

Biological Constraints Report

Project Name: Humboldt Co CDP Application Bundle #9	Date of Preparation: 04/09/2025
Project Location: Humboldt County, CA	Order Number: 8101016
Latitude/Longitude: 40.7829, -124.111	BCR ID: BCR-057197
PG&E Biological Contact: Nicole Christie	
Name of Preparer(s): Kevin Lash, Akshita Singh, Kasey MacRae ERM	
Surveys Recommended	
No	
Monitoring Recommended	
Yes	
Summary/List of Biological Constraints	
A desktop review determined that the proposed work has the potential to affect twelve special-status plant species, fourteen special-status wildlife species, and nesting birds. The work areas fall within the coverage area for the PG&E Multiple Region Operations and Maintenance Habitat Conservation Plan (MRHCP), under which the work activities are classified as E10a (Vegetation Management – Routine Maintenance). All work will adhere to the Best Management Practices (BMPs) established in the MRHCP. The implementation of avoidance and minimization measures (AMMs), BMPs, and presence of a biological monitor at work areas 109, 110, and 217 will minimize impacts to protected habitats, special-status species, and nesting birds.	
Project Description	
In order to maintain safe and reliable electric service and mandated clearance to comply with federal and state regulatory requirements for public safety and fire prevention, PG&E proposes vegetation management activities under or adjacent to the CR-Humboldt-Fairhaven and Essex Jct-Orick 60 kilovolt (kV) routine transmission lines on lands under the jurisdiction of the Humboldt County Local Coastal Plan (LCP) -Humboldt Bay and North Coast and on land managed by the California Department of Parks and Recreation (CDPR). The work areas fall within the Coastal Zone and are subject to the requirements of the Multiple Region Habitat Conservation Plan (MRHCP). The proposed vegetation removal activities will occur at 221 work areas and include the felling of 225 trees. No subsurface disturbance will occur during these activities. Tree crews will use existing roads to bring vehicles and equipment close to the work areas. Vehicles and equipment will remain on existing roads and trees will be accessed on foot. The equipment to be used includes bucket trucks, climbing equipment, roping and rigging, chippers, gas powered tools, etc. All cut vegetation will be either lopped and scattered or dragged offsite and chipped if accessible. No herbicide use is prescribed.	
Access	
Tree crews will use existing roads to bring vehicles and equipment close to the work areas. Vehicles and equipment will remain on existing roads and trees will be accessed on foot.	
Habitat Types	

Project Name: Humboldt Co CDP Application Bundle #9		Date of Preparation: 04/09/2025	
Project Location: Humboldt County, CA		Order Number: 8101016	
Mixed Conifer; Redwood; Riparian; Ruderal or Landscaped			
Notes: The work areas are along a transmission line within a mostly forested area between Big Lagoon and Orick. Work areas 141-146 and 221 are located within mixed conifer habitat. Work areas 47, 211, and 212 are located within riparian habitat. Work areas 23 and 48 are located within ruderal/landscaped habitat adjacent to private residences. All other work areas are located within redwood-Sitka spruce forest habitat.			
Site Visit?		If yes, provide date and attach photo(s):	
Special Status Species¹		CNDDDB Records (1.5-mile radius)	Suitable Habitat
<i>Plant species</i>			
Alpine marsh violet <i>Viola palustris</i> CRPR 2B.2	☒	☒	
Beach layia <i>Layia carnosa</i> FT, SE, NPS-S, CRPR 1B.1	☒	☐	
Bristle-stalked sedge <i>Carex leptalea</i> CRPR 2B.2	☒	☒	
Cylindrical trichodon <i>Trichodon cylindricus</i> CRPR 2B.2	☒	☐	
Dark eyed gilia <i>Gilia millefoliata</i> CRPR 1B.2, BLM-S, NPS-S	☒	☐	
Deceiving sedge <i>Carex saliniformis</i> CRPR 1B.2, BLM-S	☒	☒	
Ghost-pipe <i>Monotropa uniflora</i> NPS-S, CRPR 2B.2	☒	☒	
green yellow sedge <i>Carex viridula ssp. viridula</i> CRPR 2B.3	☒	☒	
Howell's montia <i>Montia howellii</i> CRPR 2B.2	☒	☒	
Humboldt Bay owl's-clover <i>Castilleja ambigua var. humboldtiensis</i> CRPR 1B.2, BLM-S, NPS-S	☒	☐	
Inundated bogclubmoss <i>Lycopodiella inundata</i> CRPR 2B.2	☒	☐	
Lagoon sedge	☒	☐	

Project Name: Humboldt Co CDP Application Bundle #9	Date of Preparation: 04/09/2025	
Project Location: Humboldt County, CA	Order Number: 8101016	
<i>Carex lenticularis</i> var. <i>limnophila</i> CRPR 2B.2		
Lyngbye's sedge <i>Carex lyngbyei</i> NPS-S, CRPR 2B.2	☒	☐
Maple-leaved checkerbloom <i>Sidalcea malachroides</i> CRPR 4.2	☒	☒
Marsh pea <i>Lathyrus palustris</i> CRPR 2B.2	☒	☒
Menzies' wallflower <i>Erysimum menziesii</i> FE, SE, CRPR 1B.1	☒	☐
Minute pocket moss <i>Fissidens pauperculus</i> FSS, CRPR 1B.2, NPS-S	☒	☒
Naked flag moss <i>Disclium nudum</i> CRPR 2B.2	☒	☐
Northern meadow sedge <i>Carex praticola</i> CRPR 2B.2	☒	☐
Oregon coast paintbrush <i>Castilleja litoralis</i> CRPR 2B.2	☒	☐
Oregon polemonium <i>Polemonium carneum</i> CRPR 2B.2	☒	☐
Pink sand-verbena <i>Abronia umbellata</i> ssp. <i>breviflora</i> BLM-S, NPS-S, CRPR 1B.1	☒	☐
Point Reyes salty bird's-beak <i>Chloropyron maritimum</i> ssp. <i>palustre</i> CRPR 1B.2, BLM-S, NPS-S	☒	☐
Running-pine <i>Lycopodium clavatum</i> NPS-S, CRPR 4.1	☒	☒
Scouler's catchfly <i>Silene scouleri</i> ssp. <i>scouleri</i> CRPR 2B.2	☒	☐
Seaside bittercress <i>Cardamine angulata</i> NPS-S, CRPR 2B.1	☒	☒
Seaside pea	☒	☐

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Project Location: Humboldt County, CA	Order Number: 8101016	
<i>Lathyrus japonicus</i> NPS-S, CRPR 2B.1		
Sierra rush <i>Juncus nevadensis</i> var. <i>inventus</i> CRPR 2B.2	☒	☐
Twisted horsehair lichen <i>Bryoria spiralifera</i> BLM-S, CRPR 1B.1	☒	☐
Western lily <i>Lilium occidentale</i> FE, SE, CRPR 1B.1	☒	☐
Western sandspurrey <i>Spergularia canadensis</i> var. <i>occidentalis</i> CRPR 2B.1	☒	☐
Wolf's evening-primrose <i>Oenothera wolfii</i> BLM-S, NPS-S, CRPR 1B.1	☒	☐
Woodnymph <i>Moneses uniflora</i> NPS-S, CRPR 2B.2	☒	☒
Animal species		
American peregrine falcon <i>Falco peregrinus</i> Delisted, NPS-S	☒	☒
Bald eagle <i>Haliaeetus leucocephalus</i> FSS, FP, SE, Delisted, BLM-S, NPS-S	☒	☒
Bank swallow <i>Riparia riparia</i> ST, BLM-S	☒	☐
Coastal run cutthroat trout <i>Oncorhynchus clarkii</i> SSC, FSS, NPS-S	☒	☒
Coho salmon - southern Oregon/northern California ESU <i>Oncorhynchus kisutch</i> FT, ST, NPS-S	☒	☒
Eulachon - southern DPS <i>Thaleichthys pacificus</i> FT	☒	☐
Foothill yellow-legged frog <i>Rana boylei</i> SSC, FE, FT, FSS, SE, ST, BLM-S, NPS-S	☒	☒

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Longfin smelt <i>Spirinchus thaleichthys</i> FE, ST, BLM-S, NPS-S	☒	☐
Marbled murrelet <i>Brachyramphus marmoratus</i> FT, SE, NPS-S	☒	☐
Mountain plover <i>Charadrius montanus</i> SSC, MBTA, BLM-S	☒	☐
Northern red-legged frog <i>Rana aurora</i> SSC, FSS, NPS-S	☒	☒
Northern spotted owl <i>Strix occidentalis caurina</i> FT, ST, NPS-S	☒	☒
Osprey <i>Pandion haliaetus</i> NPS-S	☒	☒
Pacific lamprey <i>Entosphenus tridentatus</i> SSC, FSS, BLM-S, NPS-S	☒	☐
Pacific tailed frog <i>Ascaphus truei</i> SSC	☒	☒
Southern green sturgeon <i>Acipenser medirostris</i> SSC, FT	☒	☐
Southern torrent salamander <i>Rhyacotriton variegatus</i> SSC, FSS	☒	☒
Steelhead - northern California DPS summer-run <i>Oncorhynchus mykiss irideus</i> pop. 48 FT, SE, NPS-S	☒	☒
Steelhead - northern California DPS winter-run <i>Oncorhynchus mykiss irideus</i> pop. 49 FT, NPS-S	☒	☒
Tidewater goby <i>Eucyclogobius newberryi</i> FE, NPS-S	☒	☐
Townsend's big-eared bat <i>Corynorhinus townsendii</i> SSC, FSS, BLM-S, NPS-S	☒	☒

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Western brook lamprey <i>Lampetra richardsoni</i> SSC, FSS	☒	☐
Western bumble bee <i>Bombus occidentalis</i> FSS, SC	☒	☐
Western snowy plover (coastal) <i>Charadrius alexandrinus nivosus</i> FT, NPS-S	☒	☐
Yellow rail <i>Coturnicops noveboracensis</i> SSC, FSS, MBTA	☒	☐
Nesting birds	N/A	☒

¹Special Status is defined as federal or state threatened, endangered, rare, proposed, candidate or fully protected; covered by Eagle Protection Act; or species of concern to land management agency. Abbreviations: Federally Endangered, Threatened, Proposed Endangered, Proposed Threatened, or Candidate (FE, FT, FPE, FPT, FC); State Endangered, Threatened, Candidate for Endangered, or Candidate for Threatened (SE, ST, SCE, SCT); Fully Protected (FP); CDFW Species of Special Concern (SSC); California Rare Plant Rank (CRPR) List 1 or 2.

Evaluation of Resources & Potential Impacts:

California Natural Diversity Database (CNDDDB) was reviewed in a search radius of 1.5 miles around the project location and habitat conditions were evaluated for the project's zone of impact. Species with suitable habitat are discussed below.

Plant Species

Alpine marsh violet

There are 2 CNDDDB record of this species within 1.5 miles of the work areas (1923 and 1974). Habitat for this species consists of marshes, swamps, and streambanks, often beneath shrubs from 0 - 246 feet in elevation. The bloom period for this species is March to August. Potentially suitable habitat may occur at work area 47, which is closest to the 1923 CNDDDB record of this species. With the implementation of BMPs, impacts to this species are not expected.

Bristle-stalked sedge

There are 2 CNDDDB record of this species within 1.5 miles of the work areas (1913 and 2003). Habitat for this species consists of bogs and fens, marshes and swamps, seeps, and wet meadows from 0 - 2297 feet in elevation. The bloom period for this species is March to August. Potentially suitable habitat may occur at work area 47, which is closest to the 1913 CNDDDB record of this species. With the implementation of BMPs, impacts to this species are not expected.

Deceiving sedge

There is 1 CNDDDB record of this species within 1.5 miles of the work areas (1921). Habitat for this species consists of meadows and seeps, coastal salt marshes and swamps, and wet areas of coastal prairie and coastal scrub from 10 - 820 feet in elevation. The bloom period for this species is May to July. Potentially suitable habitat may occur at

Project Name: Humboldt Co CDP Application Bundle #9	Date of Preparation: 04/09/2025
Project Location: Humboldt County, CA	Order Number: 8101016
work area 47, which is 1.23 miles away from the 1921 CNDDDB record. With the implementation of BMPs, impacts to this species are not expected. Ghost-pipe There are 2 CNDDDB record of this species within 1.5 miles of the work areas (1971 and 1971). Habitat for this species consists of mixed conifer/broadleaf upland forests and North Coast coniferous forests from 0 - 656 feet in elevation. This species is non-photosynthetic and is parasitic of mycorrhizal fungi associated with trees. The bloom period for this species is June to August, but it has been observed blooming as late as September. Potentially suitable habitat may occur at work areas 9, 11, 22, 56-58, 65-69, 72, 75, 77, 78, 81, 92, 84, 102, 111-115, 119, 120, 131, 134, 135, 172, 173, 176-185, 187, 188, 191, 194, and 196. Work areas 56-58 are the closest to the 1971 CNDDDB at 1.1 miles. With the implementation of BMPs, impacts to this species are not expected. green yellow sedge There are 2 CNDDDB record of this species within 1.5 miles of the work areas (1987 and 2014). Habitat for this species consists of sphagnum bogs, freshwater marshes and swamps, wet meadows, dune swales, lakeshores, and serpentine fens from 0 - 5905 feet in elevation. The bloom period for this species is July to September but is has been observed blooming as early as June and as late as November. Potentially suitable habitat may occur at work area 47. With the implementation of BMPs, impacts to this species are not expected. Howell's montia There is 1 CNDDDB record of this species within 1.5 miles of the work areas (1923). Habitat for this species consists of North Coast coniferous forests, vernal pools, and meadows and seeps from 0 - 2740 feet in elevation. This species is often found near roadsides or vernal mesic habitats. The bloom period for this species is February to May. Potentially suitable habitat may occur at work areas 9, 11, 22, 47, 56-58, 65-69, 72, 75, 77, 78, 81, 92, 84, 102, 111-115, 119, 120, 131, 134, 135, 172, 173, 176-185, 187, 188, 191, 194, 196, 211, and 212. Work areas 176-185 are the closest to the 1923 CNDDDB record, at 1.1 miles away. With the implementation of BMPs, impacts to this species are not expected. Maple-leaved checkerbloom There is 1 CNDDDB record of this species within 1.5 miles of the work areas (1999). Habitat for this species consists of broadleaf upland forests, coastal prairie, coastal scrub, North Coast coniferous forests, and riparian woodlands from 0 - 2395 feet in elevation. It is often found in disturbed areas. The bloom period for this species is April to August, but it has been observed blooming as early as March. Potentially suitable habitat may occur at work areas 9, 11, 22, 47, 56-58, 65-69, 72, 75, 77, 78, 81, 92, 84, 102, 111-115, 119, 120, 131, 134, 135, 172, 173, 176-185, 187, 188, 191, 194, 196, 211, and 212. Work areas 176-185 are the closest to the 1999 CNDDDB record, at 1.2 miles away. With the implementation of BMPs, impacts to this species are not expected. Marsh pea There is 1 CNDDDB record of this species within 1.5 miles of the work areas (2005). Habitat for this species consists of bogs and fens, marshes and swamps, and wet areas in coastal prairie, coastal scrub, lower montane coniferous forest, and North Coast coniferous forest from 0 - 330 feet in elevation. The bloom period for this species is March to August. Potentially suitable habitat may occur at work area 47. With the implementation of BMPs, impacts to this species are not expected. Minute pocket moss There is 1 CNDDDB record of this species within 1.5 miles of the work areas (1967). Habitat for this species consists of damp coastal soils in North Coast coniferous forest from 35 - 3360 feet in elevation. Potentially suitable habitat may occur at work areas 9, 11, 22, 56-58, 65-69, 72, 75, 77, 78, 81, 92, 84, 102, 111-115, 119, 120, 131, 134, 135, 172, 173, 176-185, 187, 188, 191, 194, and 196. With the implementation of BMPs, impacts to this species are not expected. Running-pine	

**Project Name: Humboldt Co CDP Application
Bundle #9**

Date of Preparation: 04/09/2025

Project Location: Humboldt County, CA

Order Number: 8101016

There is 1 CNDDDB record of this species within 1.5 miles of the work areas (2002). Habitat for this species consists of marshes and swamps and moist ground on the edges of openings in mesic lower montane coniferous forest and mesic North Coast coniferous forests from 150-4020 feet in elevation. This species is often found on roadsides. The sporangia of this species are generally present from June to August, but they have been observed as late as September. Potentially suitable forest edge habitat may occur at work areas 7, 18, 19, 24-28, 33, 36, 37, 41, 42, 45, 46, 49, 51, 53, 59-63, 70, 71, 73, 74, 76, 79, 80, 82-91, 93, 95-101, 103-110, 116-118, 121-130, 132, 133, 136-140, 147-159, 161, 162, 164, 166-168, 171, 174, 175, 186, 189, 190, 192, 193, 195, 197-201, 204-206, 213-215, 217, and 218. Work area 49 is the closest to the 2002 CNDDDB record at 1.43 miles. With the implementation of BMPs, impacts to this species are not expected.

