

**Appendix G**  
**Biological Resources Report, Tillamook to**  
**Oceanside Transmission Line and Substation,**  
**Tillamook, Oregon**

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*Report*

**Biological Resources Report  
Tillamook to Oceanside  
Transmission Line & Substation  
Tillamook, Oregon**

Prepared for  
**Tillamook People's Utility District**  
1115 Pacific Avenue, Tillamook, Oregon 97141

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Prepared by  
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## SECTION 1

# Introduction

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The Tillamook People's Utility District (PUD) contracted CH2M HILL to identify and evaluate biological resources for a proposed transmission line project (Project) in Tillamook County, Oregon (see Figure 1 in Appendix A). The Project's study area is an approximately 300-foot-wide corridor centered on the preferred transmission line route, and includes one short alternative route.

CH2M HILL conducted an evaluation of the Project study corridor for the potential presence of suitable habitat for state or federally listed threatened or endangered fish, wildlife, or rare plant species and for the potential presence of Category 1 habitat as defined by the Oregon Department of Fish and Wildlife (ODFW) Habitat Mitigation Policy (Oregon Administrative Rules [OAR] 635-415-0000 through 635-416-0025). The evaluation paid particular attention to the potential occurrence of salmon, bald eagles, osprey, northern spotted owl, marbled murrelet, western snowy plover, and other raptors, in addition to colonial nesting birds such as great blue heron. Federal and state candidate species were also considered. The evaluation consisted of reviewing existing data and field surveys to identify habitat types occurring within the study corridor. Field surveys were conducted in conjunction with the wetland delineation work from April 4 through April 8, 2011 and August 15, 2012.

This report provides a brief overview of the Project location and also identifies Tillamook County and the City of Tillamook regulatory requirements for protecting water resources and documenting existing trees. The methodology used to conduct the wildlife and habitat surveys, as well as the survey results and conclusions, is described below.

## 1.1 Site Location

The proposed Project is located in Tillamook County and the City of Tillamook, Oregon. The Project's study area is located in Township (T) 1S, Range (R) 9W, Section (S) 30 and Township (T) 1S, Range (R) 10W, Sections (S) 25, 26, 27, 28, 29, and 30.

The east end of the study area passes through the City of Tillamook and extends across the Tillamook Valley along the floodplain of the Trask and Tillamook Rivers. The valley is bounded to the west by timbered ridges that extend to the unincorporated community of Oceanside, Oregon. The study area consists of a 300-foot-wide corridor along the preferred transmission line route. Specifically, the east end of the route starts west of the BPA Tillamook Substation and follows along the north side of Front Street from Project milepost (MP) 0.1 to MP 1.0. The route continues west, crossing the floodplain of the Trask River, Tillamook Channel, and Tillamook River (MP 1.1 to MP 2.6). The route then heads west through private industrial forest land (MP 2.9 to MP 7) until it reaches the proposed Oceanside Substation site.

## 1.2 Landscape Setting and Land Use

Broadly, the study area is in the Coast Range physiographic province (Franklin and Dyrness, 1973) and the coastal lowlands subregion. This province is known for its mild temperatures and wet climate. The average annual precipitation in the Tillamook area is approximately 90 inches. Most precipitation arrives as rainfall from October to mid-May. The average temperature in Tillamook is 44 degrees Fahrenheit (°F) in winter and 58°F in summer (National Oceanic and Atmospheric Administration [NOAA], 2009–2010).

The study area is part of the Tillamook Bay Watershed, within the North Coast Basin. The highest, easternmost portion of the Tillamook Bay Watershed is steep and well-forested, while a smaller percentage is very low gradient, meandering streams that, at times, are under tidal influence. Elevations within the study area range from approximately 3 to 1,422 feet above mean sea level (Google Earth, 2011). Historical land uses in the study area include agricultural production, logging, and fishing. Current land uses are agricultural production, logging, and fishing, along with commercial and residential uses.

Five major waterways make up the freshwater contribution to the Tillamook Bay. The study area crosses two of these waterways: the Trask River and the Tillamook River. The Trask River watershed is approximately 175 square miles. The majority of the eastern portion of the watershed is vegetated with coniferous forest and characterized by moderate- to steep-gradient streams and narrow valley floors with moderate to steep hillslopes. The remaining part of the watershed is characterized by low-gradient to very low gradient, meandering streams that are tidally influenced, and bordered by mostly flat floodplains dominated by dairy farming and urban development. Hoquarton Slough, also located within the study area, is one of the major contributing tributaries to the Trask River Basin.

The Tillamook River is the southernmost watershed in the Tillamook Bay Watershed. The total river length is 17 miles with a watershed drainage area of approximately 61 square miles.

The Tillamook River originates in the low coastal hills southwest of the City of Tillamook. Most of the Tillamook River Watershed is in private ownership, split between private forest, agricultural use, and a mix of rural and urban residential use.

Tillamook County residents initially established their agricultural farmland near water, where the land was flat and the soil was fertile. In essence, their farmlands were on the floodplains of water bodies such as Hoquarton Slough, the Trask River, and the Tillamook River. These river valleys provided suitable land for agricultural use, considering that the majority of Tillamook County is steep and heavily forested. Parks, open space, residential, and commercial development exist within the City of Tillamook. Outside the urban growth boundary, land uses include recreational use, dairy farms, and industrial forest operations.

## 1.3 Site Alterations

Historically, much of the area in and around the City of Tillamook was wetland (Tillamook County, 2008). Wetland draining and levee construction have allowed areas north and west of Hoquarton Slough to be developed for commercial and residential use. The following is a

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summary list of past events that influenced natural resources in the vicinity of the study area:

- Construction of levees and dikes and removal of wood jams to prevent flooding in the Tillamook Bay Watershed (1850s)
- Deforestation and creation of pasture and farmland in the Tillamook Basin (1863 to present)
- Clearing the Hoquarton Slough of snags and riparian vegetation by U.S. Army Corps of Engineers (USACE) (1889)
- Dredging and disposal of dredge spoils along the banks of the Hoquarton Slough and removal of riparian vegetation by USACE (1897 to 1919)
- Construction of dikes along portions of the Hoquarton Slough (1900 to 1901)
- Construction of U.S. Highway 101 in Tillamook County and the opening of the Hoquarton Slough Bridge (1931)
- Beginning of reforestation of the Tillamook Basin following fires (1949)
- Movement of businesses and residences out of the floodplain north of Hoquarton Slough by the City and Federal Emergency Management Agency because of large-scale damage (1996)
- Construction of roads, buildings, parking lots, and infrastructure in wetlands associated with the urbanization and industrialization of the City of Tillamook (1970 to present)
- Construction of Hoquarton Interpretive Trail Park (2005)



## SECTION 2

# Federal and State Regulatory Requirements

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## 2.1 Federal Endangered Species Act (ESA)

The federal Endangered Species Act of 1973 (ESA; 16 United States Code [U.S.C.] 1531-1544, 87 Statute 884, as amended) requires federal agencies or their representatives:

*[T]o insure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species.*

The ESA protects species whose survival is recognized (listed) as endangered or threatened. The National Oceanic and Atmospheric Administration (NOAA) Fisheries Division (formerly National Marine Fisheries Service) and the U.S. Fish and Wildlife Service (USFWS) share responsibility for implementing ESA requirements. NOAA Fisheries has jurisdiction to implement ESA requirements for anadromous (salmonid) species that migrate from the ocean to freshwater for spawning and rearing. USFWS has the same jurisdiction with respect to freshwater species, plants, and animals.

Authority under the ESA includes regulating *take* of a listed species. A *take* means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (16 U.S.C. 1532[19]). This broad prohibition has been interpreted to prohibit even ordinary land-use activities such as farming or forestry or site development if the result of such activities would be significant habitat modification or degradation where it would actually kill or injure wildlife by interfering with essential biological functions such as feeding, breeding, or sheltering.

## 2.2 Oregon Endangered Species Act (OESA)

The Oregon Legislature enacted the Oregon Endangered Species Act (OESA) (Oregon Revised Statutes [ORS] Sections 496.171 et seq.) in 1987, and amended it in 1995. The purpose of the Oregon ESA is to conserve at-risk native plants, fish, and wildlife species and their habitats in Oregon.

Oregon’s endangered species list includes all native species listed under the federal ESA plus any additional native species determined by the appropriate state agency to be in danger of extinction throughout any significant portion of its range within the state. The OESA’s goal is similar to the goal of the federal ESA—that is, conservation of threatened or endangered species through “the use of methods and procedures necessary to bring a species to the point at which [protective] measures are no longer necessary.”

