 94517

Current Occupant
6 PLEASANT AVE
CORTE MADERA CA 94925

Current Occupant
60 GRACE LN
CRESCENT CITY CA 95531

Current Occupant
PO BOX 921461
DUTCH HARBOR AK 99692

Current Occupant
1975 CAL YOUNG RD
EUGENE OR 97401

Current Occupant
1324 BAY ST
EUREKA CA 95501

Current Occupant
1804 A ST
EUREKA CA 95501

Current Occupant
2535 C ST
EUREKA CA 95501

DEPT OF PUBLIC WORKS
or Current Occupant
1106 2ND ST
EUREKA CA 95501-0579

Current Occupant
870 TERRA VERDE DR
CHINO VALLEY AZ 86323

C/O HEINTZ DELANY, ADMINISTRATOR
or Current Occupant
655 W PAINE ST
COLORADO SPRINGS CO 80914

Current Occupant
1111 2ND ST
CRESCENT CITY CA 95531

Current Occupant
PO BOX 508
CUTTEN CA 95534

Current Occupant
28006 NE 151ST PL
DUVALL WA 98019

Current Occupant
1135 G ST
EUREKA CA 95501

Current Occupant
1530 TRINITY ST
EUREKA CA 95501

Current Occupant
1829 P ST
EUREKA CA 95501

Current Occupant
2928 N STREET
EUREKA CA 95501

Current Occupant
225 WABASH AVE
EUREKA CA 95501-2986

Current Occupant
PO BOX 1494
CLAREMONT CA 91711-1494

Current Occupant
PO BOX 126
CORRALES NM 87048

Current Occupant
175 CHARLESTON RD
CRESCENT CITY CA 95531

Current Occupant
PO BOX 225
DEL MAR CA 92014

Current Occupant
646 SWEET PEA PL
ENCINITAS CA 92024

C/O DAVID WILLIAMS, ADMINISTRATOR
or Current Occupant
1230 VERNON STREET
EUREKA CA 95501

Current Occupant
1795 MYRTLE AVE
EUREKA CA 95501

Current Occupant
2420 15TH ST
EUREKA CA 95501

c/o REAL PROPERTY MANAGEMENT
or Current Occupant
539 G STREET SUITE 109
EUREKA CA 95501

Current Occupant
2307 S ST
EUREKA CA 95501-3144

C/O SONYA G OLSON
or Current Occupant
PO BOX 739
EUREKA CA 95502-0739

Current Occupant
PO BOX 1032
EUREKA CA 95502-1032

Current Occupant
PO BOX 1285
EUREKA CA 95502-1285

Current Occupant
PO BOX 1475
EUREKA CA 95502-1475

C/O NORTHCOAST REDWOODS
or Current Occupant
PO BOX 2006
EUREKA CA 95502-2006

C/O DIV OF HWYS
or Current Occupant
PO BOX 3700
EUREKA CA 95502-3700

Current Occupant
PO BOX 6851
EUREKA CA 95502-6851

Current Occupant
PO BOX 6975
EUREKA CA 95502-6975

Current Occupant
1123 FRESHWATER RD
EUREKA CA 95503

Current Occupant
1940 GREENBRIAR LANE
EUREKA CA 95503

Current Occupant
2020 FERN ST
EUREKA CA 95503

Current Occupant
2180 FERN ST
EUREKA CA 95503

Current Occupant
2343 RIDGEWOOD
EUREKA CA 95503

Current Occupant
3811 F ST
EUREKA CA 95503

Current Occupant
4425 WALNUT DR
EUREKA CA 95503

Current Occupant
6209 PRYOR ST
EUREKA CA 95503

Current Occupant
8351 ELK RIVER RD
EUREKA CA 95503

DBA RAINBOW SELF STORAGE
or Current Occupant
4055 BROADWAY
EUREKA CA 95503-5708

Current Occupant
1425 NORTH STAGE COACH LN
FALLBROOK CA 92028

Current Occupant
27610 WESTCOTT CRESCENT CIR
FARMINGTON HILLS MI 48334

Current Occupant
154 COOKHOUSE SPRING LN
FIELDBROOK CA 95519

Current Occupant
240 BUCKMAN TRAIL
FIELDBROOK CA 95519

Current Occupant
3730 MURRAY RD
FIELDBROOK CA 95519

Current Occupant
3863 MURRAY RD
FIELDBROOK CA 95519

Current Occupant
4636 OLD RAILROAD GRADE RD
FIELDBROOK CA 95519

Current Occupant
5750 OLD RAILROAD GRADE RD
FIELDBROOK CA 95519

Current Occupant
100 HUGHS WAY
FIELDBROOK CA 95519-8186

Current Occupant
PO BOX 27
FORKS OF SALMON CA 96031

Current Occupant
850 E OAK ST
FORT BRAGG CA 95437

Current Occupant
PO BOX 518
FORT BRAGG CA 95437-0518

Current Occupant
624 O ST
FORTUNA CA 95540

C/O THOMAS M HERMAN
or Current Occupant
PO BOX 395
FORTUNA CA 95540

Current Occupant
3952 SPROWEL CRK RD
GARBERVILLE CA 95542

Current Occupant
2185 BIRDSEYE CREEK RD
GOLD HILL OR 97525

Current Occupant
1242 ROCKINGHAM PL
GRANTS PASS OR 97527

Current Occupant
1624 DRURY LN
GRANTS PASS OR 97527

Current Occupant
PO BOX 195
GRANTSVILLE VT 84029

Current Occupant
14950 S PONDEROSA WY
GRASS VALLEY CA 95949

Current Occupant
64236 SECOND AVE
HAPPY CAMP CA 96039

C/O RUSSELL ATTEBERY & ERIN HILLMAN
or Current Occupant
PO BOX 1016
HAPPY CAMP CA 96039

Current Occupant
PO BOX 1016
HAPPY CAMP CA 96039

C/O SCOTT QUINN
or Current Occupant
PO BOX 1016 64236 SECOND AVE
HAPPY CAMP CA 96039