Seaside bittercress

There are 3 CNDDDB records of this species within 1.5 miles of the work areas (2015-2018). Habitat for this species consists of North Coast coniferous forests and lower montane coniferous forest from 50 - 3000 feet in elevation. This species is often found near stream banks. The bloom period for this species is January to July. Potentially suitable habitat may occur at work areas 9, 11, 22, 56-58, 65-69, 72, 75, 77, 78, 81, 92, 84, 102, 111-115, 119, 120, 131, 134, 135, 172, 173, 176-185, 187, 188, 191, 194, and 196. With the implementation of BMPs, impacts to this species are not expected.

Woodnymph

There is 1 CNDDDB record of this species within 1.5 miles of the work areas (2012). Habitat for this species consists of moist, mossy North Coast coniferous forests and broadleaf deciduous forests from 330-3610 feet in elevation. The bloom period for this species is May to August. Potentially suitable habitat may occur at work areas 9, 11, 22, 56-58, 65-69, 72, 75, 77, 78, 81, 92, 84, 102, 111-115, 119, 120, 131, 134, 135, 172, 173, 176-185, 187, 188, 191, 194, and 196. With the implementation of BMPs, impacts to this species are not expected.

Animal Species

American peregrine falcon

There are 3 CNDDDB records of this species within 1.5 miles of the work areas (2012-2017). The nearest occurrence is approximately 0.35 mile southwest of work area 54. Nesting habitat for American peregrine falcons consists of open areas (in developed and undeveloped areas) and cliff ledges (natural and human-made; buildings and bridges) or in broken-top snags of large redwood (*Sequoia sempervirens*) in northern coastal California. The breeding range for this species in California includes the Channel Islands, the coast of southern and central California, inland north coastal mountains, the Klamath Mountains and Cascade Range, and the Sierra Nevada. The breeding season typically starts around late-February and extends through June. Known breeding pairs have been observed nesting in open bluff habitat present near Stone Lagoon, Big Lagoon, and Dry Lagoon Beach (work areas 49-212) and snagged redwoods near Humboldt Bay in Indianola (work areas 1-48). Suitable habitat represented by open areas in both developed and undeveloped areas, cliff ledges, as well as redwood forests that could contain snags or broken topped trees is considered present at the work areas and this species has potential to occur. Due to the lack of known nests near the work areas and with implementation of BMPs, impacts to this species are not expected to occur.

Bald eagle

There are 2 CNDDDB records of this species within 1.5 miles of the work areas (2008 and 2022). Additionally, an unmapped known bald eagle nest has been used in previous years, approximately 0.1 mile west of work area 83. Bald eagles nest predominantly within large, old-growth, and/or dominant live conifer trees (especially ponderosa pine) with open branches. Nests are usually located within one mile of key foraging areas that support a resident (non-migratory) population of prey-sized fish. These raptors characteristically choose large conifers in relatively secluded areas away from human disturbance to build nests. The breeding season for this species typically extends

Project Name: Humboldt Co CDP Application
Bundle #9

Date of Preparation: 04/09/2025

Project Location: Humboldt County, CA

Order Number: 8101016

from February through July, with peak nesting activity occurring from March through June. Work areas 21-47 fall within 0.2-0.8 miles of both the 2008 and 2022 occurrences for this species. Additionally, work areas 133-158 fall within 1 mile of mapped old growth forest in Redwood National Park and are situated between suitable nesting habitat and foraging grounds of Stone Lagoon and Freshwater Lagoon. Suitable habitat is considered present, and this species has potential to occur. With implementation of AMMs and BMPs, and pre-activity surveys conducted at work areas 21-47, 49-152, and 159-221, impacts to this species is not expected to occur.

Coastal run cutthroat trout

There are 9 CNDDDB records of this species within 1.5 miles of the work areas (1973-2016). Habitat for this species consists of estuaries, lagoons, and small, low-gradient coastal streams with cool, clean water, ample cover, and deep holding pools. While coast cutthroat trout have highly variable life history strategies compared to other anadromous salmonids, they spawn in freshwater streams. Their spawning habitat requirements are similar to those of steelhead and stream-resident rainbow trout, therefore coast cutthroat trout tend to spawn in higher reaches of coastal streams in which these other species co-occur. Spawning adults enter coastal streams after the first substantial rainfall of the season, which generally occurs between August and October.

Work areas 109 and 110 are directly overlapped by a 1980 CNDDDB occurrence for this species. Work area 109 is within 15 ft of Tom Creek and work area 110 is within 50 ft of Tom Creek. Fish passage data shows there is no barrier between work areas and the Pacific Ocean and Big Lagoon, and this species has potential to occur at work areas 109 and 110. With the implementation of Aquatic and Riparian AMMs and BMPs and the presence of a biological monitor, impacts are not expected to occur.

Coho salmon - southern Oregon/northern California ESU

There are 2 CNDDDB record of this species within 1.5 miles of the work areas (2008 and 2016). Coho salmon spend the first part of their lives in streams and the latter part out at sea. They occupy cool streams with unobstructed flow and adequate oxygen, as well as areas of shelter from strong currents. Coho salmon typically inhabit small coastal streams as well as large rivers. Spawning occurs mainly from November to January but can extend into February or March. Coho salmon can be found at elevations from sea level to 4,000 feet. Suitable habitat is present at work areas 109 and 110, which are within 50 feet of Tom Creek. With the implementation of Aquatic and Riparian AMMs and BMPs, impacts are not expected to occur.

Foothill yellow-legged frog

There are 5 CNDDDB records of this species within 1.5 miles of the work areas (1949-2014). Suitable habitat includes permanently flowing streams and rivers with large cobbles and open, sunny banks, in forests, chaparral, and woodlands. The species is also sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools. It may be found in or near streams during all seasons, and up to 100 feet from flowing water. The 1949 CNDDDB occurrence directly overlaps WLs 160, and 162-163, and 165-167 but is unrefined and linked to Big Lagoon, and suitable habitat represented by permanently flowing streams is absent from these work areas. Suitable habitat is present at work area 109, which is within 10 feet of Tom Creek, a perennial stream which connects to Big Lagoon. Therefore, this species has potential to occur at work area 109. With the implementation of Aquatic and Riparian AMMs and BMPs, impacts are not expected to occur.

Northern red-legged frog

There are 25 CNDDDB records of this species within 1.5 miles of the work areas (1965-2014). Northern red-legged frogs are known to occur along the coast range from Del Norte County to Mendocino County. Habitat for this species includes marshes, pools, ponds, and calm streams. This species prefers aquatic habitats with densely

Project Name: Humboldt Co CDP Application Bundle #9	Date of Preparation: 04/09/2025
Project Location: Humboldt County, CA	Order Number: 8101016

vegetated shorelines and rarely moves from streamside habitats, except during juvenile dispersal. This species can also be found on roads, at night, or during rain events. Breeding requires permanent to near-permanent waterbodies. The 2009 CNDDDB refined occurrence directly overlaps work areas 106, 108-110, 182, and 183 and are all within 250 feet of Tom Creek. Additionally, work area 162 is within 250 feet of Big Lagoon and the 2012 refined occurrence where egg masses were observed. Suitable habitat is considered present at these work areas, and this species has potential to occur. With the implementation of Aquatic and Riparian AMMs and BMPs, impacts are not expected to occur.

Northern spotted owl

There are 318 CNDDDB records within 1.5 miles of the work areas (1977-2023), of which 72 are positive records and 9 are activity centers. The closest known nest is 0.9 miles from Work Areas 49 and 50. The range of the northern spotted owl includes coniferous forest habitats in California, Oregon, Washington, and British Columbia. Northern spotted owls are non-migratory and prefer structurally complex, old-growth or mature forests with a multilayered canopy and moderate to high canopy cover (particularly redwood and Douglas-fir forests). High canopy layers are important to allow for sustained sub-canopy flight. Key structural components of this habitat include trees with cavities, broken tops, snags, fallen logs, and other woody debris. The primary prey for the species in California is the dusky-footed woodrat. Northern spotted owls do not build their own nests, instead they rely on existing forest structural features such as broken-top trees, tree cavities, mistletoe brooms, or nests built by other species. Potentially suitable habitat represented by old growth forest is absent from the work areas. An analysis was also conducted to evaluate the potential for noise disturbance to this species in the vicinity of the work area. Based on Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California (U.S. Fish and Wildlife Service 2006), the existing ambient conditions would be considered 'low' for work areas along low-voltage power lines set back from the highway. Project work would be considered 'very high' due to the use of a chipper. According to the document, 'very high' action-generated activities occurring in 'low' conditions can cause project noise attenuation to exceed established take thresholds within 825 feet of project work areas. Potentially suitable habitat may be present within 825 feet of work areas 49-132, 139, 140, 159-201, 213-220. The northern spotted owl is a covered species under the MRHCP and all work will be conducted in compliance with this permit.

Osprey

There are 15 CNDDDB records of this species within 1.5 miles of the work areas (1983-1999). Ospreys feed on live fish and are often located near open water where fish supplies are abundant. Nests are constructed from sticks, almost always on human-made structures, including nest platforms designed specifically for ospreys. The 1999 CNDDDB refined occurrence falls within habitat adjacent to Stone and Big Lagoon, directly adjacent to Highway 101. Suitable habitat is considered present at work areas 203-212 which are in close proximity to both lagoons. With the implementation of BMPs, impacts are not expected to occur.

Pacific tailed frog

There are 5 CNDDDB records of this species within 1.5 miles of the work areas (1962-2008). Habitat for this species consists of permanent cold, clear, swift streams with rocky streambeds to provide cover for adults, egg masses, and tadpoles. While this species will sometimes forage in redwood and Douglas-fir forests short distances (40 feet) from waterways—particularly during wet weather conditions—they are typically found close to stream banks. They can be found from sea level to 8,400 ft elevation. Adults are usually active from April to October, depending on the locality. The range of this frog in California is from near Anchor Bay, Mendocino County, north along the coast to the Oregon Border and as far east as near Big Bend, Shasta County. Suitable habitat represented by permanent streams in redwood forest is present at work locations 109 and 110, which are within 50 feet of Tom Creek. Therefore, this

**Project Name: Humboldt Co CDP Application
Bundle #9**

Date of Preparation: 04/09/2025

Project Location: Humboldt County, CA

Order Number: 8101016

species has potential to occur at work areas 109 and 110. With the implementation of Aquatic and Riparian AMMs and BMPs, impacts are not expected to occur.

Southern torrent salamander

There are 7 CNDDDB records of this species within 1.5 miles of the work areas (1952-2013). Habitat for this species consists of shallow, cold, clear, well shaded streams and seeps in mature to old-growth forests. This species is highly intolerant of desiccation and thus terrestrial activity is constrained to the riparian area surrounding streams. In California, this species occurs throughout humid coastal drainages from near Pt. Arena in southern Mendocino Co., to the Oregon border in the coniferous belt. Suitable habitat represented by permanent streams in redwood forest is present at work locations 109 and 110, which are within 50 feet of Tom Creek. Therefore, this species has potential to occur at work areas 109 and 110. With the implementation of Aquatic and Riparian AMMs and BMPs, impacts are not expected to occur.

Steelhead - northern California DPS summer-run

There is 1 CNDDDB record of this species within 1.5 miles of the work areas (2019). Steelhead occupy cool, freshwater streams or lakes during spawning and then migrate back through brackish water to the open ocean to live during the adult non-spawning phase of their life cycle. Steelhead spend most of the year in estuaries or open ocean. Summer run populations' sensitive period is from April to July, when adults frequent cold water areas, or pools with thermal stratification. Suitable habitat is considered present at work areas 109 and 110. Work area 109 is within 15 feet of Tom Creek, and 110 is within 50 feet. Tom Creek is mapped NOAA critical habitat for this species, and this species has potential to occur. With the implementation of Aquatic and Riparian AMMs and BMPs, impacts are not expected to occur.

Steelhead - northern California DPS winter-run

There are 5 CNDDDB records of this species within 1.5 miles of the work areas (2008-2020). Steelhead occupy cool, freshwater streams or lakes during spawning and then migrate back through brackish water to the open ocean to live during the adult non-spawning phase of their life cycle. Steelhead spend most of the year in estuaries or open ocean. The winter run populations' sensitive period can start as early as September and run through May, depending on the size of the watershed. Adults are seemingly tolerant of varied flows and temperatures. Suitable habitat is considered present at work areas 109 and 110. Work area 109 is within 15 feet of Tom Creek, and 110 is within 50 feet. Tom Creek is mapped NOAA critical habitat for this species, and this species has potential to occur. With the implementation of Aquatic and Riparian AMMs and BMPs, impacts are not expected to occur.

Townsend's big-eared bat

There is 1 CNDDDB record of this species within 1.5 miles of the work areas (1998). Roosting habitat for this species consists of caves, mines, tunnels, bridges, and other human-made structures. Townsend's big-eared bats forage along habitat edges, catching insects in the air or gleaning them from brush and trees. This species' sensitive period is from April 1st to August 31st, and they can be usually found between sea level and 1,820 feet in elevation. Suitable habitat represented by manmade structures has potential to occur at work areas 1-20, and therefore this species has potential to occur. However, these structures will not be directly impacted by work. With the implementation of BMPs, impacts are not expected to occur.

Nesting birds

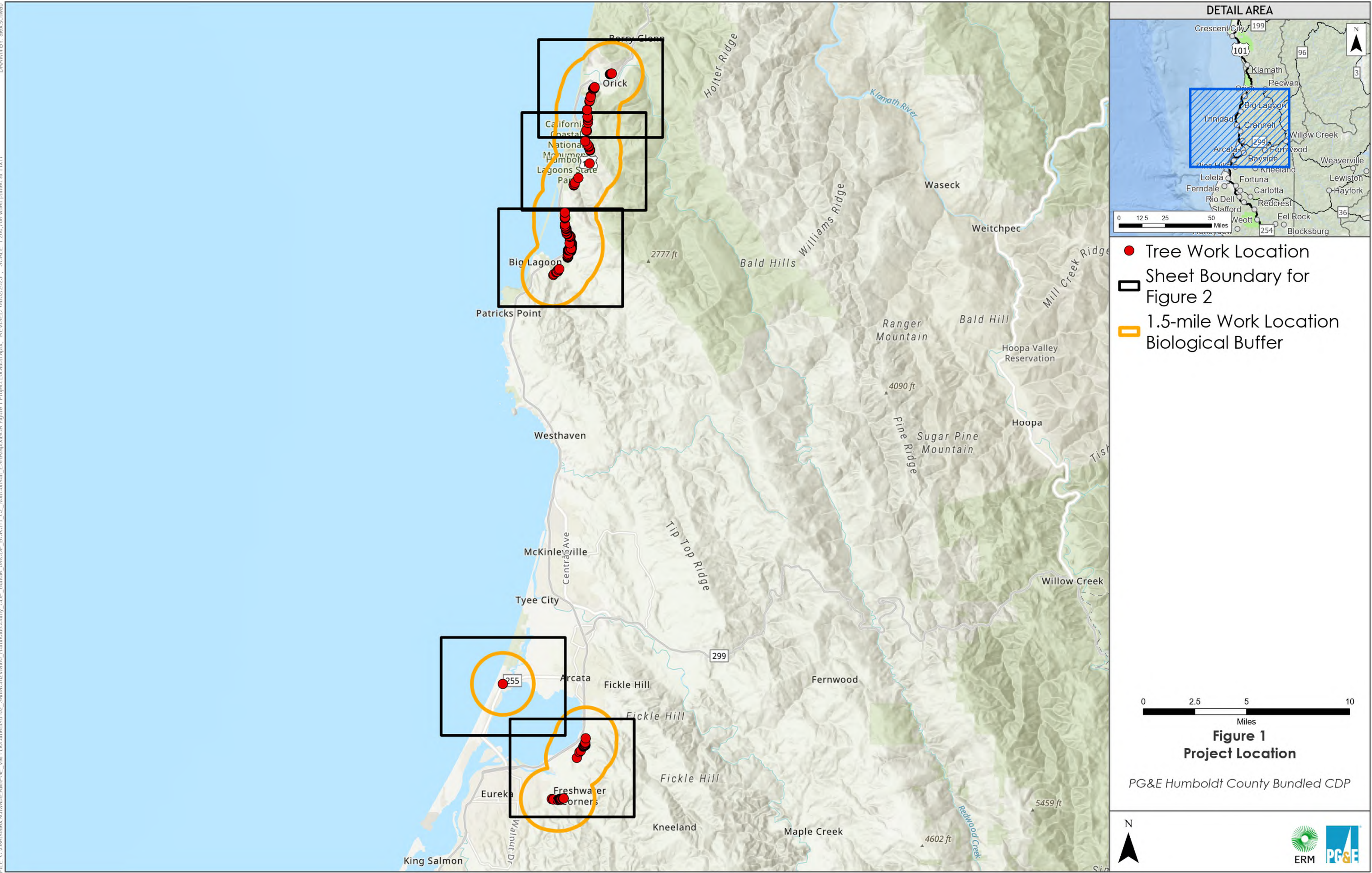
Nesting birds may be present on the ground, in shrubs and trees, or in or on utility poles, from February 15 through August 31 (nesting bird season). Potential impacts on nesting birds will be minimized or avoided with incorporation of