Regulation under the OESA is limited to actions on state-owned land, state-leased land, and land over which the state has a recorded easement. However, the OESA does regulate and

prohibit *take* of listed species on *all* lands – federal, state, and private. Under the OESA, *take* is defined as “...to kill or obtain possession or control.”

The ODFW is responsible for administering the OESA for fish and wildlife. The Oregon Department of Agriculture (ODA) administers the OESA for plants. The conservation authority of the state of Oregon in regard to state-listed plants presently extends only to non-federal public lands (state, city, county, public schools, public utilities, and so forth). Any such conservation action requires a permit from ODA.

## Local Regulatory Requirements

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### 3.1 Tillamook County Riparian Vegetation Protection

Tillamook County Land Use Ordinance (TLUO) requires protection of riparian vegetation per Section 4.080 (Requirements for Protection of Water Quality and Streambank Stabilization) (Tillamook County, 2002). This section provides protection for areas within specified distances of perennial water bodies. Riparian buffer areas are identified as follows:

- (a) *Fifty (50) feet from lakes and reservoirs of one acre or more, estuaries and the main stems of the following rivers where the channel is more than 15 feet in width (listed rivers that the Project crosses include the Tillamook and Trask Rivers)*
- (b) *Twenty-five (25) feet from all other rivers and streams where the river or stream channel is greater than 15 feet in width*
- (c) *Fifteen (15) feet from all perennial rivers and streams where the river or stream channel is 15 feet in width or less*

As stated above, the proposed transmission line route crosses the Tillamook and Trask Rivers. Thus, the riparian buffer of 50 feet applies to these two rivers. In addition, the transmission line route in Tillamook County is proposed across four other rivers and streams with channel widths greater than 15 feet and two perennial streams with channel widths at 15 feet or less. Thus, riparian buffers ranging from 15 to 25 feet apply to these rivers and streams. In Tillamook County, the riparian buffers are measured from the ordinary high water line. Section 5 in this report discusses this issue in more detail.

### 3.2 City of Tillamook Riparian Vegetation Protection

The City of Tillamook Zoning Ordinance (TZO) establishes significant wetland and riparian corridor setbacks as part of the City's compliance with Statewide Planning Goal 5 outlined in Section 21.1-Water Resources Protection Overlay District (WRP) (2003). These setbacks are established adjacent to certain wetlands and streams to add an additional layer of protection to the City's water resources. Within the Project area, a 50-foot riparian setback is required from the top of bank along Hoquarton Slough (Subsection 21.1[2][D][1][e] of the TZO). A portion of the proposed transmission line route (MP 0.5 to MP 0.8 identified in Figures 2b-2c in Appendix A) is proposed adjacent and parallel to the south bank of the Hoquarton Slough. The PUD explored numerous alternatives to the proposed route, many of which paralleled the slough for almost one mile. However, due to environmental constraints, the proposed route now runs further to the south along Front Street from MP 0.8 to MP 1.1 and is therefore out of the riparian corridor of the Hoquarton Slough in this section. The transmission line is not adjacent to any of the other water bodies listed in TZO Subsection 21.1(2)(D)(1).

The proposed route also crosses several significant wetlands as identified by the City's Local Wetland Inventory. The specific boundaries of these wetlands were formally delineated along the study corridor for the Project by the wetland biologist as documented under separate cover in the Wetland Delineation Report, Tillamook PUD Project, Tillamook, Oregon (Wetland Delineation Report). This separate document will be submitted to the Oregon Department of State Lands for formal concurrence on the location of the delineated wetland boundaries (i.e., delineation of the wetland resource). Following receipt of concurrence, the PUD will also submit the requisite application to DSL and the U.S. Army Corp of Engineers to permit the proposed wetland impact, if necessary.

### 3.3 City of Tillamook Tree Ordinance

The City of Tillamook's Tree Ordinance (No. 1266) establishes a City of Tillamook Street Tree Committee and assigns responsibility for review and approval of proposals involving tree planting and removal. Specifically, the committee has authority over trees, plants, or shrubs located within street rights-of-way, parks, and public places of the city, as well as trees, plants, and shrubs located on private property that are determined to constitute a hazard or threat. To maintain compliance with the City Tree Ordinance, the Project mapped trees located within the 100-foot-wide survey corridor, specifically properties owned by the City of Tillamook. Trees with a 6-inch or greater diameter at breast height (DBH) were recorded and mapped (see Figure 3 in Appendix A). Trees within the survey corridor but on the opposite side of an existing building, road, or waterbody from the transmission line centerline were not recorded. Figure 3 in Appendix A shows all trees recorded within the City of Tillamook limits that met the criteria noted above. Appendix D includes a table of all trees on City of Tillamook property, including DBH and species, which may be affected by the Project.

## Sensitive Species Evaluations

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### 4.1 Office Review

A review of available literature was conducted to determine the potential for the occurrence of sensitive wildlife or plant species on the Project site. The following sources were consulted:

- Oregon Biodiversity Information Center (ORBIC) database
- *Federally Listed and Proposed Endangered and Threatened Species, Candidate Species, and Species of Concern That May Occur in Tillamook County, Oregon* (USFWS, 2006)
- *Oregon Conservation Strategy: Strategy Species List* (ODFW, 2006)
- *Rare Threatened, and Endangered (RTE) Vascular Plant List* (ODA, 2010)

A species was considered to be rare if it met one or more of the following listing criteria:

- Federally listed as threatened or endangered, or a candidate for listing (*Endangered Species Act of 1973* [16 U.S.C. 1531-1544, 87 Stat. 884])
- State listed as threatened or endangered, or a candidate for listing (*State of Oregon Endangered, Threatened, and Candidate Species Classification*)

From this review, lists of target species were compiled. Target species included all plant, fish, and wildlife taxa listed by the USFWS and ODFW as *endangered* or *threatened*, or candidate for listing, and potentially occurring in Tillamook County, Oregon. A species was determined to have potential to occur in the Project area if its known or expected geographic range includes the study area or the vicinity of the study area, and if its known or expected habitat is represented within or adjacent to the study area.

### 4.2 Field Investigation

The field investigation was conducted in conjunction with the wetland delineation surveys from April 4 to 8, 2011 and August 15, 2012. The field investigation focused on identifying and characterizing the habitat types present within the Project area. This information was compared with identified habitat requirements for the target species to determine if suitable habitat is present that might support any of the target species. Complete surveys for the individual species were not conducted.

## 4.3 Habitat

Five habitat types were identified within the Project area. These were named by using the Chappel et al. (2001) system of vegetation classification. Project area natural vegetation types include the following:

- Westside Lowlands Conifer-Hardwood Forest
- Agriculture, Pasture, and Mixed Environ
- Open Water – Lakes, Rivers, and Streams
- Herbaceous Wetlands
- Westside Riparian- Wetlands

These habitat types are described below. Appendix C contains photos of typical habitat types that occur in the Project area.

### 4.3.1 Westside Lowlands Conifer- Hardwood Forest

The westside lowlands conifer - hardwood habitat (see Appendix C, Photo Plates 1 to 2) occurs in the Coast Range and along the outlying coast. It is the dominant habitat within the Project area from MP 2.8 to MP 7. These forests are dominated by Douglas-fir (*Pseudotsuga menziesii*) and Western hemlock (*Tsuga heterophylla*) trees. Most stands are dominated by one or more of the following: Douglas-fir, western hemlock, western red cedar (*Thuja plicata*), Sitka Spruce (*Picea sitchensis*), red alder (*Alnus rubra*), or big leaf maple (*Acer macrophyllum*).

Dominant or co-dominant understory shrub species include salal (*Gaultheria shallon*), Oregon grape (*Mahonia nervosa*), vine maple (*Acer circinatum*), salmonberry (*Rubus spectabilis*), thimbleberry (*Rubus parviflorus*), red elderberry (*Sambucus racemosa*), and huckleberry (*Vaccinium sp.*). Herbaceous species include swordfern (*Polystichum munitum*), Oregon oxalis (*Oxalis oregana*), deer fern (*Blechnum spicant*), and bracken fern (*Pteridium aquilinum*).

### 4.3.2 Agriculture, Pasture and Mixed Environs

Agriculture, pasture, and Mixed Environs habitat (Appendix C, Photo Plate 3) occurs with a matrix of other habitat types at low to mid-elevations. Within the Project area, this habitat is predominantly located between MP 1.3 and MP 2.8. This habitat is often characterized by regular landscape patterns and straight borders because of ownership boundaries.