Current Occupant
PO BOX 1159
HAPPY CAMP CA 96039-1159

Current Occupant
13999 CAPPELL RD
HOOPA CA 95546

Current Occupant
15-B WEITCHPEC RT
HOOPA CA 95546

Current Occupant
22510 HWY 96
HOOPA CA 95546

Current Occupant
25552 BALD HILLS RD
HOOPA CA 95546

Current Occupant
BX 397 SCHOOL RD HWY 96
HOOPA CA 95546

Current Occupant
BX 666
HOOPA CA 95546

Current Occupant
CAPPELL RD SITE 4 BOX 10
HOOPA CA 95546

Current Occupant
HC 64 SITE 10 BOX 15
HOOPA CA 95546

Current Occupant
HC 64 SITE 12 BOX 10
HOOPA CA 95546

C/O LAURA L. GEORGE
or Current Occupant
HC 64 SITE 2 BOX 1
HOOPA CA 95546

Current Occupant
HC 64 SITE 4 BX 6
HOOPA CA 95546

Current Occupant
HC 64, PO BOX 31A
HOOPA CA 95546

Current Occupant
HC 67 BOX 408
HOOPA CA 95546

Current Occupant
HC 67 BOX 515
HOOPA CA 95546

Current Occupant
HC 67 BOX 610
HOOPA CA 95546

Current Occupant
HC 67 BOX 620
HOOPA CA 95546

C/O SHALOM DORAN
or Current Occupant
HC#64 SITE 4 BOX 12
HOOPA CA 95546

Current Occupant
HCR 64 BX 26
HOOPA CA 95546

Current Occupant
PATRICK WILLSON
PO BOX 1115
HOOPA CA 95546

Current Occupant
PO BOX 1218
HOOPA CA 95546

Current Occupant
PO BOX 457
HOOPA CA 95546

Current Occupant
PO BOX 699
HOOPA CA 95546

Current Occupant
SITE 1 BOX 1
HOOPA CA 95546

Current Occupant
SITE 12 BOX 1
HOOPA CA 95546

Current Occupant
SITE 4 BOX 10
HOOPA CA 95546

Current Occupant
SITE 4 BX 10
HOOPA CA 95546

Current Occupant
SITE 7 BOX 9 WEITCHPEC RTE
HOOPA CA 95546

C/O BLUFF CREEK RESORT
or Current Occupant
WEITCHPEC RT
HOOPA CA 95546

Current Occupant
HCR 64 BOX 27
HOOPA CA 95546-0027

Current Occupant
BOX 106
HOOPA CA 95546-0106

Current Occupant
PO BOX 407
HOOPA CA 95546-0407

C/O CHRISTINE A NIX
or Current Occupant
PO BOX 444
HOOPA CA 95546-0444

Current Occupant
PO BOX 471
HOOPA CA 95546-0471

C/O VIOLA R RYERSON
or Current Occupant
PO BOX 566
HOOPA CA 95546-0566

Current Occupant
PO BOX 630
HOOPA CA 95546-0630

Current Occupant
PO BOX 988
HOOPA CA 95546-0988

Current Occupant
PO BOX 1066
HOOPA CA 95546-1066

Current Occupant
PO BOX 1130
HOOPA CA 95546-1130

Current Occupant
PO BOX 1311
HOOPA CA 95546-1311

Current Occupant
PO BOX 1369
HOOPA CA 95546-1369

Current Occupant
PO BOX 1395
HOOPA CA 95546-1395

Current Occupant
PO BOX 1432
HOOPA CA 95546-1432

Current Occupant
6243 ROHNERVILLE RD
HYDESVILLE CA 95547

SBE 320 12 02 PAR 1
or Current Occupant
PO BOX 152206
IRVING TX 75015-2206

Current Occupant
1682 PALMER CREEK RD
JACKSONVILLE CA 97530-9234

Current Occupant
2089 HUMMEL LN
KELSEYVILLE CA 95451

Current Occupant
15540 HIGHWAY 101 NORTH
KLAMATH CA 95548

Current Occupant
190 KLAMATH BLVD
KLAMATH CA 95548

ATTN: FISCAL
or Current Occupant
PO BOX 1027
KLAMATH CA 95548

C/O JAMES DUNLAP
or Current Occupant
PO BOX 1027
KLAMATH CA 95548

DBA BLUFF CREEK RESORT
or Current Occupant
PO BOX 1027
KLAMATH CA 95548

ATTN JUDITH MARASCO
or Current Occupant
15540 US HWY 101 N
KLAMATH CA 95548-0098

Current Occupant
15540 US HIGHWAY 101 N
KLAMATH CA 95548-9351

Current Occupant
11800 TINGLEY LN SP #15
KLAMATH FALLS OR 97603

Current Occupant
5300 REITER AV
LAS VEGAS NV 89108

Current Occupant
1511 VUELTE GRANDE
LONG BEACH CA 90815

Current Occupant
16200 JACARANDA WAY
LOS GATOS CA 95032

Current Occupant
21440 SHADY LN
LOS GATOS CA 95033

Current Occupant
921 DICKSON ST
MARINA DEL RAY CA 90292

Current Occupant
3263 WILDCAT RD
MARIPOSA CA 95338

Current Occupant
835 ALHAMBRA AVE
MARTINEZ CA 94553

Current Occupant
2265 TERRACE LN
MC KINLEYVILLE CA 95519

Current Occupant
2627 SUNNY GROVE AVE
MCKINEYVILLE CA 95519-7911

SCHOOL YARD
or Current Occupant
2275 CENTRAL AV
MCKINLEYVILLE CA 95519-3611

Current Occupant
1686 MURRAY ROAD
MCKINLEYVILLE CA 95519

Current Occupant
1061 HAYES RD
MCKINLEYVILLE CA 95519

Current Occupant
1211 MCCARTNEY LN
MCKINLEYVILLE CA 95519

Current Occupant
1240 MASON WAY
MCKINLEYVILLE CA 95519

Current Occupant
1295 WINCHESTER AVE
MCKINLEYVILLE CA 95519

Current Occupant
1371 CLAM BEACH RD
MCKINLEYVILLE CA 95519

Current Occupant
1410 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1428 REASOR RD
MCKINLEYVILLE CA 95519

Current Occupant
1431 LARISSA CIR
MCKINLEYVILLE CA 95519

Current Occupant
1431 UNDERWOOD RD
MCKINLEYVILLE CA 95519

Current Occupant
1440 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1450 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1460 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1463 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1465 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1467 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1468 SILVA RD
MCKINLEYVILLE CA 95519

Current Occupant
1469 LARISSA CIR
MCKINLEYVILLE CA 95519

Current Occupant
1470 LARISSA CIR
MCKINLEYVILLE CA 95519

Current Occupant
1475 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1475 CAMINO WY
MCKINLEYVILLE CA 95519

Current Occupant
1477 LARISSA CIR
MCKINLEYVILLE CA 95519

Current Occupant
1480 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1480 CAMINO WY
MCKINLEYVILLE CA 95519

Current Occupant
1483 TERRACE LN
MCKINLEYVILLE CA 95519

Current Occupant
1484 CLAM BEACH RD
MCKINLEYVILLE CA 95519

Current Occupant
1485 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1489 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1490 BLUESTONE
MCKINLEYVILLE CA 95519

Current Occupant
1490 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1490 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1490 REASOR RD
MCKINLEYVILLE CA 95519

Current Occupant
1490 SANDSTONE
MCKINLEYVILLE CA 95519

Current Occupant
1493 LARISSA CIR
MCKINLEYVILLE CA 95519

Current Occupant
1493 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1494 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1495 BLUESTONE ST
MCKINLEYVILLE CA 95519

Current Occupant
1500 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1501 LARISSA CIR
MCKINLEYVILLE CA 95519

Current Occupant
1504 UNDERWOOD RD
MCKINLEYVILLE CA 95519

Current Occupant
1508 HORRELL AV
MCKINLEYVILLE CA 95519

Current Occupant
1508 HORRELL AVE
MCKINLEYVILLE CA 95519

Current Occupant
1511 LARISSA CIR
MCKINLEYVILLE CA 95519

Current Occupant
1513 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1514 UNDERWOOD RD
MCKINLEYVILLE CA 95519

Current Occupant
1515 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1516 HORRELL AVE
MCKINLEYVILLE CA 95519

Current Occupant
1516 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1517 HARDEN DR
MCKINLEYVILLE CA 95519

Current Occupant
1519 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1520 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1521 HORREL ST
MCKINLEYVILLE CA 95519

Current Occupant
1521 HORRELL ST
MCKINLEYVILLE CA 95519

Current Occupant
1521 LARISSA CIR
MCKINLEYVILLE CA 95519

Current Occupant
1521 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1523 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1523 UNDERWOOD RD
MCKINLEYVILLE CA 95519

Current Occupant
1524 HIDDEN FOX LN
MCKINLEYVILLE CA 95519

Current Occupant
1524 HORRELL AVE
MCKINLEYVILLE CA 95519

Current Occupant
1524 UNDERWOOD RD
MCKINLEYVILLE CA 95519

Current Occupant
1525 HARDEN DR
MCKINLEYVILLE CA 95519

Current Occupant
1525 TANTARA LN
MCKINLEYVILLE CA 95519

Current Occupant
1527 HIDDEN FOX LN
MCKINLEYVILLE CA 95519

Current Occupant
1528 UNDERWOOD RD
MCKINLEYVILLE CA 95519

Current Occupant
1530 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1530 CAMINO WY
MCKINLEYVILLE CA 95519

Current Occupant
1531 HORRELL AVE
MCKINLEYVILLE CA 95519

Current Occupant
1531 HORRELL ST
MCKINLEYVILLE CA 95519

Current Occupant
1531 REASOR CIR
MCKINLEYVILLE CA 95519

Current Occupant
1532 HORRELL AV
MCKINLEYVILLE CA 95519

Current Occupant
1532 HORRELL AVE
MCKINLEYVILLE CA 95519

Current Occupant
1532 UNDERWOOD RD
MCKINLEYVILLE CA 95519

Current Occupant
1533 HARDEN DR
MCKINLEYVILLE CA 95519

Current Occupant
1533 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1534 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1536 HIDDEN FOX LN
MCKINLEYVILLE CA 95519

Current Occupant
154 COOKHOUSE SPRING RD
MCKINLEYVILLE CA 95519

Current Occupant
1540 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1540 CAMINO WY
MCKINLEYVILLE CA 95519

Current Occupant
1541 HORRELL AV
MCKINLEYVILLE CA 95519

Current Occupant
1541 HORRELL AVE
MCKINLEYVILLE CA 95519

Current Occupant
1543 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1544 AIRPORT RD
MCKINLEYVILLE CA 95519

Current Occupant
1545 UNDERWOOD RD
MCKINLEYVILLE CA 95519

Current Occupant
1546 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1548 REASOR RD
MCKINLEYVILLE CA 95519

Current Occupant
1549 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1550 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1550 CAMINO WY
MCKINLEYVILLE CA 95519

Current Occupant
1550 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1550 UNDERWOOD RD
MCKINLEYVILLE CA 95519

Current Occupant
1551 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1551 CAMINO WY
MCKINLEYVILLE CA 95519