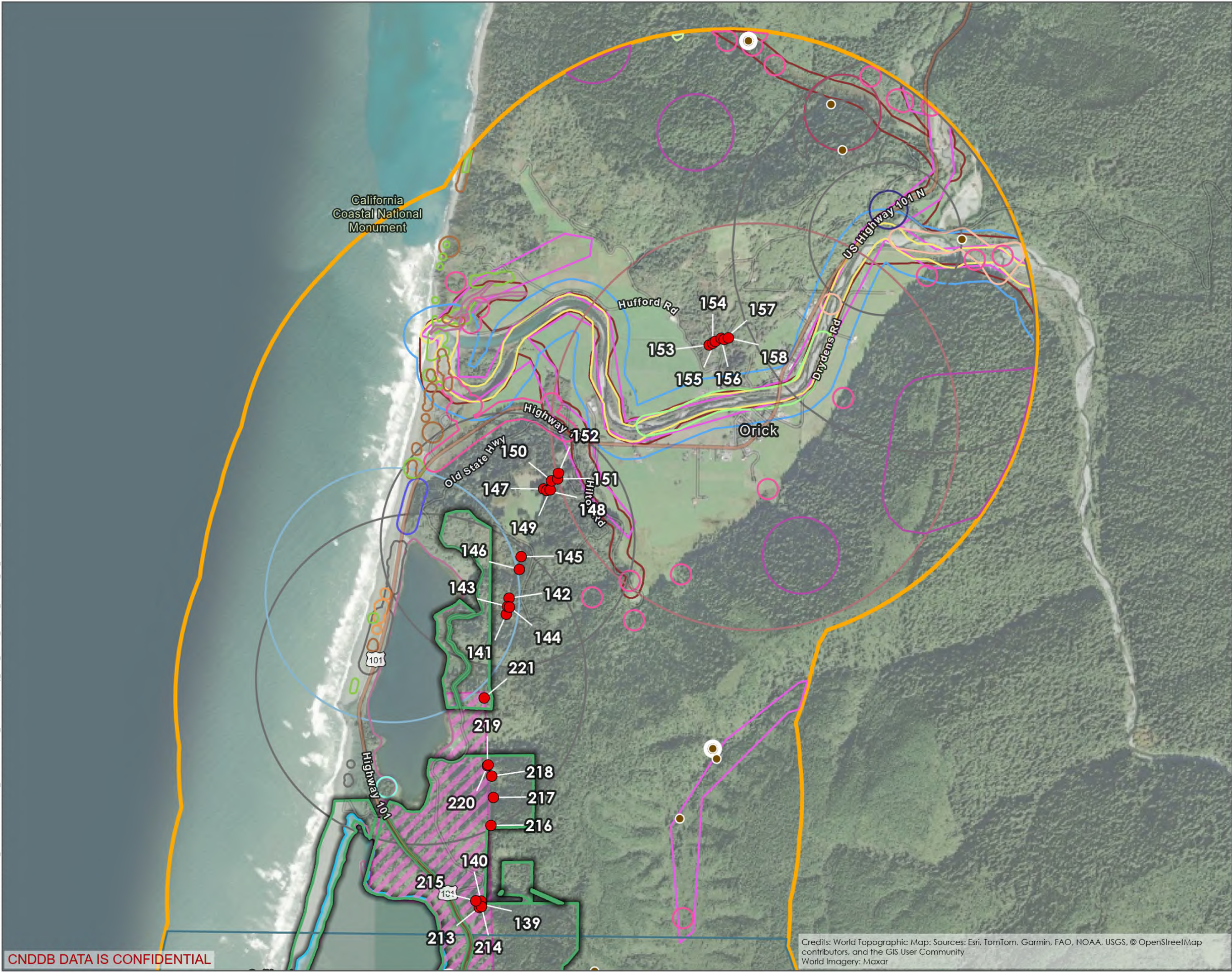
Project Name: Humboldt Co CDP Application Bundle #9	Date of Preparation: 04/09/2025
Project Location: Humboldt County, CA	Order Number: 8101016
the measures listed below and PG&E's general BMPs, which require crews to stop work and contact a biologist if any active nests are detected.	
Are there any aquatic resources (seasonal or permanent) and/or riparian corridors within 250 feet?	
Yes	If yes, type: Natural;Potential wetland;Perennial;Intermittent;Ephemeral
If you answered yes to previous question, will the project directly impact any of the above aquatic resources?	
No	
Explain: Work locations 106, 108-110, 182, and 183 are within 250 feet of Tom's Creek, a perennial stream and NWI mapped riverine wetland. Of these, work area 110 is within 50 feet and work area 109 is within 10 feet. Work area 182 is within 250 feet of an ephemeral stream. Work areas 33-47 and 165 are within 250 feet of an ephemeral stream. Work area 217 is within 50 feet of a perennial stream. Work areas 59-64 and 165 are within 250 feet of an ephemeral stream. Work area 48 is within 100 feet of a freshwater forested wetland. Work areas 44-47 are within 250 feet of a freshwater emergent wetland. Work areas 55-58 and 165 are within 250 feet of a freshwater emergent wetland. With the implementation of BMPs and the presence of a biological monitor at work areas 109, 110, and 217, impacts to aquatic resources are not anticipated.	

Project Name: Humboldt Co CDP Application Bundle #9	Date of Preparation: 04/09/2025
Project Location: Humboldt County, CA	Order Number: 8101016
Critical Habitat	
Designated Critical Habitat:	Yes
Physical and Biological Features Impacted:	No
Notes: USFWS designated critical habitat for marbled murrelet overlaps work areas 51-58, 65, 66, 76- 80, 82, 83, 97-109, 112- 132, 139, 140, 159-215, and 221. These trees may provide suitable nesting habitat, however, given the limited scope of work, selective removals of hazard trees, and implementation of AMMs and BMPs, impacts to Physical and Biological Features will be minimized. USFWS designated critical habitat for tidewater goby is within 250 feet of work areas 209 and 211. NOAA designated critical habitat for steelhead [northern California DPS] is located within 250 feet of work areas 106, 108, 109, 110, 182. Of these, work area 109 is within 50 feet. With the implementation of BMPs and AMMs, no impacts to critical habitat are anticipated.	
Resource Protection Measures & Avoidance and Minimization Measures	
The project is located within PG&E's Multiple Region Operations and Maintenance Habitat Conservation Plan (MRHCP) Area. All contractors and subcontractors must complete required HCP training via ENVR-0220WBT to work in the HCP Plan Area. Work activities must follow MRHCP Field Protocols (FP) and Best Management Practices (BMPs), and any additional measures, where identified in this ERTC. If biological issues or concerns arise during work, please contact the project Biologist listed on the ERTC. Vegetation Management BMPs 1-27 General The scope of work that is proposed includes vegetation activities that require the crew to follow the MRHCP Vegetation Management Best Management Practices 1-27 which can be found in the attachment/ Link to the ERTC documents. Special attention shall be given to the following: • BMP 4: Vehicles and equipment must use pavement, existing roads, and previously disturbed areas to the extent practicable. • BMP 16: VM activities impacting birds must follow Utility Procedure TD-7102P-27, to comply with the Migratory Bird Treaty Act. Aquatic and Riparian Measures (work areas 33-48, 55-64, 106, 108-110, 138, 165, 169, 170, 182, 183, 209, 211, and 217 • BMP 8: Vehicles and heavy equipment must be refueled at least 100 feet away from riparian areas. Handheld tools must be refueled outside of riparian areas. The fueling operator must stay with the fueling operation at all times. Do not top off tanks. • BMP 11: Vehicle use within riparian areas is limited to existing roads and dry crossings, and they must be checked and maintained daily to prevent leaks of materials that, if introduced to water, could be harmful to aquatic life. • BMP 12: Cleared or pruned vegetation and woody debris (including chips) must be disposed of in a manner to ensure that it does not enter surface water or a watercourse. All cleared vegetation and woody debris (including chips) must be removed from surface water or watercourses, and placed or secured where it cannot re-enter the watercourse.	

Project Name: Humboldt Co CDP Application Bundle #9	Date of Preparation: 04/09/2025
Project Location: Humboldt County, CA	Order Number: 8101016
• BMP 22: Disturbance or removal of non-target vegetation within a work site should not exceed the minimum necessary to complete operations, subject to other public health and safety directives governing the safe operations and maintenance of electric and gas facilities. Biological Monitor • A biological monitor is required at work areas 109, 110, and 217 (within 50 feet of NWI mapped wetlands). VM must contact the ERM Field Coordinator a minimum of two weeks prior to work to schedule biological monitor. Bald Eagle • If work is necessary between January 1 and July 31 at work areas 21-47, 49-152, and 159-221, VM must contact the ERM Field Coordinator a minimum of two weeks prior to work to schedule bald eagle surveys. Amphibians (work areas 106, 108-110, 182, and 183) • Review species identification tailboard prior to work. • Visually check for amphibians under vehicles and equipment prior to moving them and be vigilant to avoid these species on roadways. • Do not broadcast woodchips in areas with mammal burrows. If this is not feasible, contact the PG&E Biologist. Northern spotted owl (work areas 49-132, 139, 140, 159-201, 213-220) If a biologist determines that a work site is within 0.25 mile of un-surveyed northern spotted owl nesting habitat, activity centers, or critical habitat during nesting season (March 1–July 31), then work will be restricted to August 1–February 28, unless surveys determine the suitable habitat or site is unoccupied or the owls are not nesting. For project work within 0.25 mile of a known nest site or nesting habitat that cannot be scheduled outside of the nesting season and the 0.25 mile buffers cannot be maintained, PG&E may implement reduced buffers based on Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California (U.S. Fish and Wildlife Service 2006). • Per NSO-1, work during the nesting season (March-July 31) will have the following restrictions: • When work is to occur during the nesting season, the use of large chainsaws and chippers is not permitted. Project equipment shall utilize lower volume equipment, which includes hand tools, hydraulic pruners, and chainsaws with a 25-foot load max dBA rating under 90 decibels, when limbing and climbing trees to the extent feasible. Such equipment includes: ○ Small gas chainsaws (e.g., Stihl MS 170) ○ Electric chainsaws (e.g., Makita XCU02PTX1 or Stihl MSA 220 C-B) If it's unclear the types of equipment that can be used during this time period, contact the PG&E biologist for clarification. • Minimize the amount of work needed to occur during the nesting season. Consider prescription changes to achieve compliance until after nesting season, where no equipment limitations are in effect. If hazard trees must be removed due to safety concerns and cannot be felled with lower-volume equipment, minimize noise to the extent feasible by delaying wood management, chipping and other non-essential activities until after the nesting season. ○ If such activities must occur due to fire risk or safety, schedule such activities in less than two hours per day increments and conduct such activities mid-day (i.e., between 10 a.m. and 2 p.m.). Attempt to locate wood management/chipping areas adjacent to large roads (i.e., highways) or areas with human developments. Avoid operating loud equipment during early morning or dusk times of day, or in remote areas.	

Project Name: Humboldt Co CDP Application Bundle #9	Date of Preparation: 04/09/2025
Project Location: Humboldt County, CA	Order Number: 8101016
○ The PG&E biologist must be notified if safety-related work using high-volume tools will be conducted during the nesting season. Anadromous Fish (work areas 109 and 110) Where feasible, prioritize work to occur outside of spawning season December to March. If work must occur during spawning season, conduct activities during dry spells (i.e., do not work during rainy conditions). Where feasible, consider alternative prescriptions other than removals (i.e., hack and squirt, trims, etc.) where applicable to minimize impacts to waterway or riparian vegetation but still achieve compliance and safety regulations for trees that meet the following conditions: • are in an advanced state of decay that lean towards the channel or have an unimpeded fall path toward the watercourse, • are located on unstable areas or downslope of such unstable areas, or • have undermined roots due to water channel, or • provide abundance shade to the waterway • If removal is required: ○ fell trees away from the waterway if removals are the best course of action and can be done safely ○ leave as much of the trunk of the dead tree in place, where clearance regulations and safety protocols allow.	





DETAIL AREA

Tree Work Location

1.5-mile Work Location Biological Buffer

Sheet Boundary

USFWS Critical Habitat

CNDDDB

Coast cutthroat trout

Deceiving sedge

Eulachon

Foothill yellow-legged frog - north coast DPS

Ghost-pipe

Great blue heron

Howell's montia

Lagoon sedge

Marbled murrelet

Marsh walker

Northern red-legged frog

Obscure bumble bee

Oregon coast paintbrush

Osprey

Pink sand-verbena

Redwood juga

Scouler's catchfly

Seaside pea

Sitka Spruce Forest

Steelhead - northern CA DPS summer-run

Steelhead - northern CA DPS winter-run

Tidewater goby

Western bumble bee

Wolf's evening-primrose

Spotted Owl Activity Center

Spotted Owl Observation

*This occurrence is suppressed in the commercial version of CNDDDB. The actual occurrence polygon was verified and is within the 1.5-mile search buffer.

01,0002,0004,000

Feet

N

Figure 2

Special Status Species Occurrences

Sheet 1 of 5

PG&E Humboldt County Bundled CDP

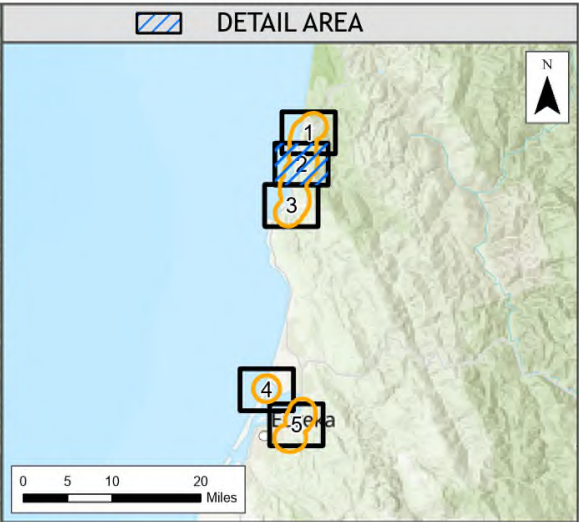
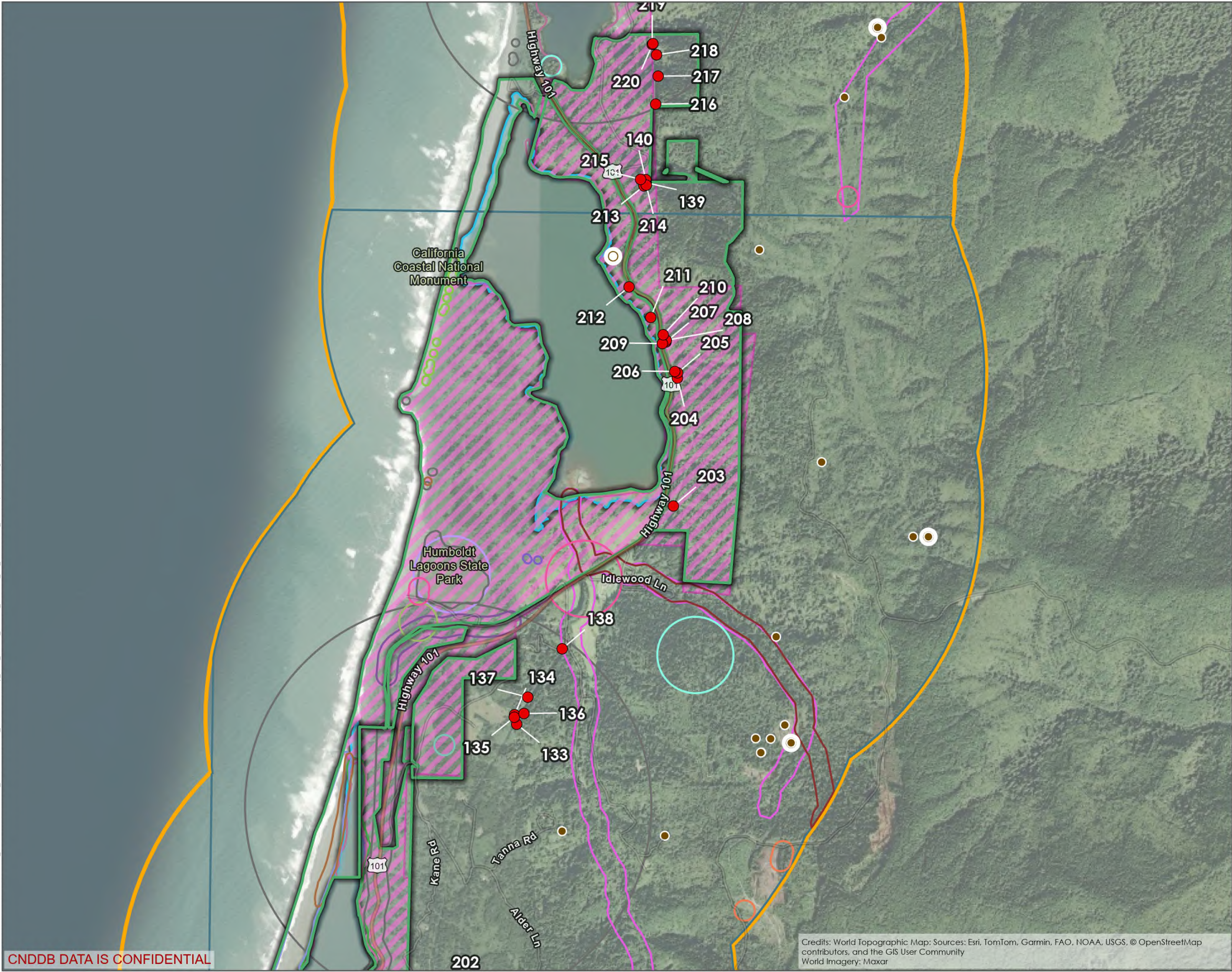
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ERM

PG&E

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World Imagery: Maxar



- | | |
|-------------------------------------|--|
| Tree Work Location | Northern red-legged frog |
| 1.5-mile Work Location | Obscure bumble bee |
| Biological Buffer | Oregon coast paintbrush |
| Sheet Boundary | Osprey |
| California State Park | Pink sand-verbena |
| USFWS Critical Habitat | Scouler's catchfly |
| Marbled murrelet | Seaside bittercress |
| Tidewater goby | Seaside pea |
| CNDDDB | Southern torrent salamander |
| American peregrine falcon* | Steelhead - northern CA DPS winter-run |
| Coast cutthroat trout | Tidewater goby |
| Coastal and Valley Freshwater Marsh | Twisted horsehair lichen |
| Cylindrical trichodon | Western snowy plover |
| Deceiving sedge | Woodnymph |
| Green yellow sedge | Spotted Owl Activity Center |
| Lagoon sedge | Spotted Owl Observation |

*This occurrence is suppressed in the commercial version of CNDDDB. The actual occurrence polygon was verified and is within the 1.5-mile search buffer.