Agriculture and pasture habitat varies substantially in the composition of cover types. Within the Project boundary, this habitat was comprised of either improved or unimproved pasture grassland used for grazing livestock and/or haying. Typical grass species include several species of fescue (*Festuca spp.*), bluegrass (*Poa spp.*), bentgrass (*Agrostis spp.*), and orchard grass (*Dactylis glomerata*). Within unimproved pasture areas, exotic species such as Himalayan blackberry (*Rubus discolor*) along field edges, Scotch's broom (*Cytisus scoparius*), and thistle (*Cirsium spp.*) were also identified.

### 4.3.3 Open Water—Lakes, Rivers, and Streams

Nine perennial and five intermittent streams were identified within the study area (Appendix C, Photo Plate 4 to 6). All streams in the lowland area (MP 0.0 to MP 2.9) were determined to be perennial and tidally influenced. These included Hoquarton Slough, Trask

River, Tillamook River, Tillamook Channel, Esther Creek, and Tomlinson Slough. Dominant vegetation along these waters within the study area was reed canarygrass (*Phalaris arundinacea*). The Hoquarton Slough had some native trees scattered along the banks that predominantly consisted of red alder (*Alnus rubra*). Higher elevation streams were typically smaller with both perennial and intermittent stream characterized by a mixed tree canopy of red alder, Douglas-fir and Western red cedar, or red alder and western hemlock.

#### 4.3.4 Herbaceous Wetlands

Herbaceous wetland habitats within the study area consist of depressional wetlands dominated by herbaceous vegetation (Appendix C, Photo Plate 7). These systems are not hydrologically connected to any stream or drainage ditch. Water arrives as precipitation. Overland surface flow from adjacent slopes or a seasonal highwater table. These wetlands support hydrophytic herbaceous vegetation, and met the criteria for hydric soils and wetland hydrology. Common plant species within these wetlands include pasture grasses, water parsley (*Oenanthe sarmentosa*), slough sedge (*Carex obnupta*), and skunk cabbage.

#### 4.3.5 Westside Riparian-Wetlands

The westside riparian habitat (Appendix C, Photo Plate 8) typically occupies patches or linear strips and often forms a mosaic with herbaceous wetlands. Open water is often adjacent to this habitat type. Within the Project area, this habitat type was identified adjacent to streams above the low-land areas (MP 2.8 to MP 7). Red alder is the most widespread tree species, and western red cedar and western hemlock are the co-dominant species. Shrubs underneath the tree layer include salmonberry, salal, red-osier dogwood, and Pacific ninebark (*Physocarpus capitatus*). The dominant herbaceous species include coltsfoot (*Petasites frigidus*), skunk cabbage (*Lysichiton americanus*) swordfern, youth-on-age (*Tolmiea menziesii*), and field horsetail (*Equisetum arvense*).

### 4.4 Plants

The office review identified eight rare plant species as potentially occurring in Tillamook County. Habitat requirements for these species were reviewed to determine if any of these species might occur in the Project area. These species, their status, habitat requirements, and potential to occur in the vicinity of the Project area are provided in Table 4-1.

TABLE 4-1  
Threatened, Endangered, or Candidate Species That May Occur in the Vicinity of the Proposed Project Area

Scientific Name	Common Name	Federal Status	State Status		Habitat Present Onsite?	Habitat Requirements
<i>Abronia umbellata</i> ssp. <i>breviflora</i>	Pink sandverbena	SOC	LE		No	Coastal disturbed sandy areas in coastal dunes and scrub
<i>Cardamine pattersonii</i>	Saddle Mt. bittercress	SOC	C	CR	No	Grass balds, moist cliffs, rock crevices, in gravel along streams in forest
<i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	Pt. Reyes bird's-beak	SOC	LE		No	Coastal salt marshes around estuaries
<i>Filipendula occidentalis</i>	Queen-of-the-forest	SOC	C	CR	Yes	Shady, damp sites; on river banks, in rock crevices and seeps just above high water level; damp salmonberry shrublands
<i>Montia howellii</i>	Howell's montia	N/A	C	CR	No	Meadows, vernal pools
<i>Sidalcea hirtipes</i>	Bristly-stemmed sidalcea	SOC	C	CR	Yes	Remnant prairie fragments and along fencerows and openings along drainages in the Puget Trough in the Western Hemlock Zone (Franklin and Dyrness, 1973)
<i>Sidalcea nelsoniana</i>	Nelson's sidalcea	LT	LT		Yes	Relatively open areas on damp soil; in meadows, wet prairie remnants, fencerows, deciduous forest edges, occasionally Oregon ash wetlands
<i>Silene douglasii</i> var. <i>oraria</i>	Cascade Head catchfly	SOC	LT		Yes	Headlands on the coast, steep coastal bluffs and grassy slopes facing the ocean

**Notes**

C = Candidate

CR = Coast Range

LE = Listed Endangered

LT= Listed Threatened

SOC= Species of Concern

Sources: ODA, 2011; ODW 2011; USFW 2011

A search of the ORBIC database indicated no recorded observations of federal or state threatened, endangered, or candidate species within 2 miles of the study area.

Based upon review of habitat requirements and known recorded observations in the area, three plant species listed by federal or state agencies as threatened or endangered were determined to potentially occur in the vicinity of the proposed Project area:

- Bristly-stemmed sidalcea
- Nelson's sidalcea
- Cascade Head catchfly

#### 4.4.1 Species Observed

The field survey identified numerous species of trees, shrubs, graminoids, and forbs. The majority of non-native species were identified in the populated areas east of MP 2.8. Native plant species were dominant within the forested portion of the study area west of MP 2.8.

No special status plant species were found within the Project area. Table 4-2 presents a list of plant species identified during the course of the field surveys. Appendix C contains photos of typical habitat types that occur in the Project area.

TABLE 4-2  
Plant Species Identified during Surveys

Scientific Name	Common Name	Native	Non-native
<b>Forbs/Graminoid</b>			
<i>Achillea millefolium</i>	Wooly yarrow	X	
<i>Agrostis sp.</i>	Bentgrass		X
<i>Alisma plantago-aquatica</i>	European water plantain		X
<i>Anaphalis margaritacea</i>	Pearly-everlasting	X	
<i>Blechnum spicant</i>	Deer fern	X	
<i>Cardamine integrifolia</i>	Toothwort	X	
<i>Carex obnupta</i>	Slough sedge	X	
<i>Chrysanthemum leucanthemum</i>	Ox-eye daisy		X
<i>Cirsium vulgare</i>	Bull thistle		X
<i>Convolvulus arvensis</i>	Field Morning-glory		X
<i>Crepis occidentalis</i>	Western hawksbeard	X	
<i>Dactylis glomerata</i>	Orchard grass	X	
<i>Equisetum arvense</i>	Horsetail	X	
<i>Festuca</i>	Fescue sp.		X
<i>Fragaria virginiana</i>	Wild strawberry	X	
<i>Galium boreale</i>	Northern bedstraw	X	
<i>Gnaphalium palustre</i>	Marsh cudweed	X	

Scientific Name	Common Name	Native	Non-native
<i>Myosotis laxa</i>	Small-flowered forget-me-not	X	
<i>Oenanthe sarmentosa</i>	Pacific water –parsley	X	
<i>Oxalis oregano</i>	Oregon oxsalis	X	
<i>Petasites frigidus</i>	Coltsfoot	X	
<i>Plagiobothrys scouleri</i>	Scouler's popcorn-flower	X	
<i>Plantago major</i>	Common plantain	X	
<i>Phalaris arundinacea</i>	Reed canarygrass		X
<i>Phleum pratense</i>	Common timothy		X
<i>Poa sp.</i>	Bluegrass		X
<i>Polystichum munitum</i>	Sword fern	X	
<i>Prunella vulgaris</i>	Self-heal		X
<i>Pteridium aquilinum</i>	Bracken fern		
<i>Ranunculus repens</i>	Creeping buttercup		X
<i>Rumex acetosella</i>	Sheep sorrel		X
<i>Scirpus microcarpus</i>	Small-fruited bulrush	X	
<i>Senecio sylvaticus</i>	Wood groundsel	X	
<i>Symphotrichum spathulatum</i>	Western mountain aster	X	
<i>Tolmiea menziesii</i>	Youth-on-age	X	
<i>Tragopogon dubius</i>	Yellow salsify		X
<i>Verbascum thapsus</i>	Wooly mullein	X	
<i>Viola glabella</i>	Stream violet		X
<i>Vicia americana</i>	American purple vetch	X	
<b>Shrubs</b>			
<i>Acer circinatum</i>	Vine maple	X	
<i>Berberis repens</i>	Creeping Oregon grape	X	
<i>Cytisus scoparius</i>	Scotch broom		X
<i>Gaultheria shallon</i>	Salal	X	
<i>Mahonia nervosia</i>	Oregon grape	X	
<i>Physocarpus capitatus</i>	Pacific ninebark	X	
<i>Rosa woodsii</i>	Wood's rose	X	
<i>Rubus discolor</i>	Himalayan discolor		X
<i>Rubus parviflorus</i>	Thimbleberry	X	