Current Occupant
1551 HORRELL AV
MCKINLEYVILLE CA 95519

Current Occupant
1551 HORRELL AVE
MCKINLEYVILLE CA 95519

Current Occupant
1553 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1553 REASOR RD
MCKINLEYVILLE CA 95519

Current Occupant
1554 REASOR RD
MCKINLEYVILLE CA 95519

Current Occupant
1555 RAILROAD DR
MCKINLEYVILLE CA 95519

DBA PERSONAL USE EQUIPMENT
or Current Occupant
1556 TANTARA LN
MCKINLEYVILLE CA 95519

Current Occupant
1560 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1560 CAMINO WY
MCKINLEYVILLE CA 95519

Current Occupant
1560 UNDERWOOD RD
MCKINLEYVILLE CA 95519

Current Occupant
1561 CAMINO WY
MCKINLEYVILLE CA 95519

Current Occupant
1561 HORRELL AV
MCKINLEYVILLE CA 95519

Current Occupant
1561 HORRELL AVE
MCKINLEYVILLE CA 95519

Current Occupant
1563 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1563 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1564 REASOR RD RD
MCKINLEYVILLE CA 95519

Current Occupant
1567 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1570 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1571 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1571 CAMINO WY
MCKINLEYVILLE CA 95519

Current Occupant
1571 HORRELL AVE
MCKINLEYVILLE CA 95519

Current Occupant
1574 REASOR RD
MCKINLEYVILLE CA 95519

Current Occupant
1580 CAMINO WAY
MCKINLEYVILLE CA 95519

DBA SJR MASONRY & CONSTRUCTION
or Current Occupant
1580 CAMINO WY
MCKINLEYVILLE CA 95519

Current Occupant
1581 CAMINO WAY
MCKINLEYVILLE CA 95519

Current Occupant
1581 HORRELL ST
MCKINLEYVILLE CA 95519

Current Occupant
1598 RAILROAD DR
MCKINLEYVILLE CA 95519

Current Occupant
1615 PRAIRIE HAWKE CT
MCKINLEYVILLE CA 95519

Current Occupant
1623 NORTON RD
MCKINLEYVILLE CA 95519

Current Occupant
1630 PRAIRIE HAWKE CT
MCKINLEYVILLE CA 95519

Current Occupant
1640 E MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1645 PRAIRIE HAWKE CT
MCKINLEYVILLE CA 95519

Current Occupant
1650 PRAIRIE HAWKE CT
MCKINLEYVILLE CA 95519

Current Occupant
1654 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1655 PRAIRIE HAWKE CT
MCKINLEYVILLE CA 95519

Current Occupant
1656 SUTTER RD
MCKINLEYVILLE CA 95519

Current Occupant
1660 PRAIRIE HAWKE CT
MCKINLEYVILLE CA 95519

Current Occupant
1665 PRAIRIE HAWKE CT
MCKINLEYVILLE CA 95519

Current Occupant
1666 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1676 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1682 LETZ LN
MCKINLEYVILLE CA 95519

Current Occupant
1685 PRAIRIE HAWKE CT
MCKINLEYVILLE CA 95519

Current Occupant
1690 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1690 TONYA LN
MCKINLEYVILLE CA 95519

Current Occupant
1695 GRANGE RD
MCKINLEYVILLE CA 95519

Current Occupant
1697 JOHNSON LN
MCKINLEYVILLE CA 95519

Current Occupant
1698 JOHNSON LN
MCKINLEYVILLE CA 95519

Current Occupant
1702 LETZ LN
MCKINLEYVILLE CA 95519

Current Occupant
1707 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1709 BALBOA AVE
MCKINLEYVILLE CA 95519

Current Occupant
1710 NORTON RD
MCKINLEYVILLE CA 95519

Current Occupant
1711 BALBOA AVE
MCKINLEYVILLE CA 95519

Current Occupant
1714 BALBOA AVE
MCKINLEYVILLE CA 95519

Current Occupant
1715 BALBOA AVE
MCKINLEYVILLE CA 95519

Current Occupant
1715 BALBOA RD
MCKINLEYVILLE CA 95519

Current Occupant
1717 PORK CHOP LN
MCKINLEYVILLE CA 95519

Current Occupant
1718 BALBOA AVE
MCKINLEYVILLE CA 95519

Current Occupant
1718 BALBOA RD
MCKINLEYVILLE CA 95519

Current Occupant
1718 JOHNSON LN
MCKINLEYVILLE CA 95519

Current Occupant
1721 GRANGE RD
MCKINLEYVILLE CA 95519

Current Occupant
1723 BALBOA AVE
MCKINLEYVILLE CA 95519

Current Occupant
1723 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1725 ONEGLIA WAY
MCKINLEYVILLE CA 95519

Current Occupant
1730 BELLA VISTA
MCKINLEYVILLE CA 95519

Current Occupant
1735 BALBOA AVE
MCKINLEYVILLE CA 95519

Current Occupant
1736 BALBOA AVE
MCKINLEYVILLE CA 95519

Current Occupant
1738 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1740 BALBOA AVE
MCKINLEYVILLE CA 95519

Current Occupant
1740 SIGMA RD
MCKINLEYVILLE CA 95519

Current Occupant
1741 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1750 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1755 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1761 BALBOA AVE
MCKINLEYVILLE CA 95519

Current Occupant
1761 BALBOA RD
MCKINLEYVILLE CA 95519

Current Occupant
1761 SIGMA RD
MCKINLEYVILLE CA 95519

Current Occupant
1762 BALBOA AVE
MCKINLEYVILLE CA 95519

Current Occupant
1762 BALBOA RD
MCKINLEYVILLE CA 95519

Current Occupant
1769 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1770 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1780 SIGMA RD
MCKINLEYVILLE CA 95519

Current Occupant
1784 BALBOA AVE
MCKINLEYVILLE CA 95519

Current Occupant
1785 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1806 MURRAY RD
MCKINLEYVILLE CA 95519

C/O WRIGHT MANAGEMENT SERVICES
or Current Occupant
1807 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
1810 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
1810 MURRAY ROAD
MCKINLEYVILLE CA 95519

Current Occupant
1834 CENTRAL AV- B
MCKINLEYVILLE CA 95519

Current Occupant
1850 MURRAY RD
MCKINLEYVILLE CA 95519

DBA CALIFORNIA NATIVE WOODS
or Current Occupant
1852 OLLIVIER RD
MCKINLEYVILLE CA 95519

C/O GARY RISLING, EXECUTOR
or Current Occupant
1870 JAMES CT
MCKINLEYVILLE CA 95519

C/O GARY RISLING, EXECUTOR
or Current Occupant
1870 JAMES CT
MCKINLEYVILLE CA 95519

Current Occupant
1905 SAGEWOOD WAY
MCKINLEYVILLE CA 95519

Current Occupant
1928 CENTRAL AVE, BOX 124
MCKINLEYVILLE CA 95519

Current Occupant
1964 ST MARU LN
MCKINLEYVILLE CA 95519

Current Occupant
1980 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
2020 MURRAY RD
MCKINLEYVILLE CA 95519

DBA SCHIRMAN LOGGING
or Current Occupant
2167 GRACE AVE
MCKINLEYVILLE CA 95519

Current Occupant
220 BUCKMAN TRAIL LN
MCKINLEYVILLE CA 95519

Current Occupant
2210 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2232 TERRACE LN
MCKINLEYVILLE CA 95519

Current Occupant
225 BUCKMAN TRAIL LN
MCKINLEYVILLE CA 95519

Current Occupant
2270 TERRACE LN
MCKINLEYVILLE CA 95519

Current Occupant
2277 TERRACE LN
MCKINLEYVILLE CA 95519

C/O ARCHEE LYNN PETTLON & JOHN ALLEN PETTLON
or Current Occupant
2280 MCKINLEYVILLE AVE
MCKINLEYVILLE CA 95519

Current Occupant
2288 CENTRAL AVE
MCKINLEYVILLE CA 95519

DBA EQUIPMENT
or Current Occupant
2290 CHILLIS CT
MCKINLEYVILLE CA 95519

Current Occupant
2291 TERRACE LN
MCKINLEYVILLE CA 95519

Current Occupant
2296 TERRACE LN
MCKINLEYVILLE CA 95519

Current Occupant
2299 TERRACE LN
MCKINLEYVILLE CA 95519

Current Occupant
2305 TERRACE LN
MCKINLEYVILLE CA 95519

Current Occupant
2308 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2314 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2330 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2365 BATES LN
MCKINLEYVILLE CA 95519