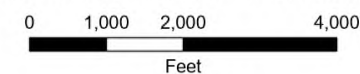


Figure 2
Special Status Species Occurrences

Sheet 2 of 5

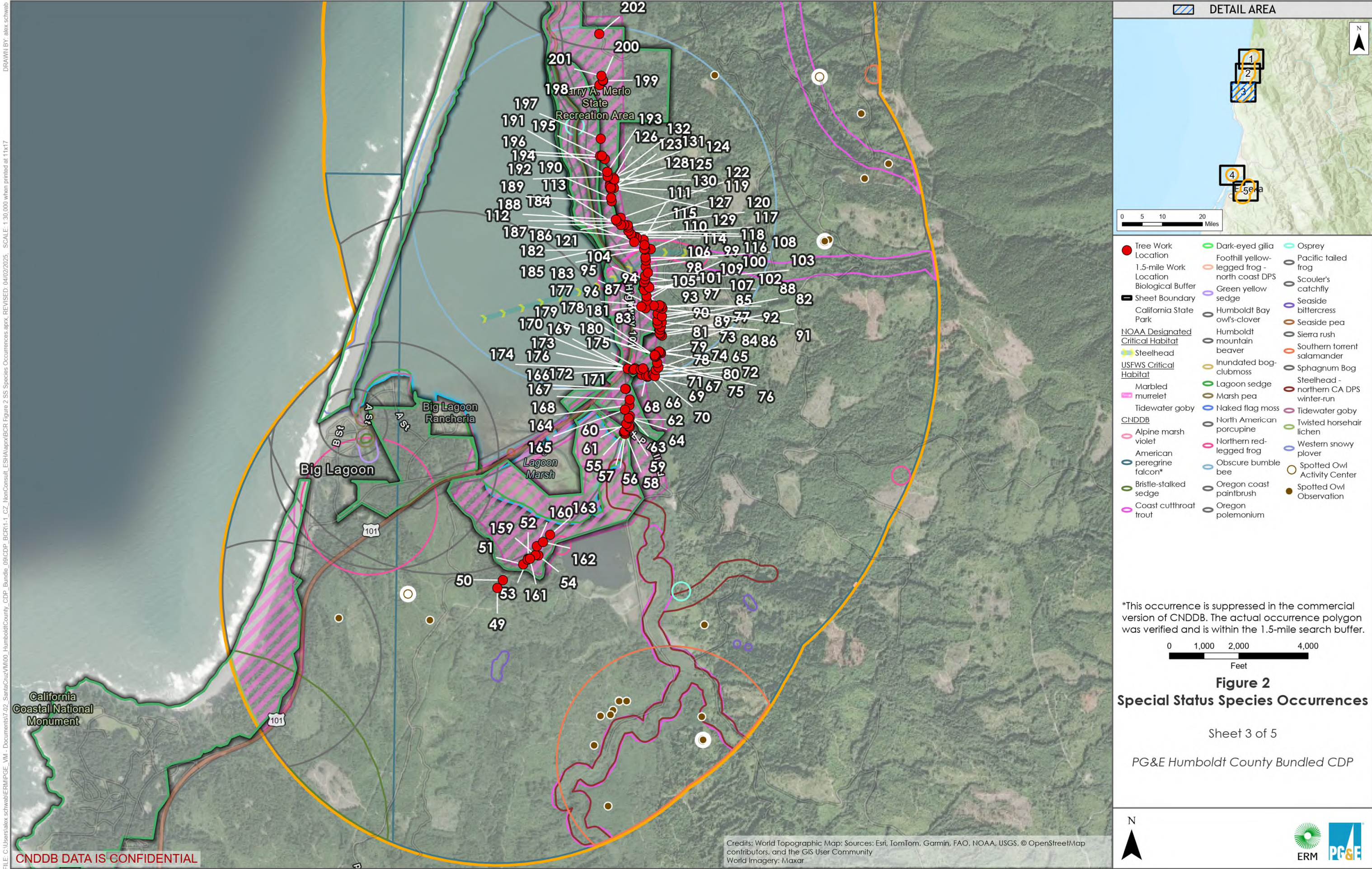
PG&E Humboldt County Bundled CDP



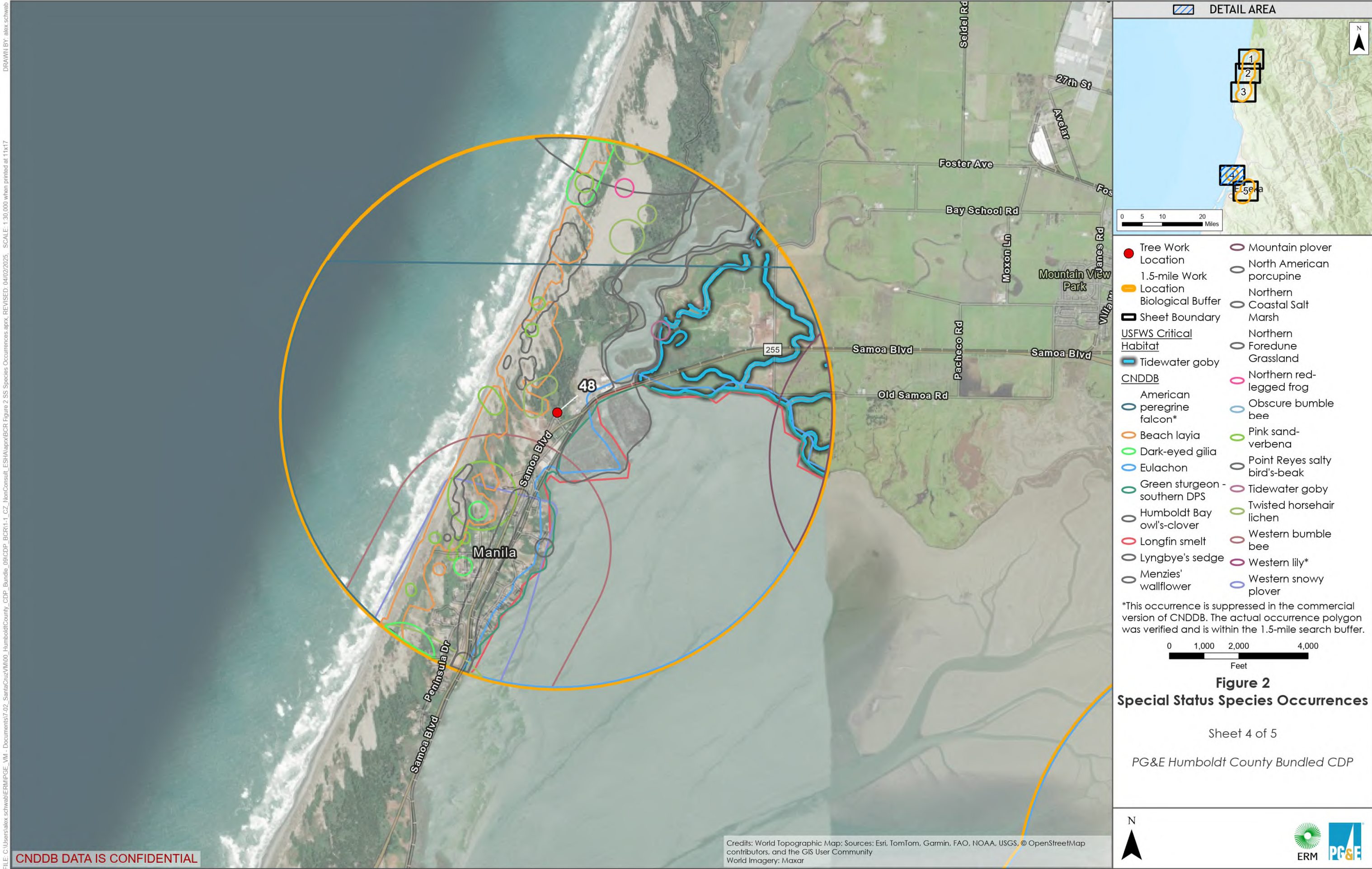
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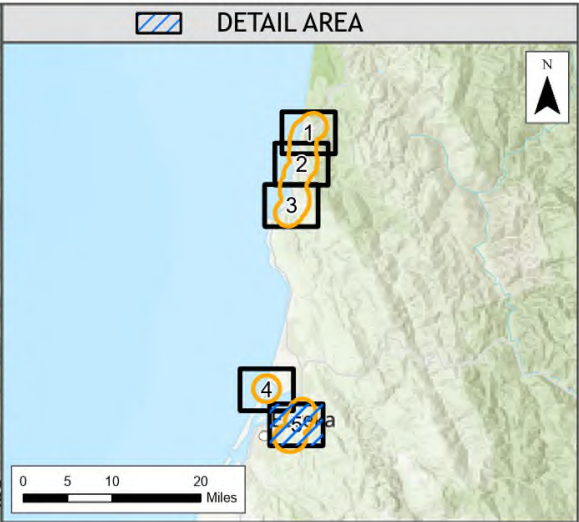
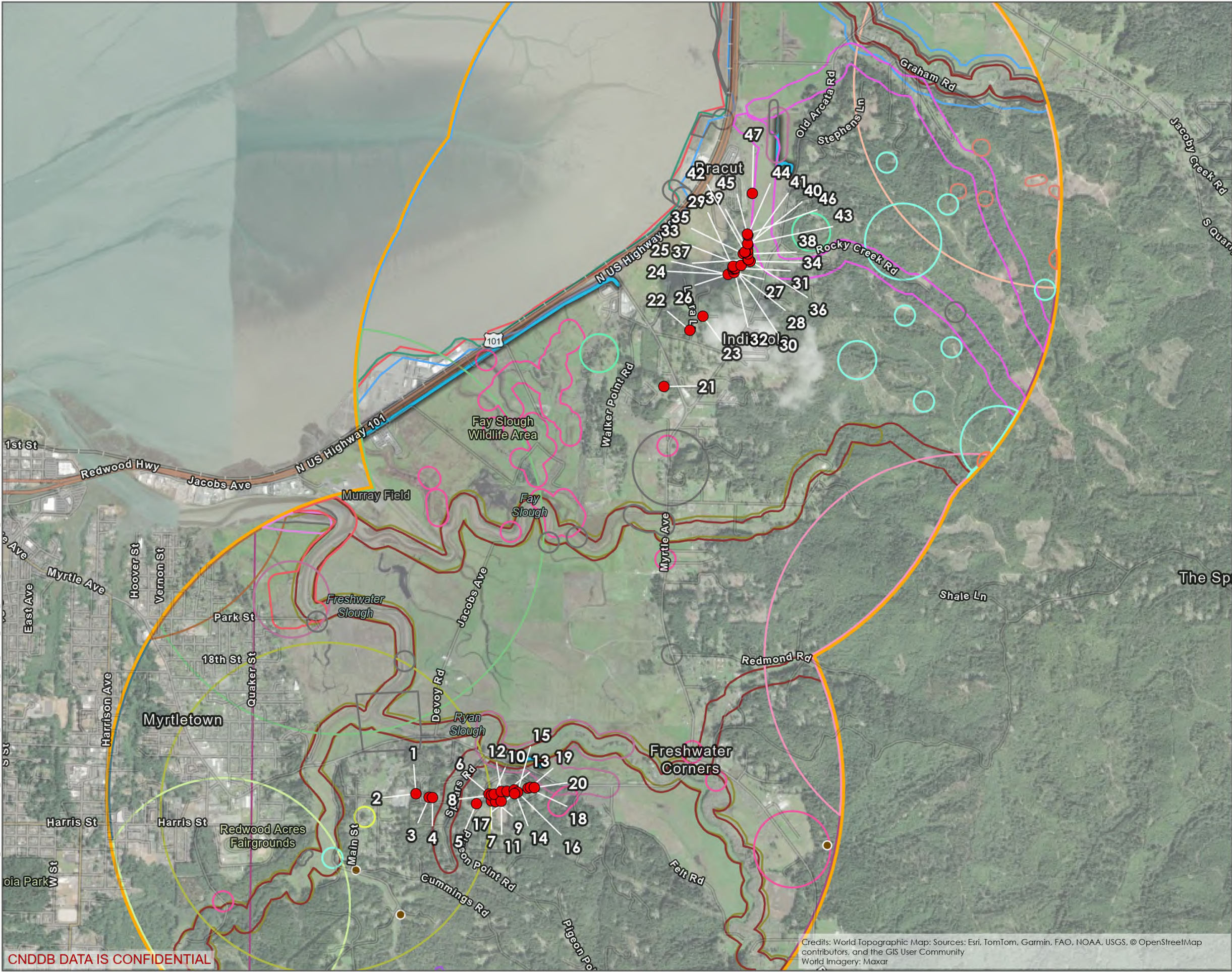
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CNDDDB DATA IS CONFIDENTIAL



- | | | |
|---|---|---|
| <ul style="list-style-type: none">Tree Work Location1.5-mile Work LocationBiological BufferSheet BoundaryUSFWS Critical HabitatTidewater gobyCNDDDBAlpine marsh violetAmerican peregrine falcon*Bald eagleBlack-crowned night heronCoast cutthroat troutCoho salmon-southernOregon / northern CA ESU | <ul style="list-style-type: none">EulachonFoothill yellow-legged frog - north coast DPSGhost-pipeGreen sturgeon - southern DPSHumboldt Bay owl's-cloverLongfin smeltLynxby's sedgeMaple-leaved checkerbloomNorth American porcupineNorthernCoastal Salt MarshNorthern meadow sedgeNorthern red-legged frogOspreyPacific lamprey | <ul style="list-style-type: none">Pacific tailed frogPoint Reyes salty bird's-beakRunning-pineSandy beach tiger beetleSeaside peaSouthern torrent salamanderSteelhead - northern CA DPS winter-runTidewater gobyTownsend's big-eared batWestern brook lampreyWestern lily*Western sand-spurreyYellow railSpotted Owl Observation |
|---|---|---|

*This occurrence is suppressed in the commercial version of CNDDDB. The actual occurrence polygon was verified and is within the 1.5-mile search buffer.