Scientific Name	Common Name	Native	Non-native
<i>Rubus spectabilis</i>	Salmonberry	X	
<i>Salix scouleriana</i>	Scouler's willow	X	
<i>Sambucus racemosa</i>	Red elderberry	X	
<i>Spiraea betulifolia</i>	White spiraea	X	
<i>Symphoricarpos albus</i>	Snowberry	X	
<i>Vaccinium sp</i>	Huckleberry	X	
<b>Trees</b>			
<i>Acre macrophyllum</i>	Big-leaf maple	X	
<i>Alnus rubra</i>	Red alder	X	
<i>Picea sitchensis</i>	Sitka spruce	X	
<i>Pseudotsuga menziesii</i>	Douglas-fir	X	
<i>Rhamnus purshiana</i>	Cascara	X	
<i>Thuja plicata</i>	Western red cedar	X	
<i>Tsuga heterophylla</i>	Weston hemlock	X	

## 4.5 Fish and Wildlife

The office review identified five vertebrate, one invertebrate, and one fish species designated as state or federal threatened, endangered, or candidate species, as potentially occurring in Tillamook County. These species, their status, habitat requirements, and potential to occur in the vicinity of the Project area are provided in Table 4-3.

TABLE 4-3  
Threatened or Endangered and Species of Concern That May Occur in the Vicinity of the Proposed Project Area

Scientific Name	Common Name	Federal Status	State Status	Habitat Preference	Habitat Present Onsite?
<b>Birds</b>					
<i><sup>1</sup>Brachyramphus marmoratus</i>	Marbled murrelet	LT	LT	Nest in large trees in older forests or forest with old-growth characteristics within 50 miles of the coast	No
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover	LT	LT	Nest on sand spits near river outlets and on sandy level beaches	No
<i>Haliaeetus leucocephalus</i>	Bald Eagle		LT		No

Scientific Name	Common Name	Federal Status	State Status	Habitat Preference	Habitat Present Onsite?
<i>Pelecanus occidentalis</i>	California brown pelican		LE		No
<i>Phoebastria albatrus</i>	Short-tailed albatross	LE	LE	Open ocean waters and islands	No
<sup>1</sup> <i>Strix occidentalis caurina</i>	Northern spotted owl	LT		Late-successional mixed coniferous forests, usually dominated by Douglas-fir	No
<b>Invertebrates (Insects)</b>					
<sup>1</sup> <i>Speyeria zerene hippolyta</i>	Oregon silverspot butterfly	LT	LT	Coastal meadows and dunes. Requires a meadow species of violet ( <i>Viola adunca</i> ) to complete its development	Yes
<b>Fish</b>					
<i>Oncorhynchus kisutch</i>	Coho salmon (Oregon Coast ESU)	LT	SV		Yes

**Notes**

ESU = Evolutionarily significant unit

LE= Endangered

LT =Threatened

PE =Proposed Endangered

PT= Proposed Threatened

SV =Sensitive Vulnerable

<sup>1</sup> = Critical Habitat Designated for this Species

Sources: ORBIC, 2010; USFWS, 2011

A search of the ORBIC database indicated recorded observations of two vertebrate species, brown pelican, bald eagle; one invertebrate species, Oregon silverspot butterfly; and one fish species, coho salmon (Oregon Coast ESU), within a 2-mile radius of the Project area.

Based upon review of habitat requirements and known recorded observations in the area, four species were determined to potentially occur in the vicinity of the proposed Project area:

- Bald eagle
- Brown pelican
- Oregon silverspot butterfly
- Coho salmon

#### 4.5.1 Species Observed

Fish and wildlife observed during the field survey included 21 bird and 4 mammal species. Evidence of wildlife (for example, scat and burrows) also observed in the study area indicate the presence of rodents and coyote (*Canis latrans*) within the Project area. No state or federally listed threatened or endangered wildlife species were observed within the study area. Table 4-4 presents the list of all wildlife species observed during the field surveys.

TABLE 4-4  
Wildlife Species Observed, April 2011 Field Investigation

Scientific Name	Common Name
<b>Birds</b>	
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Aphelocoma coerulescens</i>	Scrub jay
<i>Cyanocitta stelleri</i>	Stellar jay
<i>Zonotrichia atricapilla</i>	Golden-crowned sparrow
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Melospiza melodai</i>	Song sparrow
<i>Cistothorus palustris</i>	Marsh wren
<i>Troglodytes troglodytes</i>	Winter wren
<i>Turdus migratorius</i>	American robin
<i>Archilochus colubris</i>	Ruby throated hummingbird
<i>Corvus brachyrhynchos</i>	American crow
<i>Sturnus vulgaris</i>	European starling
<i>Colaptes auratus</i>	Northern flicker
<i>Zonotrichia albicollis</i>	White-crowned sparrow
<i>Agelaius phoeniceus</i>	Red-wing blackbird

Scientific Name	Common Name
<i>Piranga ludoviciana</i>	Western tanager
<i>Lophodytes cucullatus</i>	Hooded merganser mallard
<i>Piranga ludoviciana</i>	Western tanager
<b>Mammals</b>	
<i>Cervus canadensis</i>	Roosevelt elk
<i>Odocoileus hemeonus</i>	Black-tailed Deer
<i>Procyon lotor</i>	Raccoon
<i>Castor canadensis</i>	Beaver
<b>Amphibians</b>	
<i>Plethadon vehiculum</i>	Western Red-backed Salamander

#### 4.5.2 Oregon Department of Fish and Wildlife Category 1 Habitat

The ODFW defines Category 1 habitat as irreplaceable essential and limited habitat. "Irreplaceable" means that successful in-kind habitat mitigation to replace lost habitat quantity and/or quality is not feasible within an acceptable period of time or location, or involves an unacceptable level of risk or uncertainty. "Acceptable" means in a reasonable timeframe to benefit the affected fish and wildlife species. Examples of Category 1 habitat include old growth forest, bogs, and mature oak woodlands.

No Category 1 habitat was identified within the Project study area.

SECTION 5

# Riparian Corridors

The investigation included identifying riparian corridors within the Project study corridor and evaluating riparian corridor conditions. Table 5-1 identifies the waterbodies that the Project study area crosses and the width of the associated riparian buffer. Figures 2a-2n in Appendix A show the locations of the buffers by stream reach ID number listed in Table 5-1. Appendix C contains photos of the buffers.

TABLE 5-1  
Waterbodies Crossed within the Project Area and Associated Buffer

Stream Reach ID	Stream Name	Jurisdiction (City or County)	Flow Regime	Width at Widest Point (feet)	Regulated Riparian Buffer Width (feet) <sup>1</sup>	Corridor Condition within Project Study Area <sup>2</sup>
S01	Hoquarton Slough	City	Perennial	—	50	Marginal
S02	Trask River	County	Perennial	—	50	Degraded
S03	Tillamook Channel	County	Perennial	—	25	Marginal
S04	Tillamook River	County	Perennial	—	50	Degraded
S05	Esther Creek	County	Perennial	—	25	Degraded
S06	Tomlinson Slough	County	Perennial	—	25	Degraded
S07	Tributary of Tomlinson Slough	County	Intermittent	1.5	0	
S08	Tributary of Tomlinson Creek	County	Intermittent	10.0	0	
S09	Unnamed drainage	County	Intermittent	4.0	0	
S10	Unnamed drainage	County	Intermittent	3.0	0	
S11	Unnamed drainage	County	Intermittent	4.0	0	
S12	Unnamed drainage	County	Perennial	3.0	15	Good
S17	North Branch Fall Creek	County	Perennial	20.0	25	Good
S21	Tomlinson Creek	County	Perennial	15.0	15	Good /Marginal

**Notes**

<sup>1</sup> City buffer is measured from the top of bank and the County buffer is measured from the ordinary high water line.