Current Occupant
2390 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
240 BUCKMAN TRAIL LN
MCKINLEYVILLE CA 95519

Current Occupant
2416 CENTRAL AV
MCKINLEYVILLE CA 95519

Current Occupant
2416 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2484 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2499 HAWKS VIEW CT
MCKINLEYVILLE CA 95519

Current Occupant
2500 LIBBY LN
MCKINLEYVILLE CA 95519

Current Occupant
2580 CENTRAL SP #1-12 AVE
MCKINLEYVILLE CA 95519

Current Occupant
2612 CENTRAL AV
MCKINLEYVILLE CA 95519

Current Occupant
2612 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2615 WANDA LN
MCKINLEYVILLE CA 95519

Current Occupant
2620 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2620 WANDA LANE
MCKINLEYVILLE CA 95519

Current Occupant
2620 WANDA LN
MCKINLEYVILLE CA 95519

Current Occupant
2621 WANDA LN
MCKINLEYVILLE CA 95519

Current Occupant
2626 WANDA LN
MCKINLEYVILLE CA 95519

Current Occupant
2641 VISSER CT
MCKINLEYVILLE CA 95519

Current Occupant
2698 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2700 DAFFODIL RD
MCKINLEYVILLE CA 95519

Current Occupant
2701 ARTHUR LN
MCKINLEYVILLE CA 95519

Current Occupant
2720 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2725 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2737 STRATING CT
MCKINLEYVILLE CA 95519

Current Occupant
2740 STRATING CT
MCKINLEYVILLE CA 95519

Current Occupant
2743 STRATING CT
MCKINLEYVILLE CA 95519

Current Occupant
2745 ARTHUR RD
MCKINLEYVILLE CA 95519

Current Occupant
2745 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2746 STRATING CT
MCKINLEYVILLE CA 95519

Current Occupant
2752 STRATING CT
MCKINLEYVILLE CA 95519

Current Occupant
2755 CENTRAL AVE
MCKINLEYVILLE CA 95519

DBA AAA SELF STORAGE/COSBY CONSTRUCTION
or Current Occupant
2755 LITTLE POND ST
MCKINLEYVILLE CA 95519

Current Occupant
2758 STRATING CT
MCKINLEYVILLE CA 95519

Current Occupant
2764 STRATING COURT
MCKINLEYVILLE CA 95519

Current Occupant
2764 STRATING CT
MCKINLEYVILLE CA 95519

Current Occupant
2765 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2766 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2770 STRATING CT
MCKINLEYVILLE CA 95519

Current Occupant
2771 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2771 STRATING CT
MCKINLEYVILLE CA 95519

Current Occupant
2781 STRATING CT
MCKINLEYVILLE CA 95519

Current Occupant
2782 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2785 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2818 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
2827 ELIZABETH RD
MCKINLEYVILLE CA 95519

Current Occupant
2851 DAVID RD
MCKINLEYVILLE CA 95519

Current Occupant
2853 DAVID RD
MCKINLEYVILLE CA 95519

Current Occupant
3004 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
3020 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
3025 LITTLE CINDER
MCKINLEYVILLE CA 95519

Current Occupant
3025 LITTLE CINDER ST
MCKINLEYVILLE CA 95519

Current Occupant
3040 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
3047 LITTLE CINDER ST
MCKINLEYVILLE CA 95519

Current Occupant
3059 LITTLE CINDER ST
MCKINLEYVILLE CA 95519

Current Occupant
3059 LITTLE CINDER STREET
MCKINLEYVILLE CA 95519

Current Occupant
3071 BONANZA ST
MCKINLEYVILLE CA 95519

Current Occupant
3081 BONANZA ST
MCKINLEYVILLE CA 95519

Current Occupant
3091 BONANZA ST
MCKINLEYVILLE CA 95519

Current Occupant
3101 BONANZA
MCKINLEYVILLE CA 95519

Current Occupant
3101 BONANZA ST
MCKINLEYVILLE CA 95519

Current Occupant
3111 BONANZA ST
MCKINLEYVILLE CA 95519

Current Occupant
3121 BONANZA ST
MCKINLEYVILLE CA 95519

Current Occupant
3131 BONANZA ST
MCKINLEYVILLE CA 95519

Current Occupant
3141 BONANZA ST
MCKINLEYVILLE CA 95519

Current Occupant
3151 BONANZA ST
MCKINLEYVILLE CA 95519

Current Occupant
3160 CENTRAL AV
MCKINLEYVILLE CA 95519

Current Occupant
3160 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
3180 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
3180 EAGLE LN
MCKINLEYVILLE CA 95519

Current Occupant
3186 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
3200 ARTHUR RD
MCKINLEYVILLE CA 95519

Current Occupant
3210 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3212 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
3220 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3220 DOWS PRARIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3226 ARTHUR LN
MCKINLEYVILLE CA 95519

Current Occupant
3230 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3248 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
3254 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3258 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3278 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3329 HALFWAY AV
MCKINLEYVILLE CA 95519

COMMON AREA
or Current Occupant
3329 HALFWAY AVE
MCKINLEYVILLE CA 95519

Current Occupant
3371 BARNETT AVE
MCKINLEYVILLE CA 95519

Current Occupant
3466 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3508 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3520 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3544 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3546 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3552 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3556 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3596 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3600 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3608 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3640 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3650 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
3656 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3680 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3696 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3730 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3730 MURRAY ROAD
MCKINLEYVILLE CA 95519

Current Occupant
3748 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3764 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3778 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
3940 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4010 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4018 NOAH AVE
MCKINLEYVILLE CA 95519

Current Occupant
4040 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4055 HENSLEY RD
MCKINLEYVILLE CA 95519

Current Occupant
4059 HENSLEY RD
MCKINLEYVILLE CA 95519

Current Occupant
4060 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4125 BUSH AV
MCKINLEYVILLE CA 95519

Current Occupant
4125 BUSH AVE
MCKINLEYVILLE CA 95519

Current Occupant
4141 BUSH AVE
MCKINLEYVILLE CA 95519

Current Occupant
4155 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4156 BUSH AVE
MCKINLEYVILLE CA 95519

Current Occupant
4157 BUSH AV
MCKINLEYVILLE CA 95519

Current Occupant
4157 BUSH AVE
MCKINLEYVILLE CA 95519

Current Occupant
4171 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
4173 ROBIN LN
MCKINLEYVILLE CA 95519

Current Occupant
4175 BUSH AVE
MCKINLEYVILLE CA 95519

Current Occupant
4176 BUSH AVE
MCKINLEYVILLE CA 95519

Current Occupant
4176 BUSH ST
MCKINLEYVILLE CA 95519

Current Occupant
4177 ROBIN RD
MCKINLEYVILLE CA 95519

Current Occupant
4185 BUSH AVE
MCKINLEYVILLE CA 95519

Current Occupant
4192 BUSH AV
MCKINLEYVILLE CA 95519

Current Occupant
4192 BUSH AVE
MCKINLEYVILLE CA 95519

Current Occupant
4210 BUSH AVE
MCKINLEYVILLE CA 95519

Current Occupant
4211 BUSH AV
MCKINLEYVILLE CA 95519

Current Occupant
4211 BUSH AVE
MCKINLEYVILLE CA 95519

Current Occupant
4237 ROBIN AV
MCKINLEYVILLE CA 95519

Current Occupant
4237 ROBIN RD
MCKINLEYVILLE CA 95519

Current Occupant
4248 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4256 ROBIN AV
MCKINLEYVILLE CA 95519

Current Occupant
4256 ROBIN RD
MCKINLEYVILLE CA 95519

Current Occupant
4259 ROBIN RD
MCKINLEYVILLE CA 95519

Current Occupant
4277 CENTRAL AVE
MCKINLEYVILLE CA 95519

Current Occupant
4360 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4365 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4390 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4460 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4519 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4520 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
4535 FIELDBROOK RD
MCKINLEYVILLE CA 95519

Current Occupant
4540 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4570 KJER RD
MCKINLEYVILLE CA 95519

Current Occupant
4580 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4582 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4602 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4608 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
4632 TOTTEN LN
MCKINLEYVILLE CA 95519

Current Occupant
4700 MURRAY RD
MCKINLEYVILLE CA 95519

Current Occupant
4937 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5070 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5075 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

DBA FOGBELT GROWERS
or Current Occupant
5096 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5260 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5387 FIELDBROOK RD
MCKINLEYVILLE CA 95519

Current Occupant
5427 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5443 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5455 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5461 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5465 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5466 DOWS PRAIRIE RD #A
MCKINLEYVILLE CA 95519

Current Occupant
5475 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5489 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5523 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5755 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519