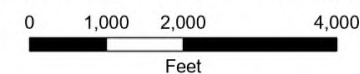


Figure 2
Special Status Species Occurrences

Sheet 5 of 5

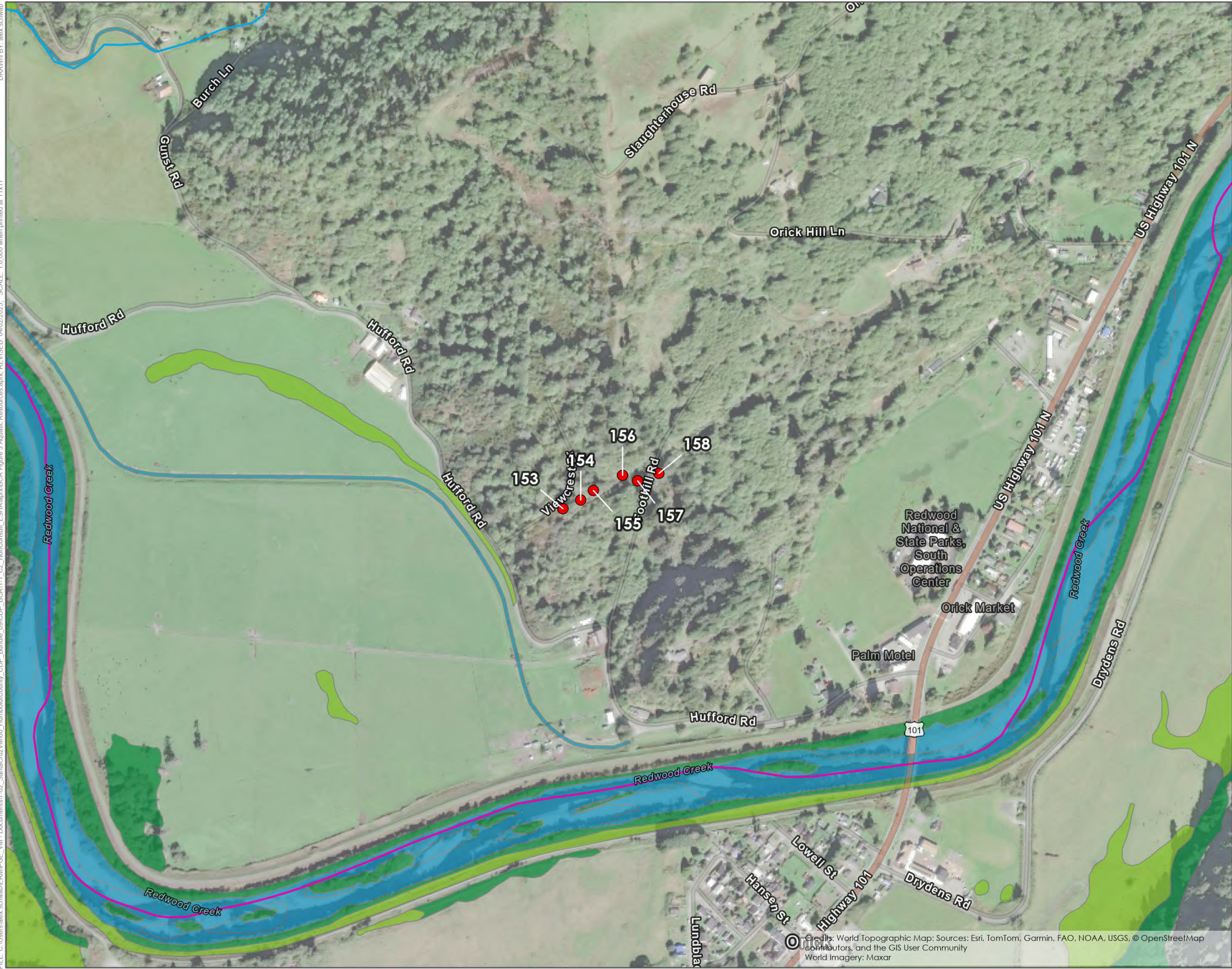
PG&E Humboldt County Bundled CDP



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DRAWN BY: alex.schwab



DETAIL AREA

0 5 10 20

Miles

N

●

Tree Work Location

□

Sheet Boundary

NHD

Stream - perennial

Artificial path

NWI Wetland Type

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Riverine

0 250 500 1,000

Feet

Figure 3

Aquatic Resources

Sheet 1 of 15

PG&E Humboldt County Bundled CDP

N

ERM

PG&E

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DETAIL AREA

0 5 10 20 Miles

● Tree Work Location

▭ Sheet Boundary

California State Park

NHD

--- Stream - intermittent

--- Stream - ephemeral

Artificial path

NWI Wetland Type

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

Riverine

0 250 500 1,000 Feet

Figure 3
Aquatic Resources

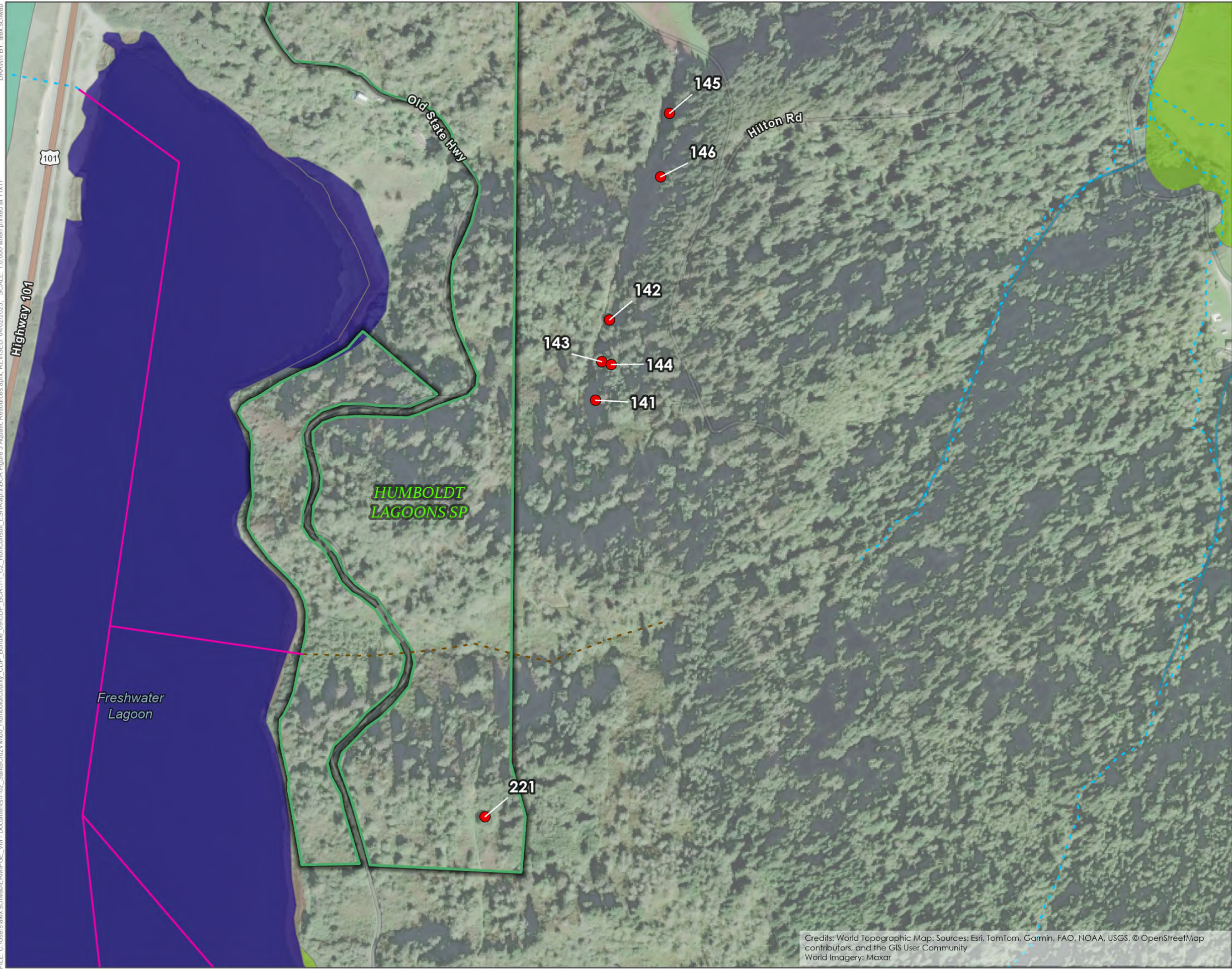
Sheet 2 of 15

PG&E Humboldt County Bundled CDP

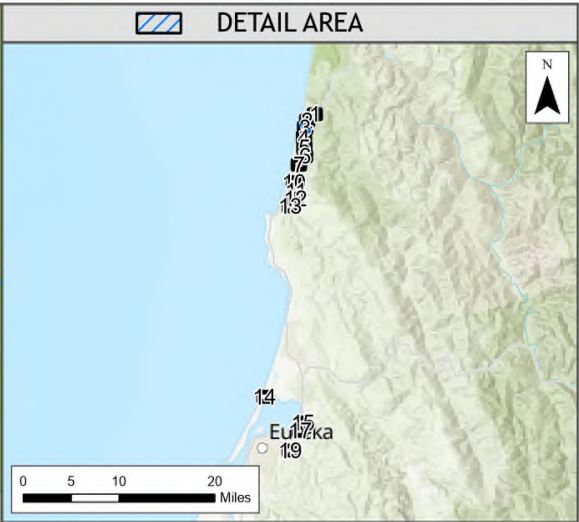
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World Imagery: Maxar

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World Imagery: Maxar



- Tree Work Location
 - Sheet Boundary
 - ▭ California State Park
- NHD
- - - Stream - intermittent
 - - - Stream - ephemeral
 - Artificial path
- NWI Wetland Type
- Estuarine and Marine Wetland
 - Freshwater Emergent Wetland
 - Lake
 - Riverine

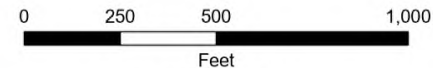


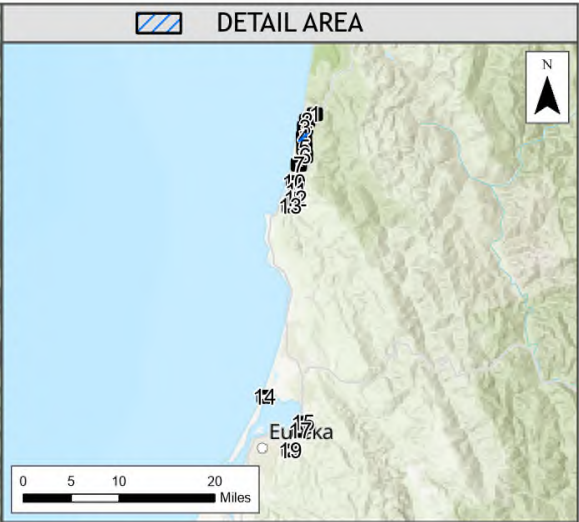
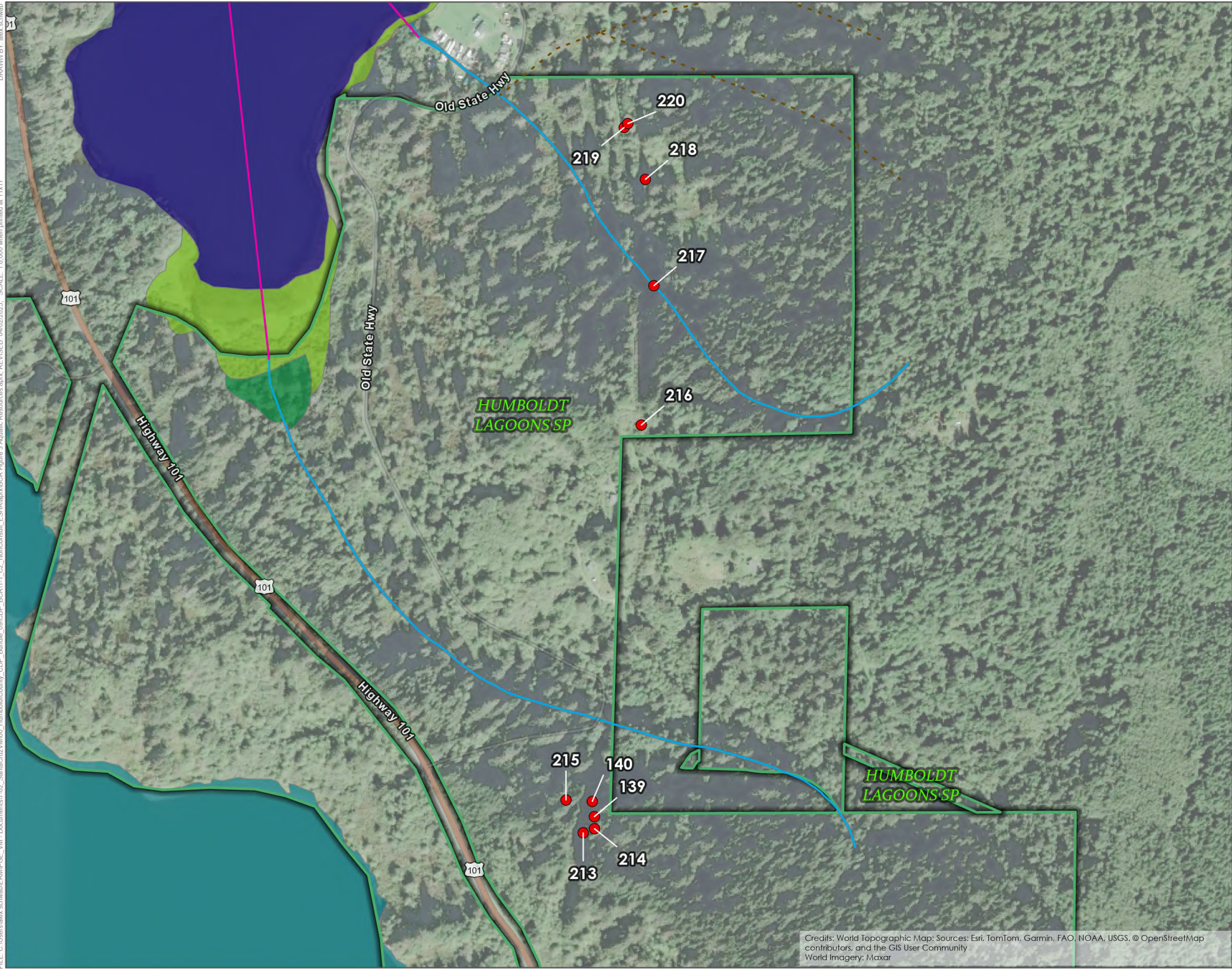
Figure 3
Aquatic Resources

Sheet 3 of 15

PG&E Humboldt County Bundled CDP



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- Tree Work Location
- ▭ Sheet Boundary
- ▭ California State Park
- NHD
 - Stream - perennial
 - - - Stream - ephemeral
 - Artificial path
- NWI Wetland Type
 - Estuarine and Marine Deepwater
 - Estuarine and Marine Wetland
 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Lake
 - Riverine

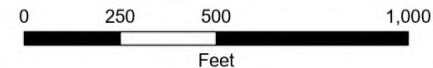


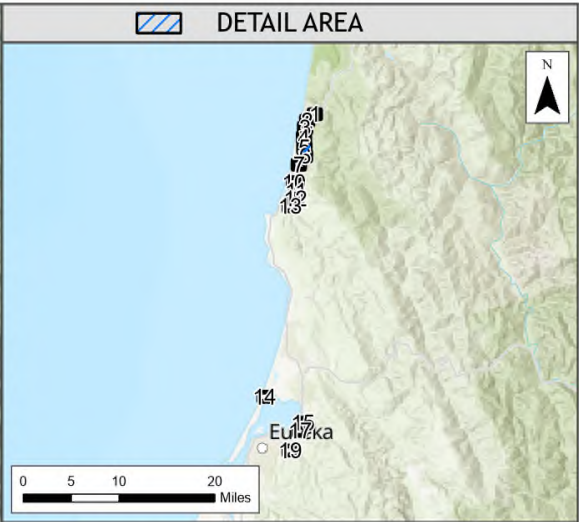
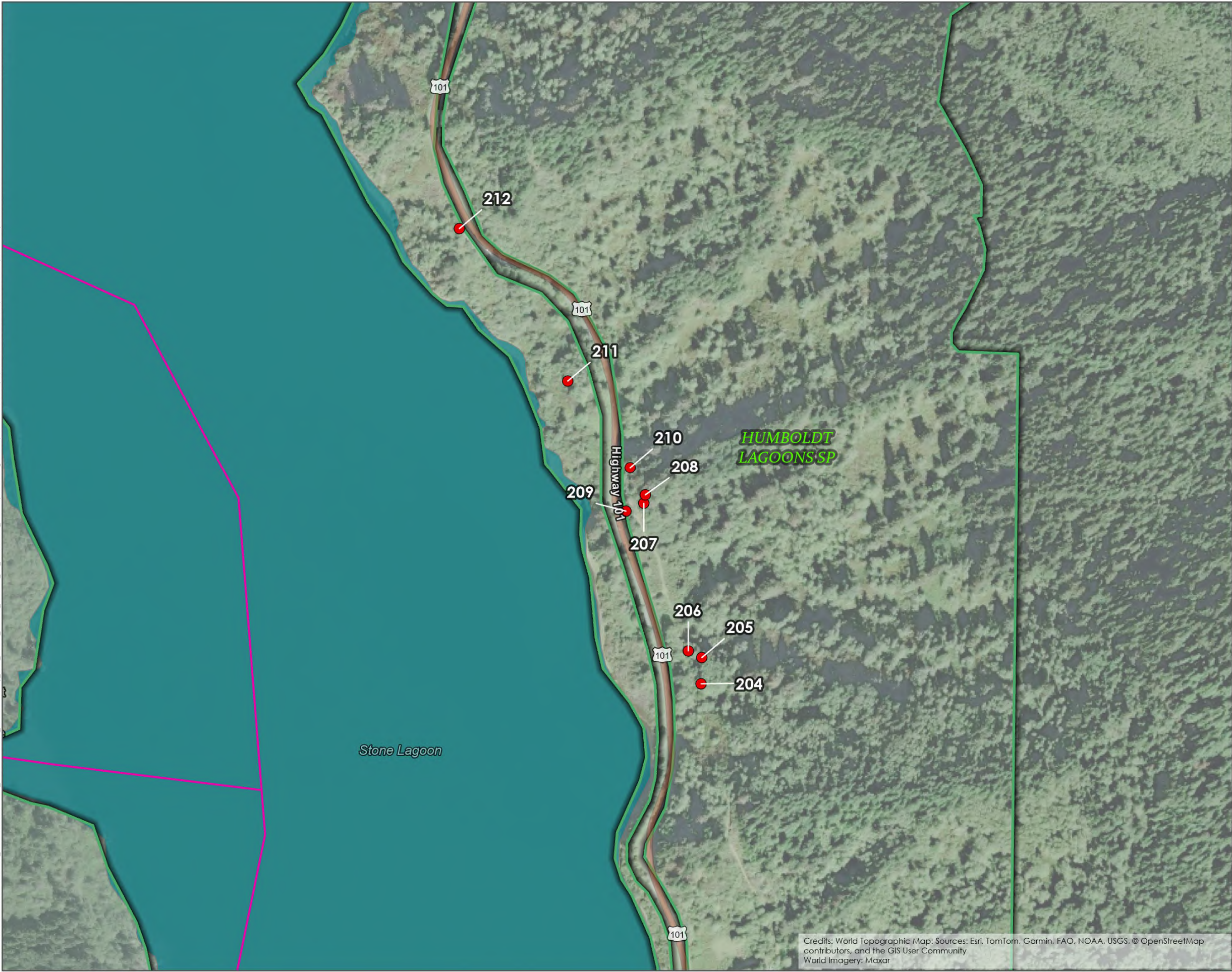
Figure 3
Aquatic Resources