<sup>2</sup> Criteria from Clean Water Services *Design and Construction Standards*, June 2007

Table 5-1 shows that nine water bodies along the proposed transmission line route include regulated riparian buffers; eight are located in Tillamook County and one is in the City of Tillamook.

## 5.1 Riparian Corridor Conditions

Corridor conditions were assessed to either have a good, marginal, or degraded condition. The method for assessing corridor conditions used the following criteria.

- 1) **Good Corridor Condition** – Combination of native trees, shrubs, and groundcover covering greater than 80 percent of the vegetative community with greater than 50 percent tree canopy (areal measure).
- 2) **Marginal Corridor Condition** – Combination of native trees, shrubs, and groundcover covering 50 percent to 80 percent of the community with 26 percent to 50 percent tree canopy (areal measure).
- 3) **Degraded Corridor Condition** – Combination of native trees, shrubs, and groundcover covering less than 50 percent of the community with less than 25 percent tree canopy (areal measure).

Generally, corridor conditions were moderate to degraded between MP 0.1 to MP 2.8. Corridors had limited species and structural diversity with little to no canopy cover (less than 50 percent areal cover). Additional cover of non-native species such as reed canary grass and Himalayan blackberry was more than 50 percent.

From MP 2.8 to MP 7, corridor conditions were good with greater than 80 percent cover of native trees, shrubs, and ground cover, and an areal cover exceeding 50 percent.

## 5.2 Tillamook County Riparian Vegetation Protection

Although a review of Section 4.080 in the TLUO makes it clear this type of linear facility is not contemplated, the Tillamook PUD should attempt to locate components of the Project with permanent impacts (e.g. pole structures), outside the riparian buffer specified for the water bodies in Table 5-1. The clearing of riparian vegetation within the buffer for fire prevention and overall transmission line safety may require a Development Permit from Tillamook County [see Section 4.080(4)].

## 5.3 City of Tillamook Riparian Vegetation Protection

The transmission line route is proposed within the 50-foot riparian setback along Hoquarton Slough. However, Section 21.1(3)(A)(2) of the TZO specifically exempts certain uses from compliance with the riparian setback and “*utilities*” are listed as an exempted use where no other alternatives are feasible. The TZO definition for utilities includes transmission lines, which provide the public with electricity (see TZO Section 4). The Tillamook PUD should still attempt to minimize the number of Project components with permanent impacts (e.g. pole structures), from within the riparian setback. Table 5-1 indicates that the condition of the riparian corridor along Hoquarton Slough is marginal. The corridor is heavy with non-native species such as reed canary grass and Himalayan blackberry, although some canopy coverage is provided by existing red alder trees. Native trees removed from this riparian setback for pole structure placement, fire prevention and overall transmission line safety could be replaced with native low-lying species.

## SECTION 6

# Trees

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CH2M HILL biologists conducted surveys for trees with a 6-inch or greater DBH on City of Tillamook property within the Project survey corridor (see Figure 3 in Appendix A), according to the regulations in City Ordinance Number 1266. Trees within the survey corridor but on the opposite side of an existing building, road, or waterbody from the transmission line centerline were not recorded. Only trees within the 100-foot easement will be removed, per NESC, RUS, and PUD standards for safe operation. Figure 3 in Appendix A shows all trees recorded within the City of Tillamook limits that met the criteria noted above. Appendix D includes a table of all trees on City of Tillamook property, including DBH and species where possible, that may be affected by the Project.

Of the 144 trees found within the 300-foot Project study corridor within the five City-owned properties, approximately 33 trees (or 23 percent) are located within the 100-foot wide easement and will likely need to be removed. Of the 33 trees to be removed, 29 are also within the WRP Overlay District. Trees that are required to be removed within the wetlands and riparian corridor, which comprise the WRP Overlay District, could be replaced with low-lying native vegetation such as grasses and shrubs to minimize impacts.



# Conclusions

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CH2M HILL biologists conducted evaluations for potential presence of rare plant and wildlife species within the Project study area. The purpose of the surveys was to identify habitats with the potential to support any of the target special status species and to determine whether proposed Project activities will affect these populations.

## 7.1 Conclusions

The surveys identified five habitat types and numerous plant and animal species. No state or federally listed endangered or threatened species were observed in the Project area during field investigation. The following conclusions were derived:

- Three dominant habitat types were identified within the Project area: Agriculture, Pasture, and Mixed Environs; Westside Lowlands Conifer-Hardwood Forest; and Open Water – Lakes, Rivers, and Streams. Agriculture, Pasture, and Mixed Environs was located predominantly between MP 0.1 and MP 2.8 and located partially within the urban growth boundary of the City of Tillamook and also between the Trask and Tillamook rivers within Tillamook County. The majority of non-native species was found within this habitat. A large part of this area consists of farmed wetlands and does not provide native vegetation.
- Westside Lowlands Conifer-Hardwood Forest habitat was identified between MP 2.8 and MP 7. These habitats within the study area have been disturbed and fragmented by commercial forest practices which have resulted in forest habitat in various stages of succession from clear-cut to mid-succession. It does not provide suitable habitat for listed species located in the vicinity of the Project area.
- Suitable habitat for listed species, namely chum salmon (Oregon Coast ESU), occurs in the Open Water – Lakes, Rivers, and Streams habitat in the lower elevations of the Project area. All impacts to this habitat from construction and operation of the Project will be avoided by transmission lines spanning the rivers and streams.
- Potential for suitable habitat for listed species in Herbaceous Wetlands and Westside Riparian – Wetlands is low. These habitats within the study area have been disturbed and fragmented by commercial forest practices and by residential development and agriculture in the surrounding area.
- No ODFW Category 1 habitat was identified in the Project study area.
- Tillamook County and City of Tillamook have riparian setback standards, which will be addressed during the land use entitlement process within each jurisdiction. The County’s standard may require approval of a Development Permit, while transmission lines are exempt from the City’s standard.

- Of the 144 trees that were counted within the 300-foot study corridor on the five City of Tillamook properties affected by the Project, only 33 (or 23 percent) will need to be removed within the 100-foot easement consistent with safety standards for maintenance and operation. Trees that are required to be removed within the wetlands and riparian corridor, which comprise the Water Resources Protection Overlay District, could be replaced with low-lying native vegetation such as grasses and shrubs to minimize impacts.
- The proposed Project is not expected to result in any significant impacts to special status species. However, potentially suitable habitat may be temporarily and permanently impacted. Temporary impacts may occur in conjunction with the placement and use of heavy equipment during Project construction. Permanent impacts will occur because of habitat alteration and tree removal. State or federal resource agencies may require additional surveys to determine if any rare plants or listed wildlife species occur in the study area.