Current Occupant
5900 OLD RAILROAD GRADE RD
MCKINLEYVILLE CA 95519

Current Occupant
685 SCHOOL RD
MCKINLEYVILLE CA 95519

Current Occupant
993 LISCOM HILL RD
MCKINLEYVILLE CA 95519

Current Occupant
PO BOX 2044
MCKINLEYVILLE CA 95519

DBA A & L FEED
or Current Occupant
PO BOX 2068
MCKINLEYVILLE CA 95519

Current Occupant
PO BOX 2117
MCKINLEYVILLE CA 95519

Current Occupant
PO BOX 2369
MCKINLEYVILLE CA 95519

Current Occupant
PO BOX 2795
MCKINLEYVILLE CA 95519

Current Occupant
PO BOX 2849
MCKINLEYVILLE CA 95519

Current Occupant
PO BOX 2958
MCKINLEYVILLE CA 95519

Current Occupant
PO BOX 2061
MCKINLEYVILLE CA 95519-2061

Current Occupant
PO BOX 2122
MCKINLEYVILLE CA 95519-2122

Current Occupant
PO BOX 2157
MCKINLEYVILLE CA 95519-2157

Current Occupant
PO BOX 2274
MCKINLEYVILLE CA 95519-2274

DBA CENTRAL AVENUE SERVICE CENTER
or Current Occupant
PO BOX 2305
MCKINLEYVILLE CA 95519-2305

Current Occupant
1719 JOHNSON LN
MCKINLEYVILLE CA 95519-2601

Current Occupant
PO BOX 2682
MCKINLEYVILLE CA 95519-2682

Current Occupant
PO BOX 2723
MCKINLEYVILLE CA 95519-2723

C/O BARSANTI SHEL
or Current Occupant
PO BOX 2836
MCKINLEYVILLE CA 95519-2836

Current Occupant
PO BOX 2935
MCKINLEYVILLE CA 95519-2935

DBA GOLDEN MANOR
or Current Occupant
PO BOX 2957
MCKINLEYVILLE CA 95519-2957

Current Occupant
1180 PEEPLES LN
MCKINLEYVILLE CA 95519-3437

Current Occupant
1696 MURRAY RD
MCKINLEYVILLE CA 95519-3713

DBA RONS GARDENING
or Current Occupant
1710 MURRAY RD
MCKINLEYVILLE CA 95519-3714

Current Occupant
2745 WARNER RD
MCKINLEYVILLE CA 95519-3758

Current Occupant
1100 PEEPLES RD
MCKINLEYVILLE CA 95519-3961

Current Occupant
1765 SITKA CT
MCKINLEYVILLE CA 95519-4269

Current Occupant
2759 STRATING CT
MCKINLEYVILLE CA 95519-4721

Current Occupant
1495 SANDSTONE ST
MCKINLEYVILLE CA 95519-4724

Current Occupant
1959 S GWIN RD
MCKINLEYVILLE CA 95519-5808

Current Occupant
3032 SAND POINTE DR
MCKINLEYVILLE CA 95519-6413

Current Occupant
2695 ELIZABETH RD
MCKINLEYVILLE CA 95519-7706

Current Occupant
2805 ELIZABETH RD
MCKINLEYVILLE CA 95519-7708

Current Occupant
1625 PRAIRIE HAWKE CT
MCKINLEYVILLE CA 95519-8001

Current Occupant
1635 PRAIRIE HAWKE CT
MCKINLEYVILLE CA 95519-8001

Current Occupant
1670 PRAIRIE HAWKE CT
MCKINLEYVILLE CA 95519-8001

Current Occupant
1690 PRAIRIE HAWKE CT
MCKINLEYVILLE CA 95519-8001

Current Occupant
3712 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519-8009

Current Occupant
1470 CAMINO WAY
MCKINLEYVILLE CA 95519-8042

Current Occupant
1510 CAMINO WAY
MCKINLEYVILLE CA 95519-8043

Current Occupant
1506 HIDDEN FOX LN
MCKINLEYVILLE CA 95519-9125

Current Occupant
1515 HIDDEN FOX LN
MCKINLEYVILLE CA 95519-9126

Current Occupant
1535 HIDDEN FOX LN
MCKINLEYVILLE CA 95519-9126

Current Occupant
4177 ROBIN AVE
MCKINLEYVILLE CA 95519-9416

DBA PERSONAL USE EQUIPMENT
or Current Occupant
4283 CENTRAL AVE
MCKINLEYVILLE CA 95519-9417