Sheet 4 of 15

PG&E Humboldt County Bundled CDP

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World Imagery: Maxar





- Tree Work Location
- Sheet Boundary
- ▭ California State Park
- NHD
- Artificial path
- NWI Wetland Type
- Estuarine and Marine Deepwater

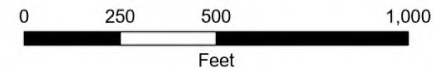


Figure 3
Aquatic Resources

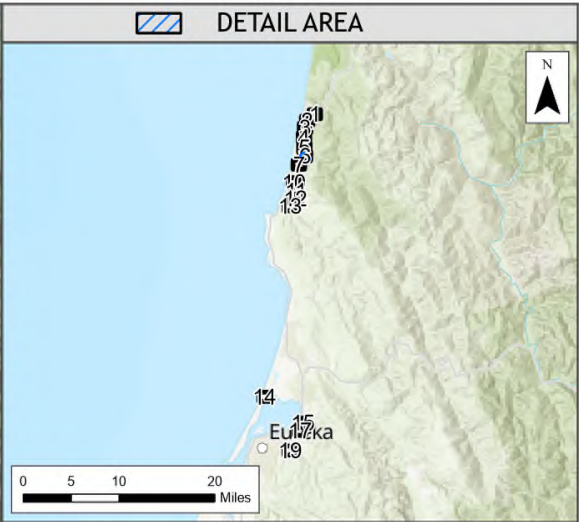
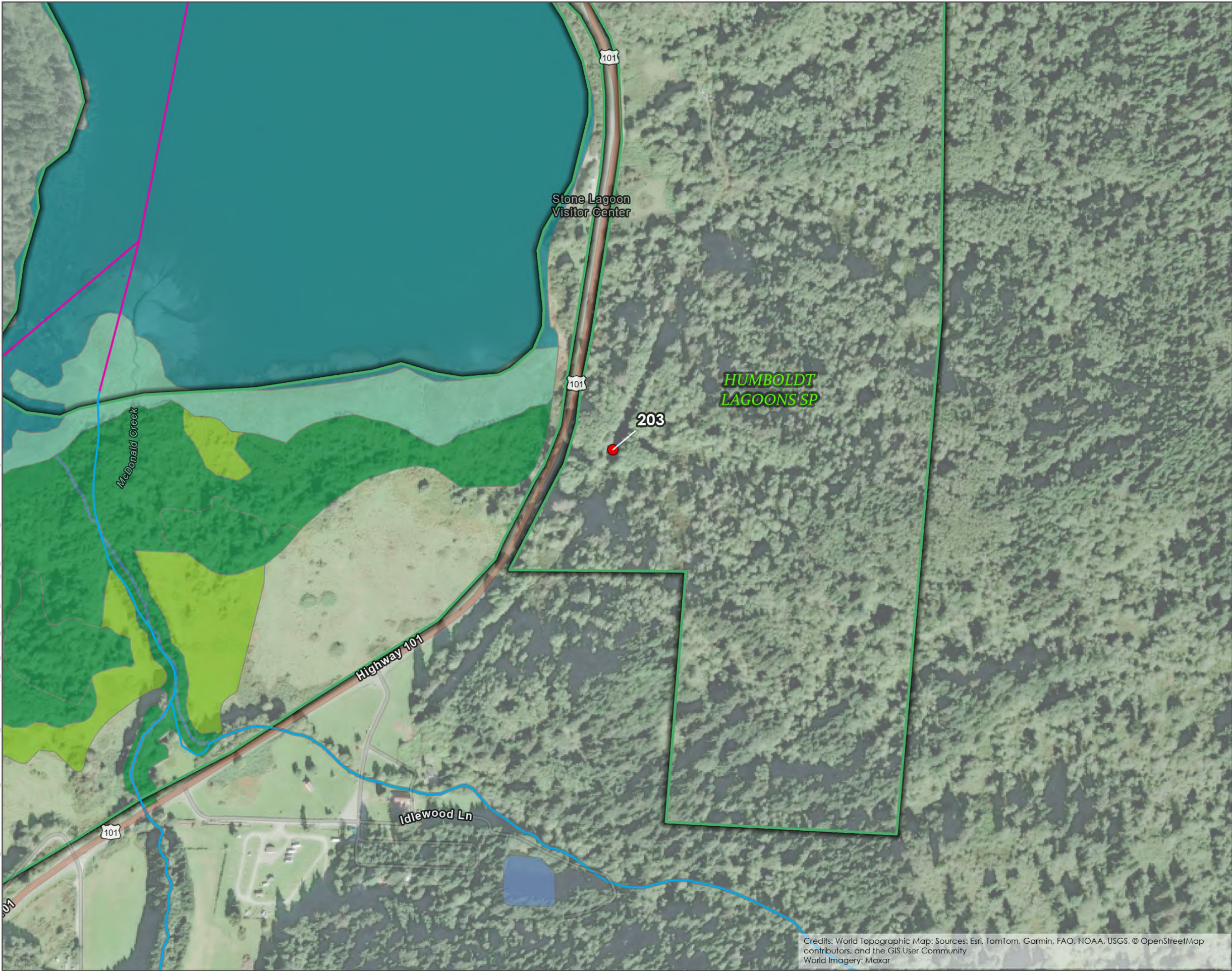
Sheet 5 of 15

PG&E Humboldt County Bundled CDP

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World Imagery: Maxar



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- Tree Work Location
 - ▭ Sheet Boundary
 - ▭ California State Park
- NHD
- Stream - perennial
 - Artificial path
- NWI Wetland Type
- Estuarine and Marine Deepwater
 - Estuarine and Marine Wetland
 - Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Freshwater Pond
 - Riverine

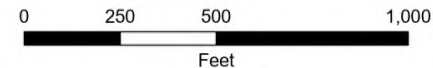


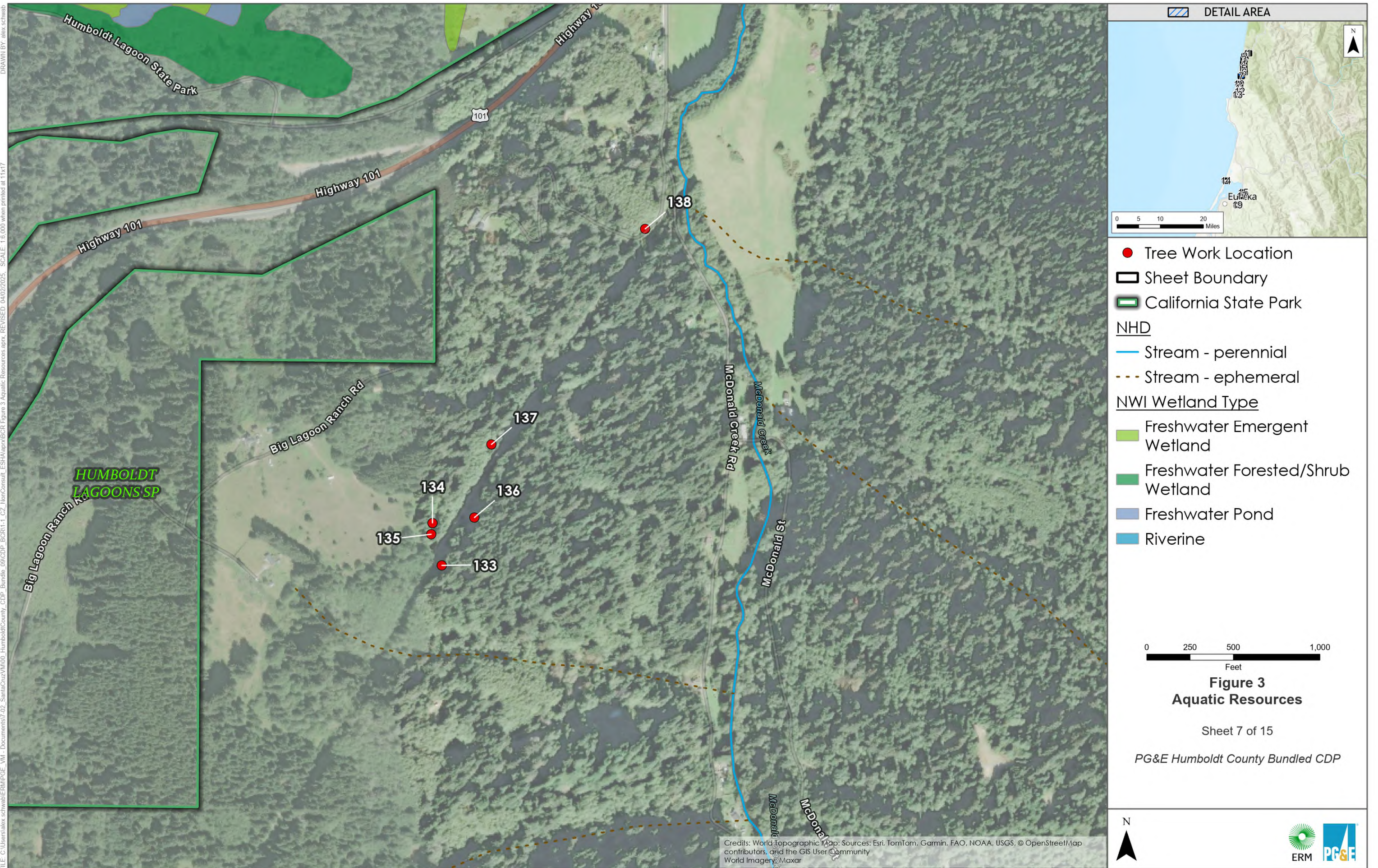
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Aquatic Resources