## SECTION 8

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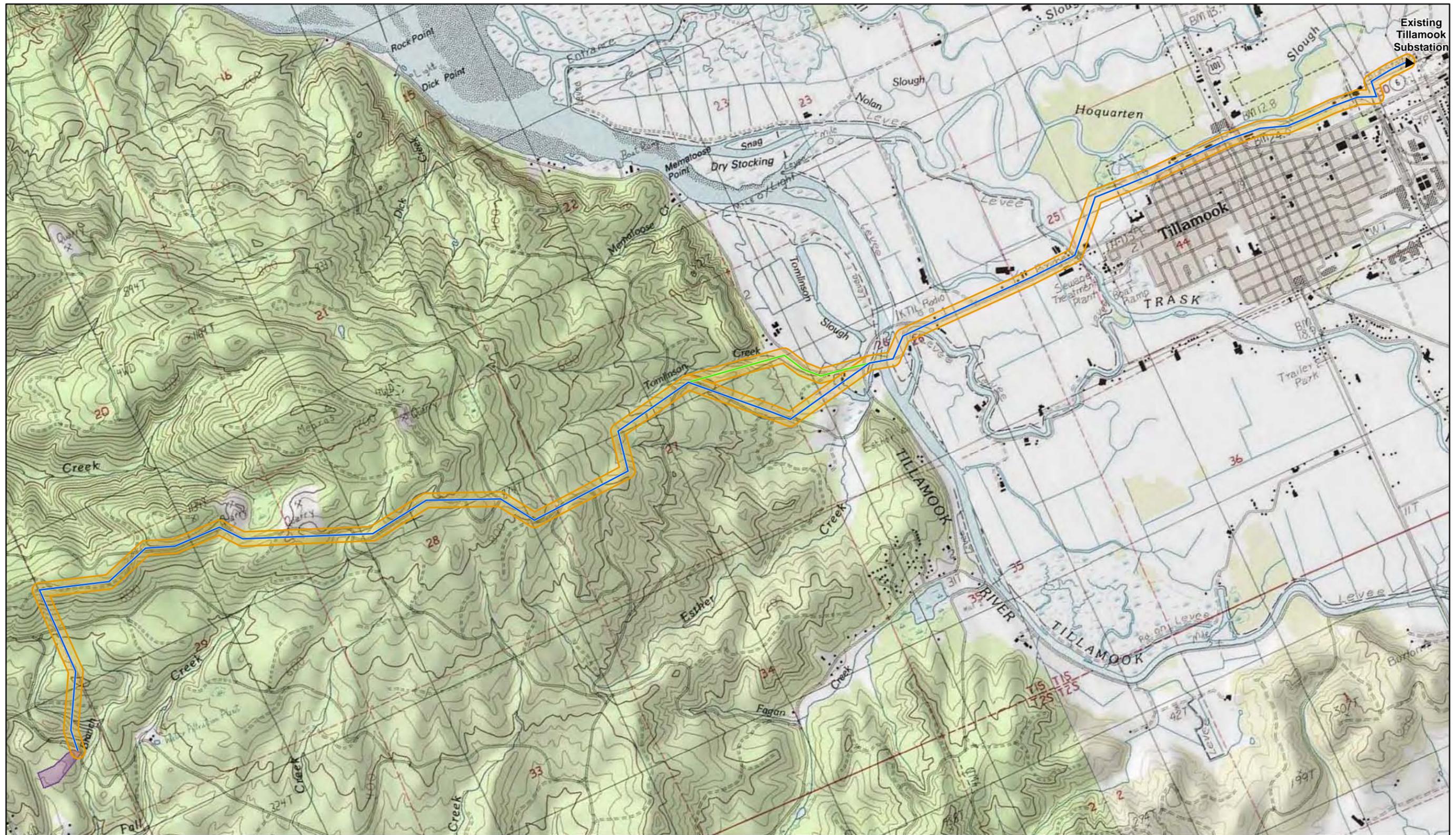
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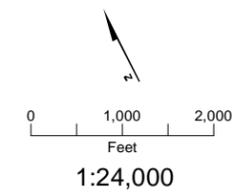
APPENDIX A  
**Figures**

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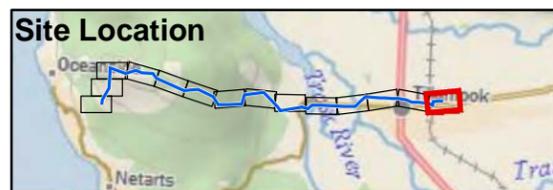


- LEGEND**
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  - Alternate Transmission Route
  - 300-foot Study Corridor
  - Proposed Substation Location

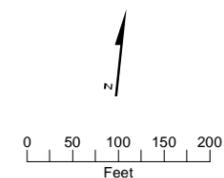


**FIGURE 1**  
**Project Location Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD



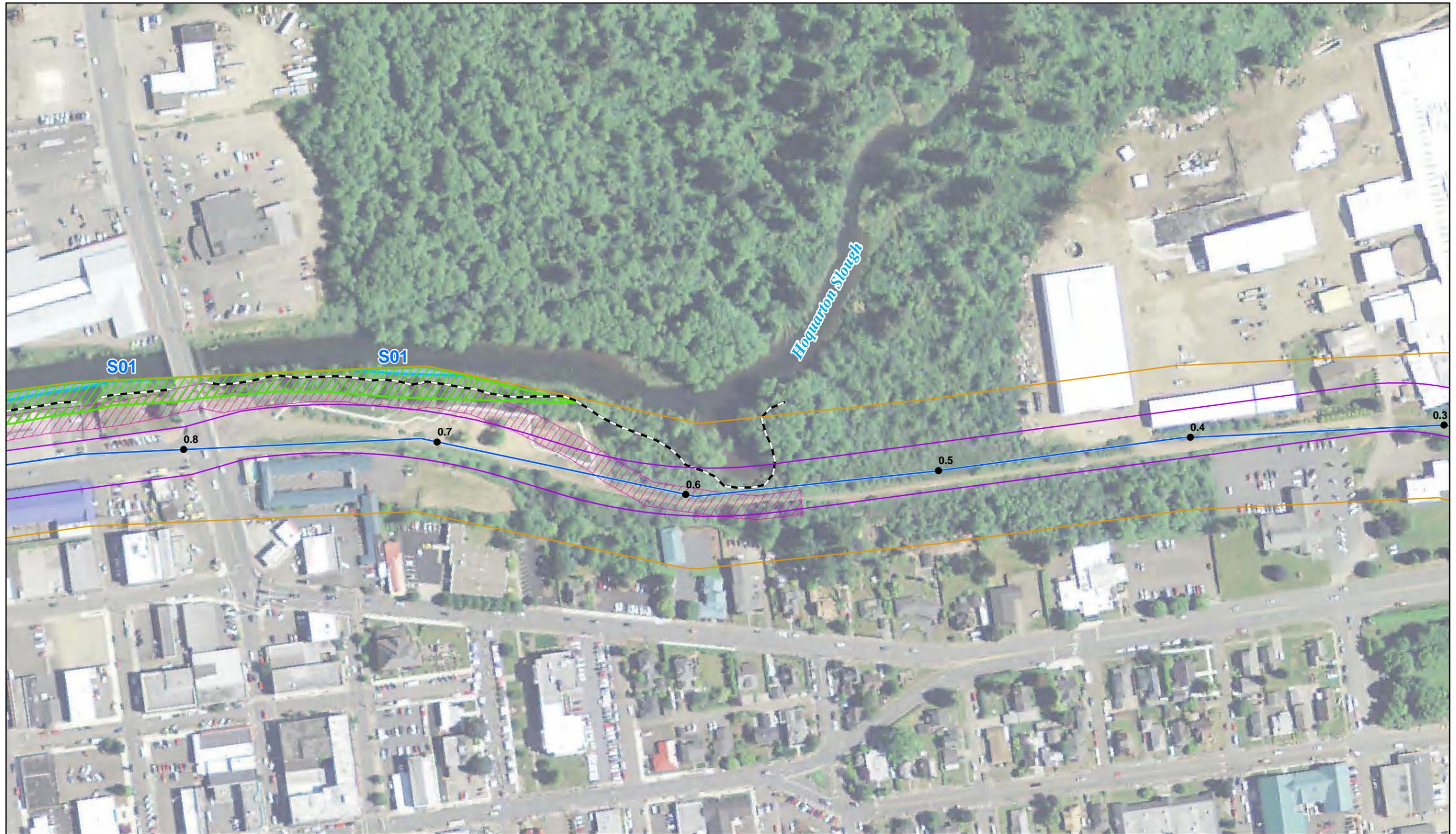


- LEGEND**
- Top of Bank
  - Delineated Stream
  - Delineated Waterbody
  - Stream Buffer
  - Riparian Corridor
  - 1/10 Milepost Station
  - Proposed Transmission Route
  - Alternate Transmission Route
  - 300-foot Study Corridor
  - 100-foot Easement
  - Proposed Substation Location

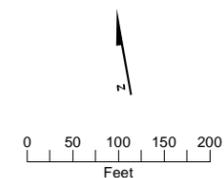


**FIGURE 2a**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD





- LEGEND**
- Top of Bank
  - Delineated Stream
  - Delineated Waterbody
  - Stream Buffer
  - Riparian Corridor
  - 1/10 Milepost Station
  - Proposed Transmission Route
  - Alternate Transmission Route
  - 300-foot Study Corridor
  - 100-foot Easement
  - Proposed Substation Location