Current Occupant
4334 DOWS PRAIRIE RD
MCKINLEYVILLE CA 95519-9436

Current Occupant
3037 LITTLE CINDER ST
MCKINLEYVILLE CA 95519-9465

Current Occupant
1509 HARDEN DR
MCKINLEYVILLE CA 95519-9468

Current Occupant
1526 CLAM BEACH RD
MCKINLEYVILLE CA 95519-9487

Current Occupant
1500 TANTARA LN
MCKINLEYVILLE CA 95519-9494

Current Occupant
1570 UNDERWOOD
MCKINLEYVILLE CA 95521

Current Occupant
740 EDGEWOOD AVE
MILL VALLEY CA 94941

Current Occupant
872 LOS POSITOS DR
MILPITAS CA 95035

Current Occupant
428 EAST PINE ST
MISSOULA MT 59802

C/O THORNTON MARIE
or Current Occupant
PO BOX 282
MORRICE MI 48857

Current Occupant
220 IRON BRIDGE RD
MOSHEIM TN 37818

Current Occupant
1076 LA GRANGE
NEWBURY PARK CA 91320

Current Occupant
1046 VALLE VIEW COURT
NOVATO CA 94945

Current Occupant
15221 PHILLIPS RD
OAK RUN CA 96069

Current Occupant
2211 W BEVERLY DR
ORANGE CA 92868

Current Occupant
10 ORICK HILL LN
ORICK CA 95555

Current Occupant
10001 BALD HILLS RD
ORICK CA 95555

Current Occupant
106 LUNDBLADE ST
ORICK CA 95555

Current Occupant
11 HANSEN ST
ORICK CA 95555

Current Occupant
114 LUNDBLADE ST
ORICK CA 95555

Current Occupant
115 ORICK HILL LN
ORICK CA 95555

Current Occupant
119933 ST HWY 101
ORICK CA 95555

Current Occupant
120 HILTON RD
ORICK CA 95555

Current Occupant
120069 ST HWY 101
ORICK CA 95555

Current Occupant
120120 ST HWY 101
ORICK CA 95555

Current Occupant
120187 ST HWY 101
ORICK CA 95555

Current Occupant
120215 ST HWY 101
ORICK CA 95555

Current Occupant
120216 ST HWY 101
ORICK CA 95555

Current Occupant
120229 ST HWY 101
ORICK CA 95555

Current Occupant
120230 ST HWY 101
ORICK CA 95555

Current Occupant
120420 HIGHWAY 101
ORICK CA 95555

Current Occupant
120420 ST HWY 101
ORICK CA 95555

Current Occupant
120465 ST HWY 101
ORICK CA 95555

Current Occupant
120466 ST HWY 101
ORICK CA 95555

Current Occupant
120516 ST HWY 101
ORICK CA 95555

Current Occupant
120548 ST HWY 101
ORICK CA 95555

Current Occupant
120607 ST HWY 101
ORICK CA 95555

Current Occupant
120666 ST HWY 101
ORICK CA 95555

Current Occupant
1207 OLD STATE HWY
ORICK CA 95555

Current Occupant
120717 ST HWY 101
ORICK CA 95555

Current Occupant
120759 ST HWY 101
ORICK CA 95555

Current Occupant
120784 ST HWY 101
ORICK CA 95555

Current Occupant
120785 ST HWY 101
ORICK CA 95555

Current Occupant
120789 ST HWY 101
ORICK CA 95555

Current Occupant
120861 ST HWY 101
ORICK CA 95555

Current Occupant
120893 ST HWY 101
ORICK CA 95555

Current Occupant
121130 ST HWY 101
ORICK CA 95555

Current Occupant
121140 ST HWY 101
ORICK CA 95555

Current Occupant
121200 ST HWY 101
ORICK CA 95555

Current Occupant
121390 ST HWY 101
ORICK CA 95555

Current Occupant
121392 ST HWY 101
ORICK CA 95555

Current Occupant
121444 ST HWY 101
ORICK CA 95555

Current Occupant
121452 ST HWY 101
ORICK CA 95555

Current Occupant
121464 ST HWY 101
ORICK CA 95555

Current Occupant
121480 ST HWY 101
ORICK CA 95555

Current Occupant
121488 ST HWY 101
ORICK CA 95555

Current Occupant
121530 ST HWY 101
ORICK CA 95555

Current Occupant
121616 ST HWY 101
ORICK CA 95555

Current Occupant
121912 ST HWY 101
ORICK CA 95555

Current Occupant
1291 MCDONALD CREEK RD
ORICK CA 95555

Current Occupant
136 ORICK HILL LN
ORICK CA 95555

Current Occupant
14 SLAUGHTERHOUSE RD
ORICK CA 95555

Current Occupant
14 TOAD LN
ORICK CA 95555

Current Occupant
140 ERIS LN
ORICK CA 95555

Current Occupant
144 MCDONALD CREEK RD
ORICK CA 95555

Current Occupant
15 BARNUM ST
ORICK CA 95555

Current Occupant
155 ORICK HILL LN
ORICK CA 95555

Current Occupant
171 ORICK HILL LN
ORICK CA 95555

Current Occupant
174 BALD HILLS RD
ORICK CA 95555

Current Occupant
182 ERIS LN
ORICK CA 95555

Current Occupant
19 REDWOOD ST
ORICK CA 95555

Current Occupant
20 OLD STATE HWY
ORICK CA 95555

Current Occupant
202 RIVERVIEW LN
ORICK CA 95555

Current Occupant
21 HANSEN ST
ORICK CA 95555

Current Occupant
23 WEBSTER ST
ORICK CA 95555

Current Occupant
24 BARNUM ST
ORICK CA 95555

Current Occupant
24 TOAD LN
ORICK CA 95555

Current Occupant
25 BARNUM ST
ORICK CA 95555

Current Occupant
265 MCDONALD CREEK RD
ORICK CA 95555

Current Occupant
28 HANSEN ST
ORICK CA 95555

Current Occupant
29 LOWELL ST
ORICK CA 95555

Current Occupant
30 LUNDBLADE ST
ORICK CA 95555

Current Occupant
31 HANSEN ST
ORICK CA 95555

Current Occupant
310 ORICK HILL LN
ORICK CA 95555

Current Occupant
3287 OLD STATE HWY
ORICK CA 95555

Current Occupant
3289 OLD STATE HIGHWAY
ORICK CA 95555

Current Occupant
3289 OLD STATE HWY
ORICK CA 95555

Current Occupant
3316 OLD STATE HWY
ORICK CA 95555

Current Occupant
3321 OLD STATE HWY
ORICK CA 95555

Current Occupant
3327 OLD STATE HWY
ORICK CA 95555

Current Occupant
34 LOWELL ST
ORICK CA 95555

Current Occupant
35 BARNUM ST
ORICK CA 95555

Current Occupant
36 BARNUM ST
ORICK CA 95555

Current Occupant
37 HUFFORD RD
ORICK CA 95555

Current Occupant
37 LOWELL ST
ORICK CA 95555

Current Occupant
38 HANSEN ST
ORICK CA 95555

Current Occupant
38 WEBSTER ST
ORICK CA 95555

Current Occupant
40 LUNDBLADE ST
ORICK CA 95555

Current Occupant
41 WEBSTER ST
ORICK CA 95555

Current Occupant
412 ROBINSON RD
ORICK CA 95555

Current Occupant
45 BARNUM ST
ORICK CA 95555

Current Occupant
45 LOWELL ST
ORICK CA 95555

Current Occupant
48 HANSEN ST
ORICK CA 95555

Current Occupant
488 KANE RD
ORICK CA 95555

Current Occupant
50 ERIS LN
ORICK CA 95555

Current Occupant
50 LUNDBLADE ST
ORICK CA 95555

Current Occupant
51 HANSEN ST
ORICK CA 95555

Current Occupant
545 BALD HILLS RD
ORICK CA 95555

Current Occupant
55 BARNUM ST
ORICK CA 95555

Current Occupant
55 LOWELL ST
ORICK CA 95555

Current Occupant
58 HANSEN ST
ORICK CA 95555

Current Occupant
59 LUNDBLADE ST
ORICK CA 95555

Current Occupant
61 HANSEN ST
ORICK CA 95555

Current Occupant
65 LOWELL ST
ORICK CA 95555

Current Occupant
66 LOWELL ST
ORICK CA 95555

Current Occupant
68 HANSEN ST
ORICK CA 95555

Current Occupant
72 HUFFORD RD
ORICK CA 95555

Current Occupant
73 LOWELL ST
ORICK CA 95555

Current Occupant
744 HILTON RD
ORICK CA 95555

Current Occupant
760 KANE RD
ORICK CA 95555

Current Occupant
760 KANE ROAD
ORICK CA 95555

Current Occupant
78 LOWELL ST
ORICK CA 95555

Current Occupant
80 OLD STATE HWY
ORICK CA 95555

Current Occupant
81 LUNDBLADE ST
ORICK CA 95555

Current Occupant
844 HILTON RD
ORICK CA 95555

Current Occupant
850 HILTON RD
ORICK CA 95555

Current Occupant
86 LUNDBLADE ST
ORICK CA 95555

Current Occupant
862 HILTON RD
ORICK CA 95555

Current Occupant
88 RIVERVIEW LN
ORICK CA 95555

Current Occupant
90 LOWELL ST
ORICK CA 95555

Current Occupant
902 KANE RD
ORICK CA 95555

Current Occupant
BOX 111
ORICK CA 95555

Current Occupant
BOX 151
ORICK CA 95555

Current Occupant
PO BOX 101
ORICK CA 95555

Current Occupant
PO BOX 143
ORICK CA 95555

Current Occupant
PO BOX 173
ORICK CA 95555

Current Occupant
PO BOX 183
ORICK CA 95555

Current Occupant
PO BOX 282
ORICK CA 95555

Current Occupant
PO BOX 297
ORICK CA 95555

Current Occupant
PO BOX 305
ORICK CA 95555

Current Occupant
PO BOX 31
ORICK CA 95555

Current Occupant
PO BOX 326
ORICK CA 95555

Current Occupant
PO BOX 368
ORICK CA 95555

Current Occupant
PO BOX 417
ORICK CA 95555

Current Occupant
PO BOX 44
ORICK CA 95555

DBA FARM EQUIPMENT
or Current Occupant
PO BOX 73
ORICK CA 95555

Current Occupant