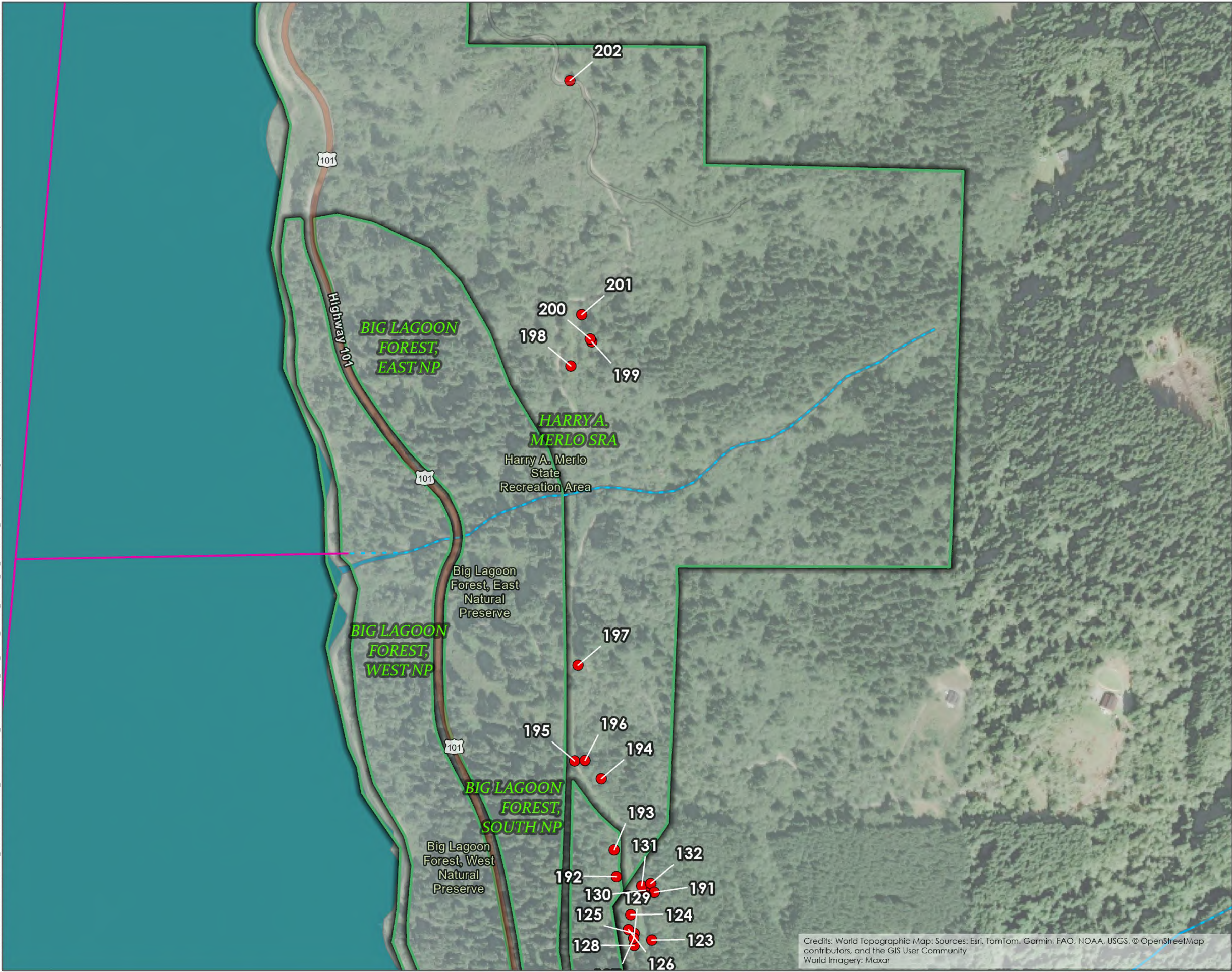
Sheet 6 of 15

PG&E Humboldt County Bundled CDP

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World Imagery: Maxar







DETAIL AREA

0 5 10 20 Miles

- Tree Work Location
- ▭ Sheet Boundary
- ▭ California State Park

NHD

- - - Stream - intermittent
- Stream - perennial
- Artificial path

NWI Wetland Type

- Estuarine and Marine Deepwater
- Riverine

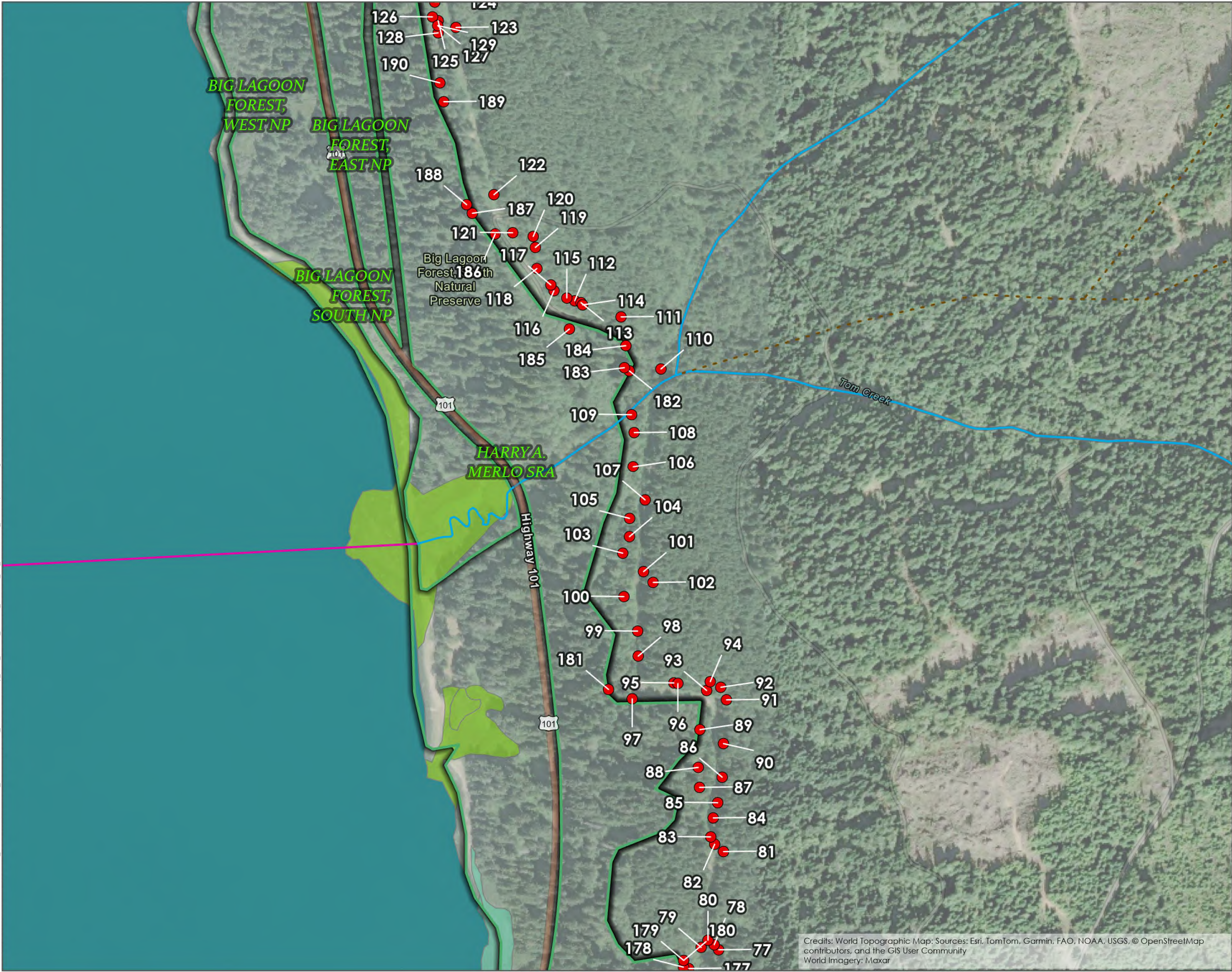
0 250 500 1,000 Feet

Figure 3
Aquatic Resources

Sheet 8 of 15

PG&E Humboldt County Bundled CDP

N



DETAIL AREA

0 5 10 20 Miles

● Tree Work Location

▭ Sheet Boundary

▭ California State Park

NHD

--- Stream - intermittent

— Stream - perennial

--- Stream - ephemeral

— Artificial path

NWI Wetland Type

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Riverine

0 250 500 1,000 Feet

Figure 3

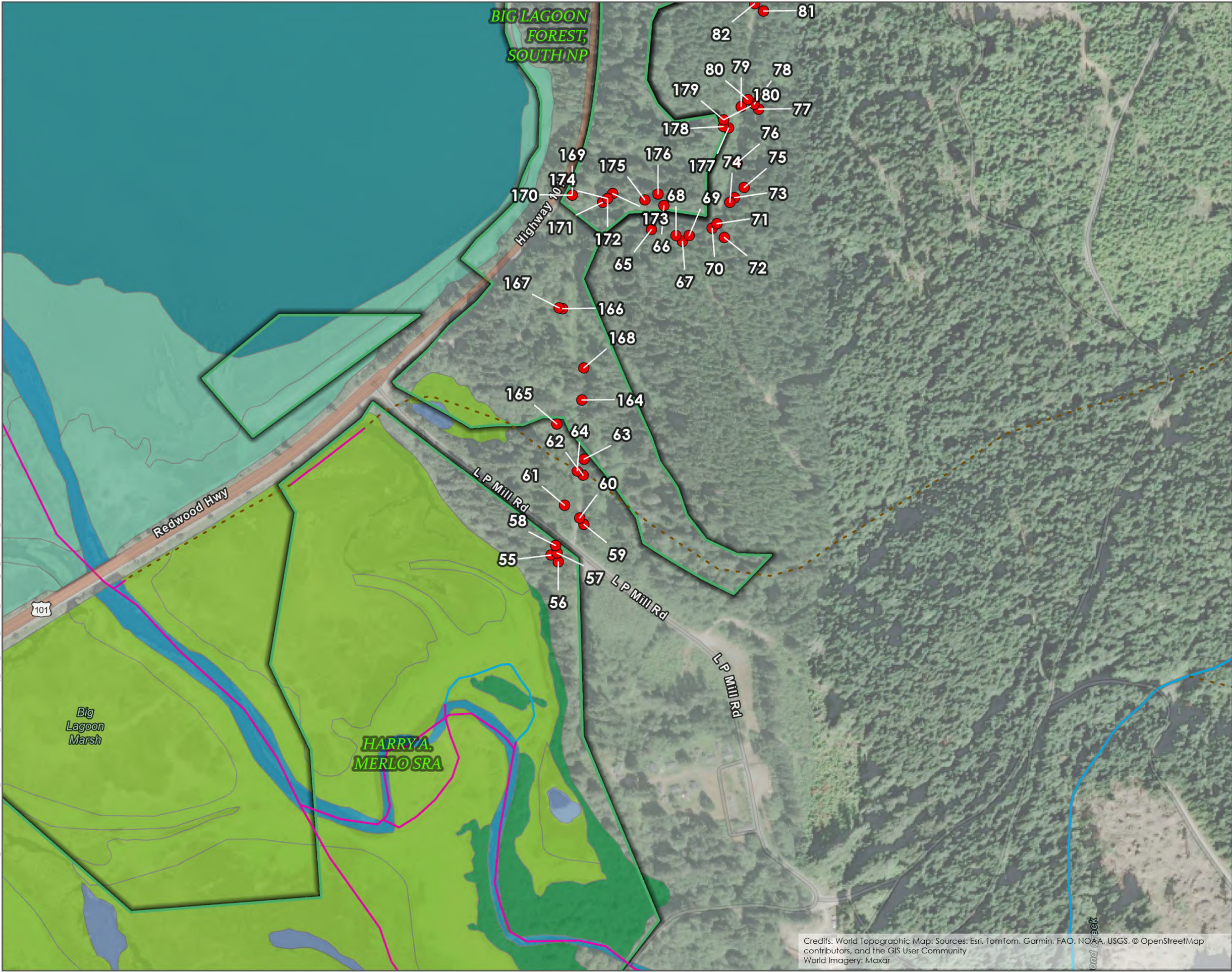
Aquatic Resources

Sheet 9 of 15

PG&E Humboldt County Bundled CDP

N

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DETAIL AREA

0 5 10 20 Miles

0 250 500 1,000 Feet

Tree Work Location

Sheet Boundary

California State Park

NHD

Stream - perennial

Stream - ephemeral

Artificial path

NWI Wetland Type

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Riverine

N

Figure 3
Aquatic Resources

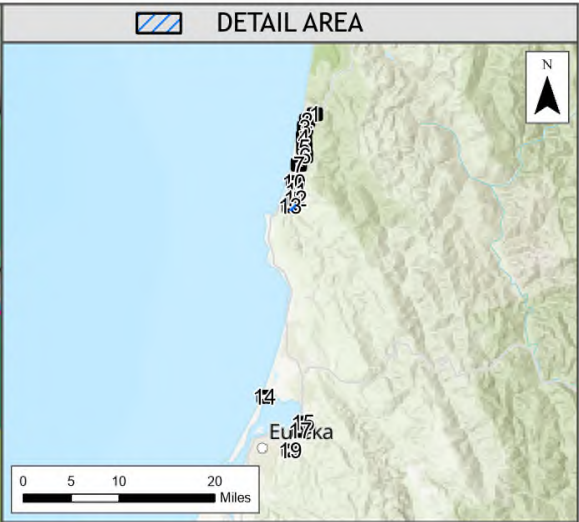
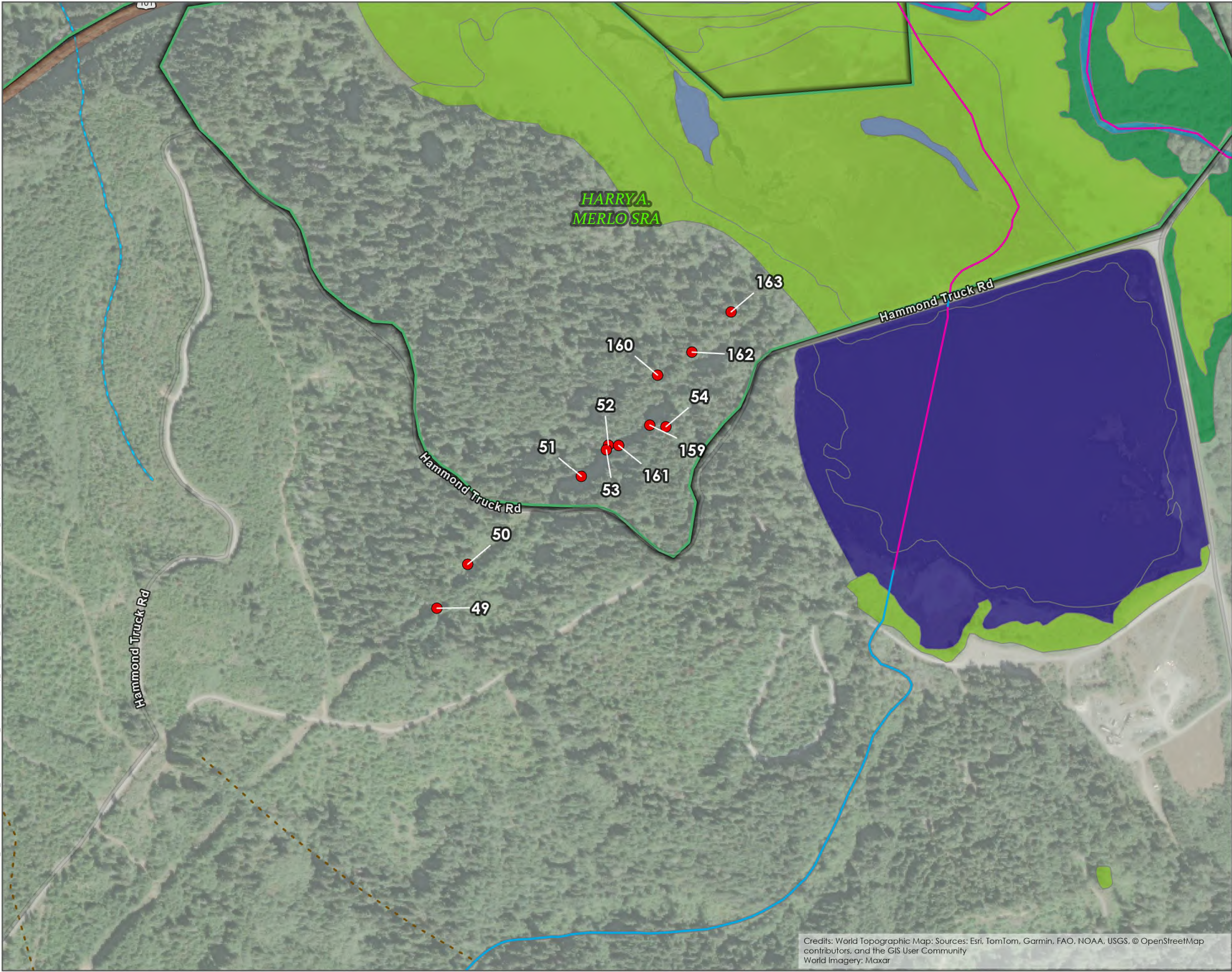
Sheet 10 of 15

PG&E Humboldt County Bundled CDP

ERM

PG&E

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World Imagery: Maxar



- Tree Work Location
- ▬ Sheet Boundary
- ▬ California State Park
- NHD
- - - Stream - intermittent
- Stream - perennial
- - - Stream - ephemeral
- Artificial path
- NWI Wetland Type
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