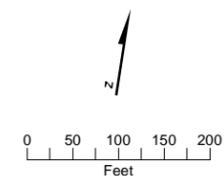


**FIGURE 2b**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD



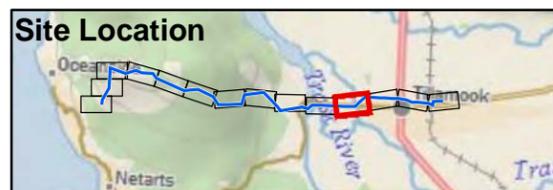
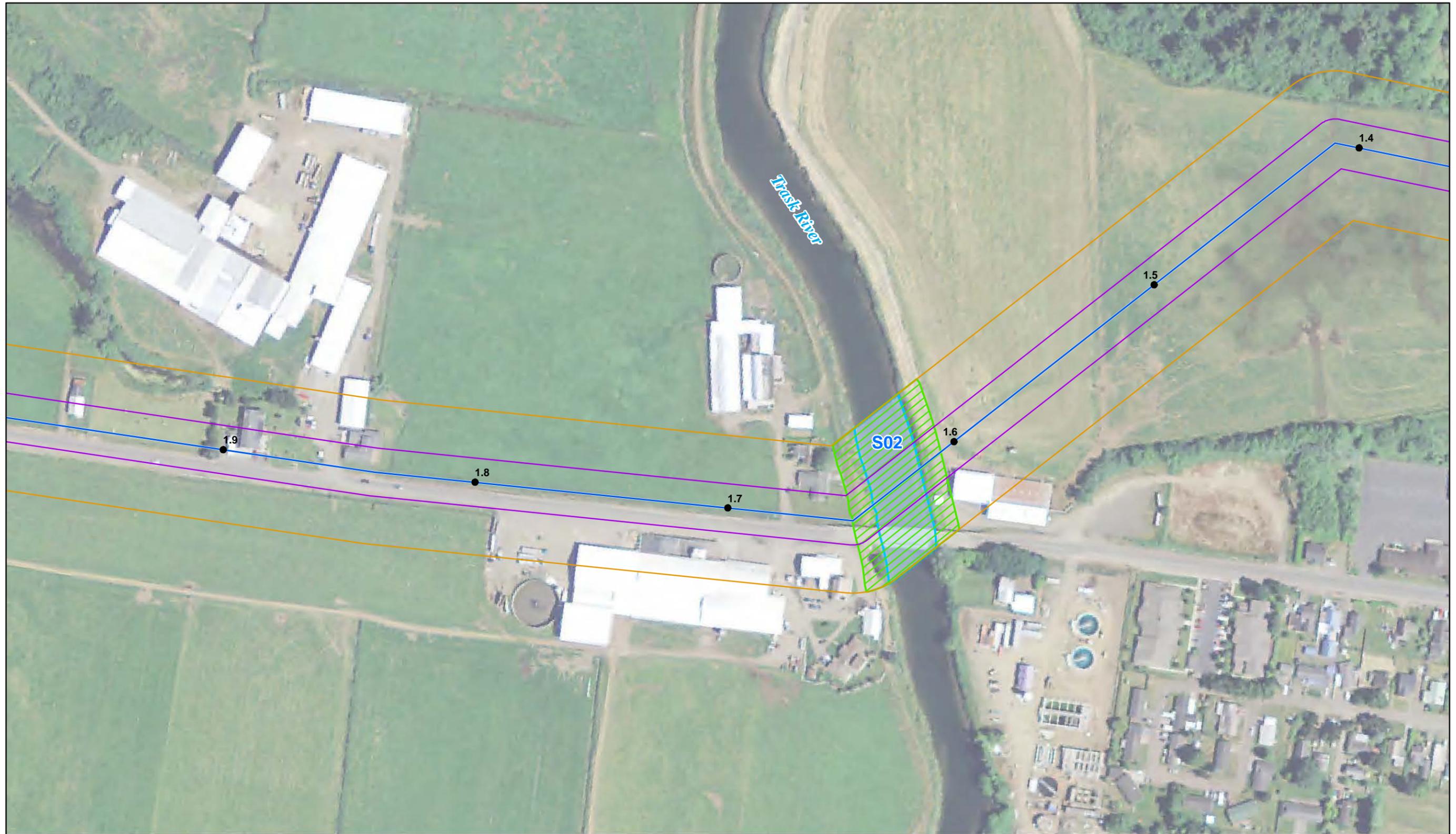


- LEGEND**
- Top of Bank
  - Delineated Stream
  - Delineated Waterbody
  - Stream Buffer
  - Riparian Corridor
  - 1/10 Milepost Station
  - Proposed Transmission Route
  - Alternate Transmission Route
  - 300-foot Study Corridor
  - 100-foot Easement
  - Proposed Substation Location

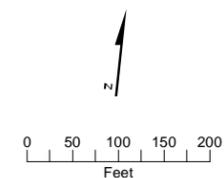


**FIGURE 2c**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD





- LEGEND**
- Top of Bank
  - Delineated Stream
  - Delineated Waterbody
  - Stream Buffer
  - Riparian Corridor
  - 1/10 Milepost Station
  - Proposed Transmission Route
  - Alternate Transmission Route
  - 300-foot Study Corridor
  - 100-foot Easement
  - Proposed Substation Location

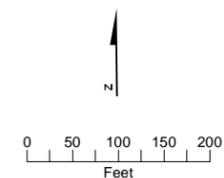


**FIGURE 2d**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD



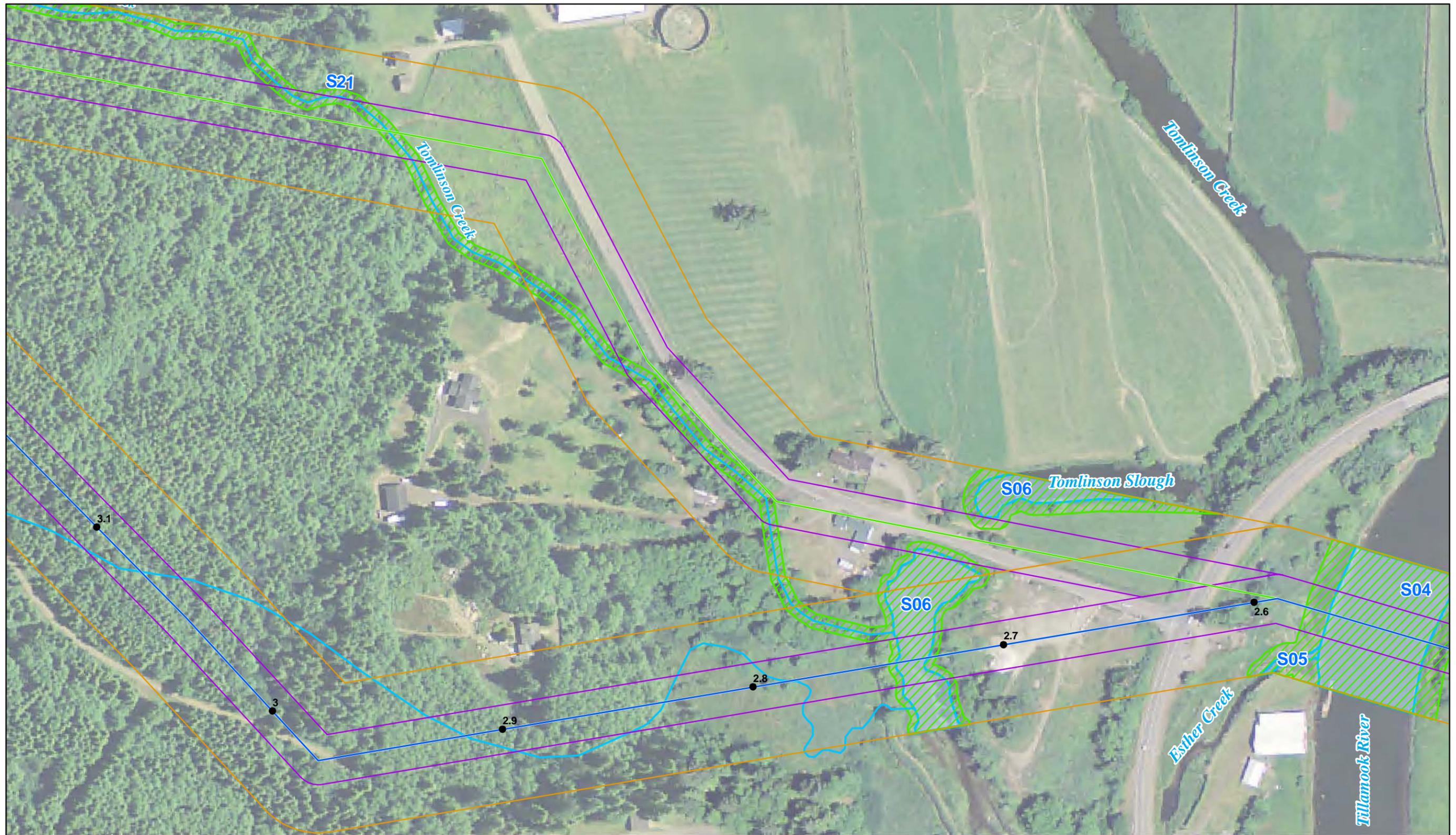


LEGEND					
	Top of Bank		Riparian Corridor		300-foot Study Corridor
	Delineated Stream		1/10 Milepost Station		100-foot Easement
	Delineated Waterbody		Proposed Transmission Route		Proposed Substation Location
	Stream Buffer		Alternate Transmission Route		