PO BOX 8
ORICK CA 95555

Current Occupant
PO BOX 92
ORICK CA 95555

Current Occupant
PO BOX 11
ORICK CA 95555-0011

C/O DAVID AND ANNA COOK
or Current Occupant
PO BOX 34
ORICK CA 95555-0034

Current Occupant
PO BOX 81
ORICK CA 95555-0081

Current Occupant
PO BOX 83
ORICK CA 95555-0083

DBA BEEF
or Current Occupant
PO BOX 97
ORICK CA 95555-0097

Current Occupant
PO BOX 122
ORICK CA 95555-0122

Current Occupant
PO BOX 123
ORICK CA 95555-0123

Current Occupant
PO BOX 134
ORICK CA 95555-0134

Current Occupant
PO BOX 145
ORICK CA 95555-0145

Current Occupant
PO BOX 146
ORICK CA 95555-0146

Current Occupant
PO BOX 185
ORICK CA 95555-0185

Current Occupant
PO BOX 193
ORICK CA 95555-0193

Current Occupant
PO BOX 201
ORICK CA 95555-0201

Current Occupant
PO BOX 217
ORICK CA 95555-0217

Current Occupant
PO BOX 235
ORICK CA 95555-0235

Current Occupant
PO BOX 276
ORICK CA 95555-0276

Current Occupant
PO BOX 316
ORICK CA 95555-0316

Current Occupant
PO BOX 317
ORICK CA 95555-0317

Current Occupant
PO BOX 333
ORICK CA 95555-0333

Current Occupant
PO BOX 348
ORICK CA 95555-0348

Current Occupant
PO BOX 363
ORICK CA 95555-0363

Current Occupant
PO BOX 378
ORICK CA 95555-0378

Current Occupant
PO BOX 403
ORICK CA 95555-0403

Current Occupant
PO BOX 426
ORICK CA 95555-0426

Current Occupant
PO BOX 449
ORICK CA 95555-0449

Current Occupant
PO BOX 462
ORICK CA 95555-0462

Current Occupant
6262 NEWVILLE RD
ORLAND CA 95963

Current Occupant
100 BIG ROCK RD
ORLEANS CA 95556

Current Occupant
104 DOWNS RANCH RD
ORLEANS CA 95556

Current Occupant
1150 ST HWY 169
ORLEANS CA 95556

Current Occupant
125 OWL MINE RD
ORLEANS CA 95556

Current Occupant
125 ST HWY 96
ORLEANS CA 95556

Current Occupant
141 PLACER DR
ORLEANS CA 95556

Current Occupant
15 LOWER CAMP CREEK RD
ORLEANS CA 95556

Current Occupant
163 PLACER DR
ORLEANS CA 95556

Current Occupant
166 ISHI PISHI RD
ORLEANS CA 95556

Current Occupant
170 ST HWY 96
ORLEANS CA 95556

Current Occupant
175 PLACER DR
ORLEANS CA 95556

Current Occupant
179 PLACER DR
ORLEANS CA 95556

Current Occupant
180 DREDGE RD
ORLEANS CA 95556

Current Occupant
191 DOWNS RANCH RD
ORLEANS CA 95556

Current Occupant
215 PLACER DR
ORLEANS CA 95556

Current Occupant
225 PLACER DR
ORLEANS CA 95556

Current Occupant
233 DREDGE RD
ORLEANS CA 95556

Current Occupant
240 NEW ISHI PISHI RD
ORLEANS CA 95556

Current Occupant
26340 ST HWY 96
ORLEANS CA 95556

Current Occupant
27475 ST HWY 96
ORLEANS CA 95556

Current Occupant
282 ST HWY 96
ORLEANS CA 95556

Current Occupant
301 DREDGE RD
ORLEANS CA 95556

Current Occupant
309 WEITCHPEC SCHOOL RD
ORLEANS CA 95556

Current Occupant
32340 ST HWY 96
ORLEANS CA 95556

Current Occupant
345 DREDGE RD
ORLEANS CA 95556

Current Occupant
35 RED CAP RD
ORLEANS CA 95556

Current Occupant
36835 ST HWY 96
ORLEANS CA 95556

Current Occupant
36980 ST HWY 96
ORLEANS CA 95556

Current Occupant
36996 ST HWY 96
ORLEANS CA 95556

Current Occupant
37105 ST HWY 96
ORLEANS CA 95556

Current Occupant
37497 HWY 96
ORLEANS CA 95556

Current Occupant
37497 ST HWY 96
ORLEANS CA 95556

Current Occupant
37511 ST HWY 96 RD
ORLEANS CA 95556

Current Occupant
37531 ST HWY 96
ORLEANS CA 95556

Current Occupant
37571 ST HWY 96
ORLEANS CA 95556

Current Occupant
37589 ST HWY 96
ORLEANS CA 95556

Current Occupant
37605 ST HWY 96
ORLEANS CA 95556

Current Occupant
37629 ST HWY 96
ORLEANS CA 95556

Current Occupant
377 DREDGE RD
ORLEANS CA 95556

Current Occupant
37737 ST HWY 96
ORLEANS CA 95556

Current Occupant
37751 ST HWY 96
ORLEANS CA 95556

Current Occupant
37756 ST HWY 96
ORLEANS CA 95556

Current Occupant
37813 ST HWY 96
ORLEANS CA 95556

Current Occupant
37950 ST HWY 96
ORLEANS CA 95556

Current Occupant
37960 ST HWY 96
ORLEANS CA 95556

Current Occupant
37979 ST HWY 96
ORLEANS CA 95556

Current Occupant
38010 ST HWY 96
ORLEANS CA 95556

Current Occupant
38030 ST HWY 96
ORLEANS CA 95556

Current Occupant
38041 ST HWY 96
ORLEANS CA 95556

Current Occupant
38083 ST HWY 96
ORLEANS CA 95556

Current Occupant
38084 ST HWY 96
ORLEANS CA 95556

Current Occupant
38110 ST HWY 96
ORLEANS CA 95556

Current Occupant
38129 ST HWY 96
ORLEANS CA 95556

Current Occupant
38137 ST HWY 96
ORLEANS CA 95556

Current Occupant
38150 ST HWY 96
ORLEANS CA 95556

Current Occupant
38205 ST HWY 96
ORLEANS CA 95556

Current Occupant
38228 ST HWY 96
ORLEANS CA 95556

Current Occupant
38935 ST HWY 96
ORLEANS CA 95556

Current Occupant
39051 ST HWY 96
ORLEANS CA 95556

Current Occupant
397 WEITCHPEC SCHOOL RD
ORLEANS CA 95556

Current Occupant
400 ORLEANS SCHOOL RD
ORLEANS CA 95556

Current Occupant
41 WEITCHPEC SCHOOL RD
ORLEANS CA 95556

Current Occupant
52 ST HWY 96
ORLEANS CA 95556

Current Occupant
536 RED CAP RD
ORLEANS CA 95556

Current Occupant
55 PLACER DR
ORLEANS CA 95556

Current Occupant
565 WEITCHPEC SCHOOL RD
ORLEANS CA 95556

Current Occupant
595 OWL MINE RD
ORLEANS CA 95556

Current Occupant
75 DOWNS RANCH RD
ORLEANS CA 95556

Current Occupant
76 LOWER CAMP CREEK RD
ORLEANS CA 95556

Current Occupant
89 PLACER DR
ORLEANS CA 95556

Current Occupant
94 LOWER CAMP CREEK RD
ORLEANS CA 95556

Current Occupant
BOX 434
ORLEANS CA 95556

Current Occupant
PO BOX 103
ORLEANS CA 95556

Current Occupant
PO BOX 165
ORLEANS CA 95556

Current Occupant
PO BOX 23
ORLEANS CA 95556

Current Occupant
PO BOX 25
ORLEANS CA 95556

Current Occupant
PO BOX 304
ORLEANS CA 95556

Current Occupant
PO BOX 312
ORLEANS CA 95556

Current Occupant
PO BOX 326
ORLEANS CA 95556

Current Occupant
PO BOX 440
ORLEANS CA 95556

C/O VICTOR STARRITT
or Current Occupant
PO BOX 52
ORLEANS CA 95556

Current Occupant
PO BOX 74
ORLEANS CA 95556

Current Occupant
PO BOX 95
ORLEANS CA 95556

Current Occupant
PO BOX 16
ORLEANS CA 95556-0016

Current Occupant
PO BOX 24
ORLEANS CA 95556-0024

Current Occupant
PO BOX 42
ORLEANS CA 95556-0042

C/O DELORES A JORDAN
or Current Occupant
PO BOX 63
ORLEANS CA 95556-0063

Current Occupant
PO Box 127
ORLEANS CA 95556-0127

DBA MCLAUGHLIN & SONS
or Current Occupant
PO BOX 148
ORLEANS CA 95556-0148

Current Occupant
PO BOX 192
ORLEANS CA 95556-0192

Current Occupant
PO BOX 201
ORLEANS CA 95556-0201

Current Occupant
PO BOX 216
ORLEANS CA 95556-0216

Current Occupant
PO BOX 222
ORLEANS CA 95556-0222

C/O VERN MOFFETT
or Current Occupant
PO BOX 236
ORLEANS CA 95556-0236

Current Occupant
PO BOX 267
ORLEANS CA 95556-0267

Current Occupant
PO BOX 272
ORLEANS CA 95556-0272

Current Occupant
PO BOX 289
ORLEANS CA 95556-0289

Current Occupant
PO BOX 302
ORLEANS CA 95556-0302

Current Occupant
PO BOX 321
ORLEANS CA 95556-0321

Current Occupant
PO BOX 342
ORLEANS CA 95556-0342

Current Occupant
PO BOX 349
ORLEANS CA 95556-0349

Current Occupant
PO BOX 409
ORLEANS CA 95556-0409

Current Occupant
PO BOX 455
ORLEANS CA 95556-0455

Current Occupant
1485 NORTON ST
OROVILLE CA 95966

DBA GREEN VALLEY MOTEL
or Current Occupant
1732 ALMANOR ST
OXNARD CA 93030

GUFFEY JOEL
or Current Occupant
4040 ISCHIA DR
OXNARD CA 93035

Current Occupant
2475 HANOVER ST STE 100
PALO ALTO CA 94304

Current Occupant
PO BOX 380
PETALUMA CA 94953

Current Occupant
363 TAFT ST
PORT TOWNSEND WA 98368

Current Occupant
180 S MAIN ST SPC 6
RED BLUFF CA 96080-3853

C/O BUREAU OF INDIAN AFFAIRS
or Current Occupant
1900 CHURN CREEK RD, STE 300
REDDING, CA 96002-0292