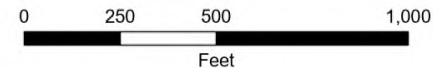


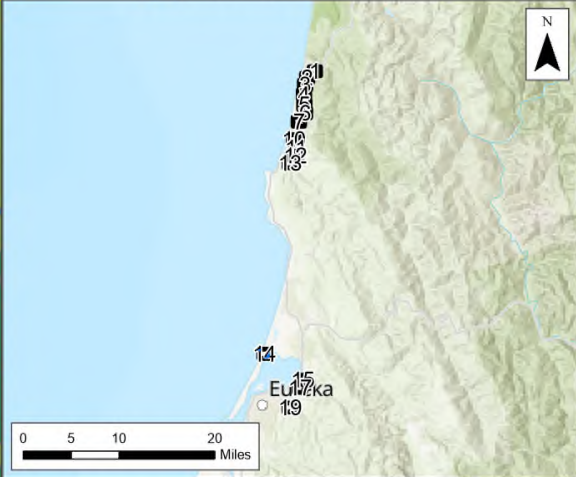
Figure 3
Aquatic Resources

Sheet 11 of 15

PG&E Humboldt County Bundled CDP



DETAIL AREA



● Tree Work Location

□ Sheet Boundary

NHD

— Artificial path

— Canal/Ditch

NWI Wetland Type

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Riverine

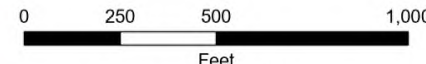


Figure 3
Aquatic Resources

Sheet 12 of 15

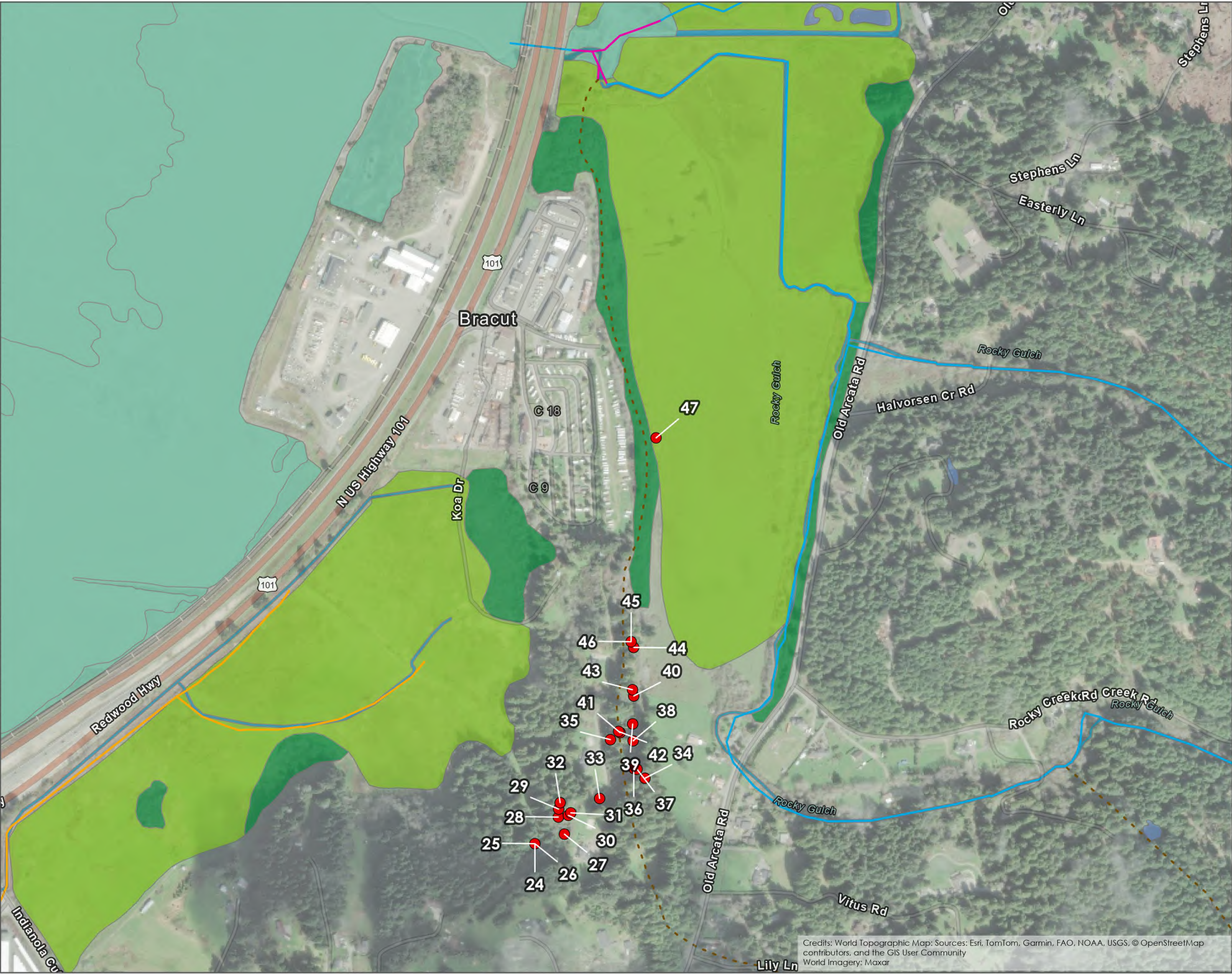
PG&E Humboldt County Bundled CDP



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World Imagery: Maxar



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0 5 10 20 Miles

DETAIL AREA

● Tree Work Location

▭ Sheet Boundary

NHD

— Stream - perennial

- - - Stream - ephemeral

— Artificial path

— Canal/Ditch

NWI Wetland Type

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

0 250 500 1,000 Feet

Figure 3
Aquatic Resources

Sheet 13 of 15

PG&E Humboldt County Bundled CDP

N

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DETAIL AREA

0 5 10 20

Miles

N

●

Tree Work Location

□

Sheet Boundary

NHD

Stream - perennial

Stream - ephemeral

Canal/Ditch

NWI Wetland Type

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Riverine

0 250 500 1,000

Feet

Figure 3

Aquatic Resources

Sheet 14 of 15

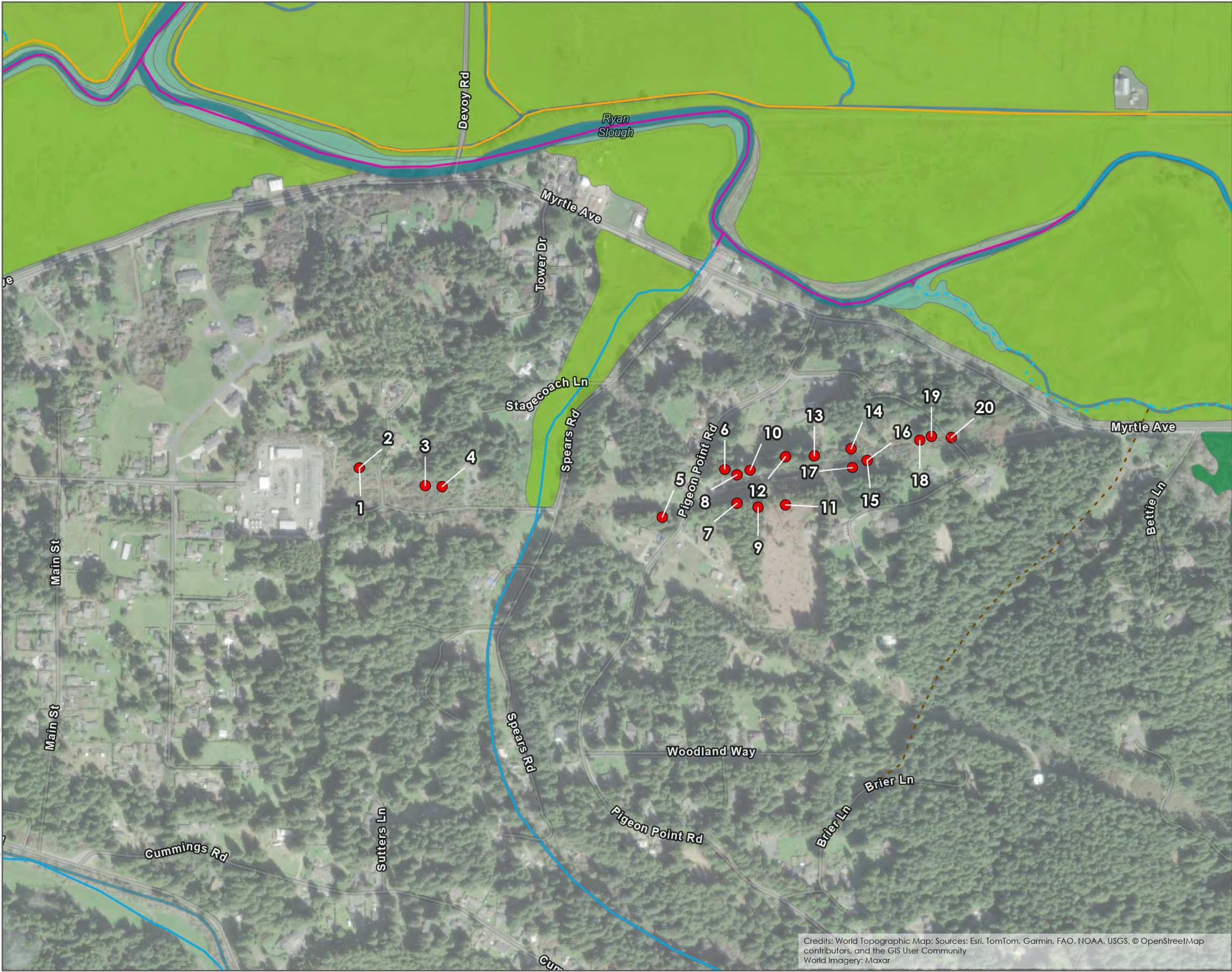
PG&E Humboldt County Bundled CDP

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ERM

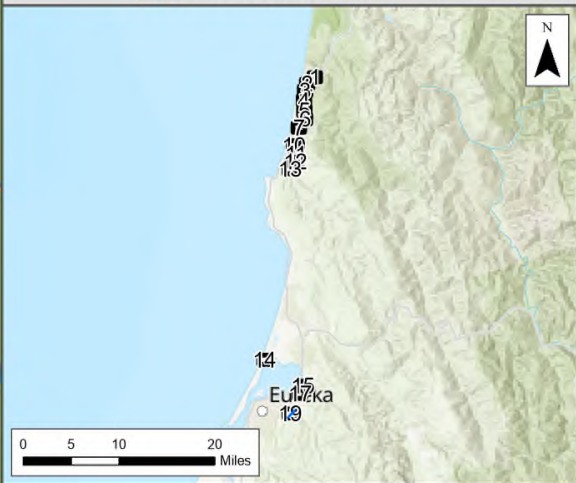
PG&E

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World Imagery: Maxar



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World Imagery: Maxar

DETAIL AREA



● Tree Work Location

▬ Sheet Boundary

NHD

- - - Stream - intermittent

— Stream - perennial

- - - Stream - ephemeral

— Artificial path

— Canal/Ditch

NWI Wetland Type

Estuarine and Marine
Deepwater

Estuarine and Marine
Wetland

Freshwater Emergent
Wetland

Freshwater Forested/Shrub
Wetland

Riverine

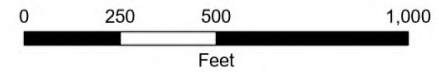


Figure 3
Aquatic Resources

Sheet 15 of 15

PG&E Humboldt County Bundled CDP



Table 5-2. Best Management Practices^a to Reduce Environmental Impacts from Vegetation Management Activities

BMP # ^b	Best Management Practice
BMP 1 (FP-01)	Vegetation management (VM) employees and contractors must conduct ongoing training of environmental laws and procedures. VM employees and contractors performing VM activities must comply with these laws and procedures to minimize or avoid impacts on natural resources during work activities.
BMP 2 (FP-05)	On federal, state, local, and tribal agency land the land managers should be notified of pending work as far in advance as possible.
BMP 3	Roads, erosion control measures, fences, and structures damaged as a result of VM operations must be repaired and reported to the work group supervisor and the VM PG&E representative. Gates must be left as they are found.
BMP 4 (FP-02, FP-03, FP-04)	Vehicles and equipment must use pavement, existing roads, and previously disturbed areas to the extent practicable.
BMP 5	Motorized equipment must comply with Air Resources Board permitting requirements.
BMP 6	Vehicle idling, noise, and odor must be minimized to the extent practicable during work near residences, public buildings, or commercial buildings. Within 100 feet of school facilities work vehicle must not stand idling for more than 5 minutes, unless necessary for work purposes. Diesel-fueled work vehicles must not stand idling for more than 5 minutes at any location, unless necessary for work purposes.
BMP 7	Contractors must have the ability to communicate quickly with their supervisor and/or PG&E by having a working cell phone or radio on the job site at all times, or by identifying the closest area of cell phone reception or closest public phone and familiarizing all employees with that location.
BMP 8 (FP-15)	Vehicles and heavy equipment must be refueled at least 100 feet away from riparian areas. Handheld tools must be refueled outside of riparian areas. The fueling operator must stay with the fueling operation at all times. Do not top off tanks.
BMP 9	Petroleum and herbicide spill containment and cleanup materials must be available at the job site. Spills must be immediately cleaned up and contaminated materials disposed of properly. Spills greater than 8 oz. on soil or spills that create sheen on the water must be reported immediately to the supervisor and the VM PG&E Representative for appropriate management.
BMP 10 (FP-11)	If the amount of contiguous, bare soil exposed in one location exceeds 0.1 acre immediately after completion of VM activities, erosion control measures must be implemented. These measures may include lop & scatter, broadcasting chipped material or compliance with other PG&E Erosion control measures.
BMP 11	Vehicle use within riparian areas is limited to existing roads and dry crossings, and they must be checked and maintained daily to prevent leaks of materials that, if introduced to water, could be harmful to aquatic life.
BMP 12	Cleared or pruned vegetation and woody debris (including chips) must be disposed of in a manner to ensure that it does not enter surface water or a watercourse. All cleared vegetation and woody debris (including chips) must be removed from surface water or watercourses, and placed or secured where it cannot re-enter the watercourse.
BMP 13 (FP-07)	Vehicles should not exceed 15 mph on un-surfaced roads such as agricultural field roads and transmission ROW access roads.
BMP 14	Vehicles and heavy Valley Elderberry Longhorn Beetle (VELB) equipment must not be operated off roads within 25 feet of the edge of a vernal pool unless a biologist or natural resource professional evaluates and prescribes site specific AMMs.

BMP # ^b	Best Management Practice
BMP 15	VELB: VM activities in habitat must follow PG&E VELB Utility Standard ENV-7001S and VM VELB Procedures.
BMP 16 (FP-18)	Migratory Birds: VM activities must follow the VM Migratory Bird Flowchart ¹ .
BMP 17	Sudden Oak Death: VM activities in counties subject to the Sudden Oak Death quarantine must follow VM Sudden Oak Death Protocols.
BMP 18	Environmental screening for mowing locations, fee strip weed abatement, and for electric transmission ROW reclamation work must be conducted by the VM environmental group prior to work.
BMP 19	VM personnel must verify that the environmental screening process for capital and other non-VM work was conducted by the work owner prior to VM starting VM activities. VM personnel and contractors must implement the environmental protection measures prescribed for the work.
BMP 20	Cultural Resources: Items identified through patrols and screenings: When previously identified cultural resources are found (e.g., old bottles, cans, buildings), they must be left in place and undisturbed. If it is necessary to move or disturb them to complete the work, or if human remains are found, stop work and contact the VM PG&E Representative. Unanticipated Discovery: If any new cultural resources (e.g., structure features, bone, shell, artifacts, or architectural remains) are encountered and site disturbance cannot be avoided during work activities, or if human remains are suspected, implement the following measures: • Stop all work within 100 feet of the discovery. • Notify the VM PG&E representative who will contact the Cultural Resource Specialist. • Secure location, but do not touch or remove remains and associated artifacts. • Do not remove associated spoils or pick through them. • Note the location and document all calls and events. • Keep the location confidential.
BMP 21	If a protected wildlife species is killed or injured as a result of VM activities, the incident must be reported immediately to a supervisor and the VM PG&E Representative for appropriate management.
BMP 22	Disturbance or removal of non-target vegetation within a work site should not exceed the minimum necessary to complete operations, subject to other public health and safety directives governing the safe operations and maintenance of electric and gas facilities.
BMP 23 (FP-09)	During designated fire season motorized equipment must have federally or state-approved spark arrestors; all vehicles must be equipped with firefighting tools as appropriate and in accordance with all applicable laws, rules, regulations, orders, and ordinances. When the fire danger rating is Very High or Extreme no vehicular travel is permitted off cleared roads except in case of emergency.
BMP 24 (FP-09)	During designated fire season the contractor must check and follow the requirements of the daily Project Activity Level when working on USFS land (or other properties as required), or follow the requirements of the fire danger rating system in hazardous fire areas and SRAs. These are measures of fire weather conditions and may restrict activities otherwise permitted.

¹ PG&E implements this process to comply with state law.

BMP # ^b	Best Management Practice								
BMP 25	The following provisions apply for VM activities during designated fire season in grass and wildland areas: - Smoking is not allowed while walking, working, or operating light or heavy equipment. - Smoking is allowed in a barren area, or within an area cleared to mineral soil at least 3 feet in diameter. - During fire adjective index ratings of Very High or Extreme smoking is not allowed at any time in grass and wildland areas.								
BMP 26 (FP-08)	Hunting, firearms, portable stoves, open fires (such as barbecues) not required by the VM activity, and pets (except for safety in remote locations) are prohibited in VM activity work sites. All trash, food items, and human-generated debris must be properly contained and/or removed from the site.								
BMP 27	Woody debris created by chipping, lop and scatter, or brush mowing operations must be left at an average depth of less than 18 inches from the ground surface unless otherwise specified in an easement or landowner agreement.								
BMP 28	A Licensed Pest Control Advisor must write prescriptions for all herbicide and tree growth regulator applications. Contractors must use a Qualified Applicator when applying herbicides and tree growth regulators for VM.								
BMP 29	Nozzle tip, pressure, and sprayer configuration should be such to produce a coarser droplet to minimize drift.								
BMP 30	Pesticides must not be transported in the same compartment with persons, food, or feed. Pesticide containers must be secured to the vehicle during transportation in a manner that will prevent spilling into or off the vehicle.								
BMP 31 (Plant-01)	Selective application techniques should be used for VM ROW maintenance operations wherever practicable so that desirable vegetation is not adversely impacted.								
BMP 32	The contractor must have a written training program for employees who handle pesticides. The written program must describe the materials and the information that will be provided and used to train the employees.								
BMP 33	Training must be completed before an employee is allowed to handle any pesticide, and must be continually updated to cover any new pesticides that will be handled. Training must be repeated at least annually thereafter.								
BMP 34	These special precautions must be observed during periods of inclement weather: - Applications must not be made in, immediately prior to, or immediately following rain when runoff could be expected. - Applications must not be made when wind and/or fog conditions have the potential to cause drift. - Basal bark applications must not be made when stems are wet with rain, snow, or ice.								
BMP 35 (Plant-01)	<table border="1"> <tr> <th>Herbicide Buffer Width from Stream, Wetland, or Other Sensitive Habitat</th><th>Herbicide designation or usage</th></tr> <tr> <td>No buffer requirement</td><td>Approved for aquatic use</td></tr> <tr> <td>25 feet</td><td>Not approved for aquatic use</td></tr> <tr> <td>200 feet</td><td>Mixing, loading, cleaning</td></tr> </table>	Herbicide Buffer Width from Stream, Wetland, or Other Sensitive Habitat	Herbicide designation or usage	No buffer requirement	Approved for aquatic use	25 feet	Not approved for aquatic use	200 feet	Mixing, loading, cleaning
Herbicide Buffer Width from Stream, Wetland, or Other Sensitive Habitat	Herbicide designation or usage								
No buffer requirement	Approved for aquatic use								
25 feet	Not approved for aquatic use								
200 feet	Mixing, loading, cleaning								
BMP 36	Mechanical clearing equipment must not be used to clear vegetation within 10 feet of towers, poles or guy wires. Only handheld tools such as chainsaws and weed eaters may be used in these areas.								
BMP 37	Contractor must flag guy wires 200 feet ahead of working an area, using brightly colored flagging, and a minimum of three flags per wire.								

BMP # ^b	Best Management Practice
BMP 38	During fire season contractor must have a water source containing a minimum of 300 gallons of water and 250 feet of 1-inch hose on site at all times during operation. The water source must either be self-propelled or always attached to a vehicle capable of moving it to where it is needed. Where access and terrain allows, contractor's water source must always be within 500 feet of the mowing/cutting operation. Excess water must be disposed of in accordance with all laws and regulations.
BMP 39	Mechanical clearing equipment must have at least one 5 lb. or more Class ABC fire extinguisher with current inspection tag mounted in the cab and accessible by the operator.
BMP 40	During fire season or during high fire danger rating levels contractor must stay on site for a minimum of ½ hour after mechanical clearing operations end for the day to ensure fire safety. During extreme fire levels an additional support person must be dedicated to follow the equipment with a water type back pump and fire line tool. During extreme fire levels mechanical clearing will be limited to the hours of 5:00 a.m. to 12:30 p.m.
BMP 41	Watercourse protection zones must be marked with brightly colored flagging prior to the start of any mechanical clearing or timber operation. Water classes are defined by the California Forest Practice Rules: 14 CCR 916.5. The following watercourse protection zone widths must be maintained at all times, except on existing roadways: • Class I & II watercourses with a slope < 30%: No heavy equipment within 50 feet. • Class I & II watercourses with a slope > 30%: No heavy equipment within 75 feet. • Class III & IV watercourses: No heavy equipment within 25 feet. Protection zones may be increased in areas with steep slopes or highly erodible soils.

^a Vegetation Management BMPs are equivalent to field protocols in implementation.

^b Where PG&E distribution and transmission field protocols or AMMs are similar or overlap, they are referenced in parenthesis under the BMP number.