Current Occupant
PO BOX 619015
ROSEVILLE CA 95661

C/O ANN MASHER
or Current Occupant
1418 36TH ST
SACRAMENTO CA 95816

C/O MARIE MARYE
or Current Occupant
9873 COTTONTAIL LN
SAN ANGELO TX 76901

Current Occupant
754 CALLE VALLARTA
SAN CLEMENTE CA 92673

Current Occupant
111 SUTTER ST 11TH FLOOR
SAN FRANCISCO CA 94104

Current Occupant
235 PINE ST STE 1475
SAN FRANCISCO CA 94104-2735

Current Occupant
1001 O'REILLY AVE STE A
SAN FRANCISCO CA 94129

Current Occupant
6314 JERILYNN AVE
SAN PABLO CA 94806

Current Occupant
2819 BLUE BELL DR
REDDING CA 96001

Current Occupant
4062 FARM HILL BLVD APT 8
REDWOOD CITY CA 94061

DEPT OF PARKS & RECREATION OFFICE
OF
or Current Occupant
ONE CAPITOL MALL STE 500
SACRAMENTO CA 95814

C/O BUREAU OF INDIAN AFFAIRS, PACIFIC
REGION
or Current Occupant
2800 COTTAGE WAY
SACRAMENTO CA 95825

C/O KRAMPERT
or Current Occupant
PO BOX 805
SAN CARLOS CA 94070-0805

Current Occupant
111 SUTTER ST 11TH FLOOR
SAN FRANCISCO CA 94104

DBA SAVE THE REDWOODS LEAGUE
or Current Occupant
111 SUTTER STREET, 11TH FLOOR
SAN FRANCISCO CA 94104

ATTN: GENERAL COUNSEL
or Current Occupant
111 SUTTER STREET, 11TH FLOOR
SAN FRANCISCO CA 94104-3823

Current Occupant
1589 TREDISO AVE
SAN JOSE CA 95118

Current Occupant
2801 OCEAN PARK BLVD #218
SANTA MONICA CA 90405

Current Occupant
4384 BECHELLI LN
REDDING CA 96002

Current Occupant
4911 LAKERIDGE TERRACE W
RENO NV 89509

DEPT OF PARKS & RECREATION
or Current Occupant
ONE CAPITOL MALL SUITE 410
SACRAMENTO CA 95814

Current Occupant
2588 LINDSTROM AVE
SAMOA CA 95564

Current Occupant
1710 VIA VIOLETA
SAN CLEMENTE CA 92673

Current Occupant
111 SUTTER ST 11TH FL
SAN FRANCISCO CA 94104

Current Occupant
582 MARKET ST STE 912
SAN FRANCISCO CA 94104

Current Occupant
2022 18TH AVE
SAN FRANCISCO CA 94116

Current Occupant
633 PALM HAVEN AVE
SAN JOSE CA 95125-2247

Current Occupant
1715 E FOOTHILL DR
SANTA ROSA CA 95404

Current Occupant
PO BOX 308
SCOTIA CA 95565

Current Occupant
1812 MENDOCINO ST
SEASIDE CA 93955

DBA CELL TOWER
or Current Occupant
1301 5TH AVENUE STE 2700
SEATTLE WA 98101

DBA CRANNELL TRUCK STOP
or Current Occupant
1301 5TH AVENUE STE 2700
SEATTLE WA 98101

Current Occupant
2985 THORN RD
SEBASTOPOL CA 95472

Current Occupant
2985 THORN ROAD
SEBASTOPOL CA 95472

Current Occupant
PO BOX 695
SELMA OR 97538

Current Occupant
9740 SEPULVEDA BL #32
SEPULVEDA CA 91343

Current Occupant
206 SOUTH MORRIS ST
SNOW HILL MD 21863

Current Occupant
HC 11 BOX 224
SOMES BAR CA 95568

Current Occupant
PO BOX 713
SOMES BAR CA 95568

Current Occupant
13801 JENNY LIND RD
SONORA CA 95370

C/O RHONDA DELGADO
or Current Occupant
9643 MALLISON AVE APT F
SOUTH GATE CA 90280

Current Occupant
PO BOX 5851
SPARKS NV 89432

Current Occupant
17136 MANZANITA
STIRLING CITY CA 95978

Current Occupant
152 FRANK WEST CIRCLE SUITE 100
STOCKTON CA 95206

Current Occupant
150 VERANDA DR
SUMMERVILLE SC 29485-6267

Current Occupant
HC 89 BOX 8516
TALKEETNA AK 99676

Current Occupant
HC 89 BOX 8516
TALKEETNA AK 99676

Current Occupant
3971 MT WASHINGTON RD
TAYLORSVILLE KY 40071

C/O ARLENE PERRY
or Current Occupant
PO BOX 88
THE SEA RANCH CA 95497

Current Occupant
7655 TURKEY DR
TITUSVILLE FL 32780

Current Occupant
7655 TURKEY POINT DR
TITUSVILLE FL 32780-7552

Current Occupant
111 ANDERSON LN
TRINIDAD CA 95570

Current Occupant
1451 CRANNELL RD
TRINIDAD CA 95570

C/O JERRI MCMILLAN & SOPHIA
MACHADO
or Current Occupant
206 MCDONALD CREEK RD
TRINIDAD CA 95570

Current Occupant
390 MCDONALD CREEK RD
TRINIDAD CA 95570

Current Occupant
412 WESTGATE DRIVE
TRINIDAD CA 95570

Current Occupant
605 BIG LAGOON RANCH RD
TRINIDAD CA 95570

Current Occupant
690 MCDONALD CREEK RD
TRINIDAD CA 95570

Current Occupant
874 N WESTHAVEN DR
TRINIDAD CA 95570

Current Occupant
893 S WESTHAVEN DR
TRINIDAD CA 95570

Current Occupant
PO BOX 1120
TRINIDAD CA 95570

Current Occupant
PO BOX 1233
TRINIDAD CA 95570

Current Occupant
PO BOX 124
TRINIDAD CA 95570

Current Occupant
PO BOX 1250
TRINIDAD CA 95570

Current Occupant
PO BOX 240
TRINIDAD CA 95570

Current Occupant
PO BOX 249
TRINIDAD CA 95570

Current Occupant
PO BOX 327
TRINIDAD CA 95570

Current Occupant
PO BOX 524
TRINIDAD CA 95570

Current Occupant
PO BOX 810
TRINIDAD CA 95570

Current Occupant
PO BOX 621
TRINIDAD CA 95570-0621

Current Occupant
PO BOX 842
TRINIDAD CA 95570-0842

Current Occupant
PO BOX 942
TRINIDAD CA 95570-0942

Current Occupant
PO BOX 1241
TRINIDAD CA 95570-1241

Current Occupant
PO BOX 1261
TRINIDAD CA 95570-1261

Current Occupant
473 QUARRY RD
TRINIDAD CA 95570-8737

Current Occupant
5132 E FORT LOWELL RD
TUCSON AZ 85712

Current Occupant
307 SO MAIN ST. SUITE B
UKIAH CA 95482

C/O JENNY MCGOWAN
or Current Occupant
791 SANEL DR
UKIAH CA 95482

Current Occupant
4990 BURKE HILL DR
UKIAH CA 95482-9313

Current Occupant
810 VERMONT AVE NW
WASHINGTON DC 20420-0001

Current Occupant
PO BOX 1892
WEAVERVILLE CA 96093-1892

Current Occupant
965 COUNTY RD 70
WEISER ID 83672

Current Occupant
17678 169 HWY
WEITCHPEC CA 95546

Current Occupant
228 BENS CREEK LN
WEITCHPEC CA 95546

Current Occupant
23003 BALD HILLS RD
WEITCHPEC CA 95546

Current Occupant
23135 BALD HILLS RD
WEITCHPEC CA 95546

Current Occupant
H C 67 BOX 407
WEITCHPEC CA 95546

Current Occupant
HC 67 BOX 407 HWY 96
WEITCHPEC CA 95546

Current Occupant
PO BOX 239
WEST POINT CA 95255

Current Occupant
PO BOX 2
WESTPORT WA 98595

Current Occupant
2125 W BROMM LN
WICKENBURG AZ 85390

Current Occupant
169 ST HWY 96
WILLOW CREEK CA 95573

Current Occupant
PO BOX 1218
WILLOW CREEK CA 95573

Current Occupant
PO BOX 172
WILLOW CREEK CA 95573

Current Occupant
PO BOX 372
WILLOW CREEK CA 95573

Current Occupant
PO BOX 907
WILLOW CREEK CA 95573-0907

Current Occupant
PO BOX 1485
WILLOW CREEK CA 95573-1485

Current Occupant
PO BOX 1498
WILLOW CREEK CA 95573-1498

Current Occupant
PO BOX 1566
WILLOW CREEK CA 95573-1566

Current Occupant
PO BOX 1409
WILLOWCREEK CA 95573