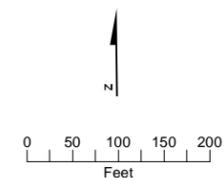


**FIGURE 2e**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD



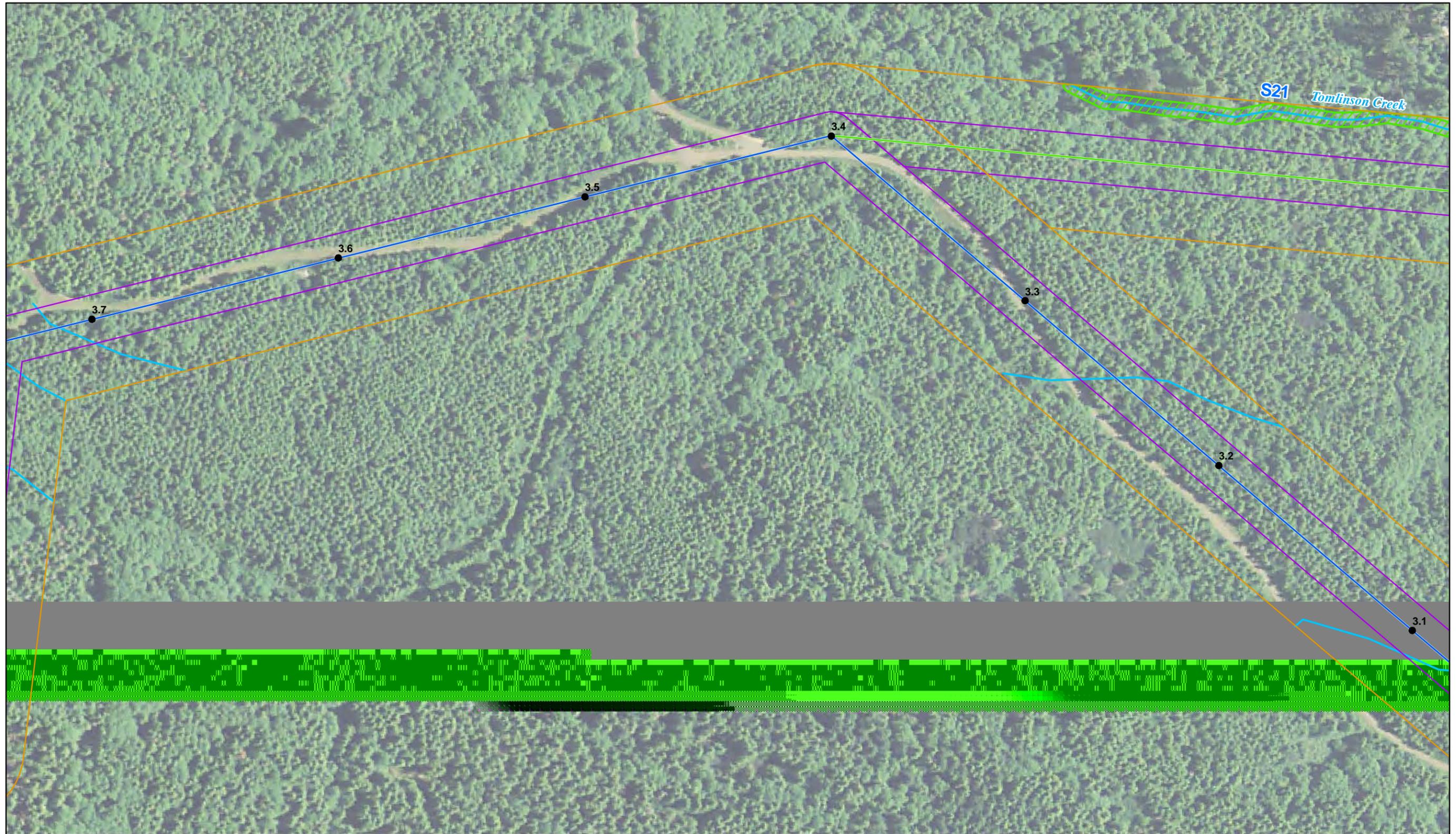


- LEGEND**
- Top of Bank
  - Delineated Stream
  - Delineated Waterbody
  - Stream Buffer
  - Riparian Corridor
  - 1/10 Milepost Station
  - Proposed Transmission Route
  - Alternate Transmission Route
  - 300-foot Study Corridor
  - 100-foot Easement
  - Proposed Substation Location



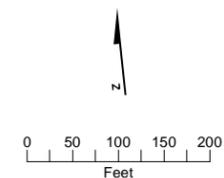
**FIGURE 2f**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD





**LEGEND**

- |                      |                              |                              |
|----------------------|------------------------------|------------------------------|
| Top of Bank          | Riparian Corridor            | 300-foot Study Corridor      |
| Delineated Stream    | 1/10 Milepost Station        | 100-foot Easement            |
| Delineated Waterbody | Proposed Transmission Route  | Proposed Substation Location |
| Stream Buffer        | Alternate Transmission Route |                              |

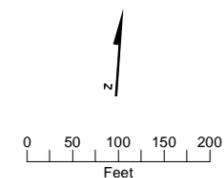


**FIGURE 2g**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD



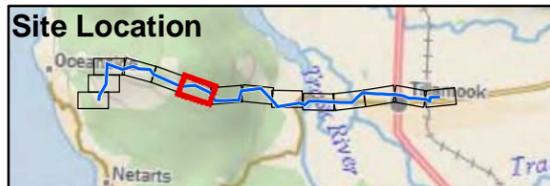


- LEGEND**
- Top of Bank
  - Delineated Stream
  - Delineated Waterbody
  - Stream Buffer
  - Riparian Corridor
  - 1/10 Milepost Station
  - Proposed Transmission Route
  - Alternate Transmission Route
  - 300-foot Study Corridor
  - 100-foot Easement
  - Proposed Substation Location



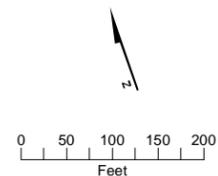
**FIGURE 2h**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD





**LEGEND**

Top of Bank	Riparian Corridor	300-foot Study Corridor
Delineated Stream	1/10 Milepost Station	100-foot Easement
Delineated Waterbody	Proposed Transmission Route	Proposed Substation Location
Stream Buffer	Alternate Transmission Route	

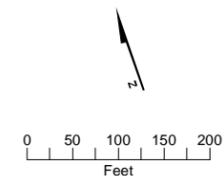


**FIGURE 2i**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD



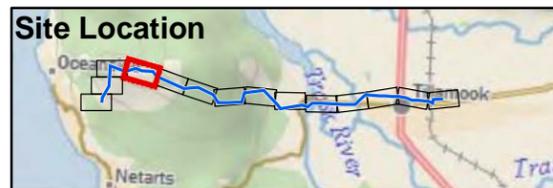


LEGEND		
Top of Bank	Riparian Corridor	300-foot Study Corridor
Delineated Stream	1/10 Milepost Station	100-foot Easement
Delineated Waterbody	Proposed Transmission Route	Proposed Substation Location
Stream Buffer	Alternate Transmission Route	



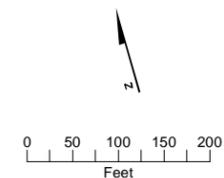
**FIGURE 2j**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD





**LEGEND**

- Top of Bank
- Delineated Stream
- Delineated Waterbody
- Stream Buffer
- Riparian Corridor
- 1/10 Milepost Station
- Proposed Transmission Route
- Alternate Transmission Route
- 300-foot Study Corridor
- 100-foot Easement
- Proposed Substation Location



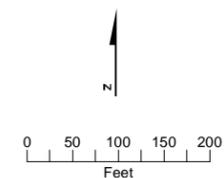
**FIGURE 2k**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD





**LEGEND**

Top of Bank	Riparian Corridor	300-foot Study Corridor
Delineated Stream	1/10 Milepost Station	100-foot Easement
Delineated Waterbody	Proposed Transmission Route	Proposed Substation Location
Stream Buffer	Alternate Transmission Route	



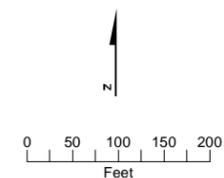
**FIGURE 21**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD





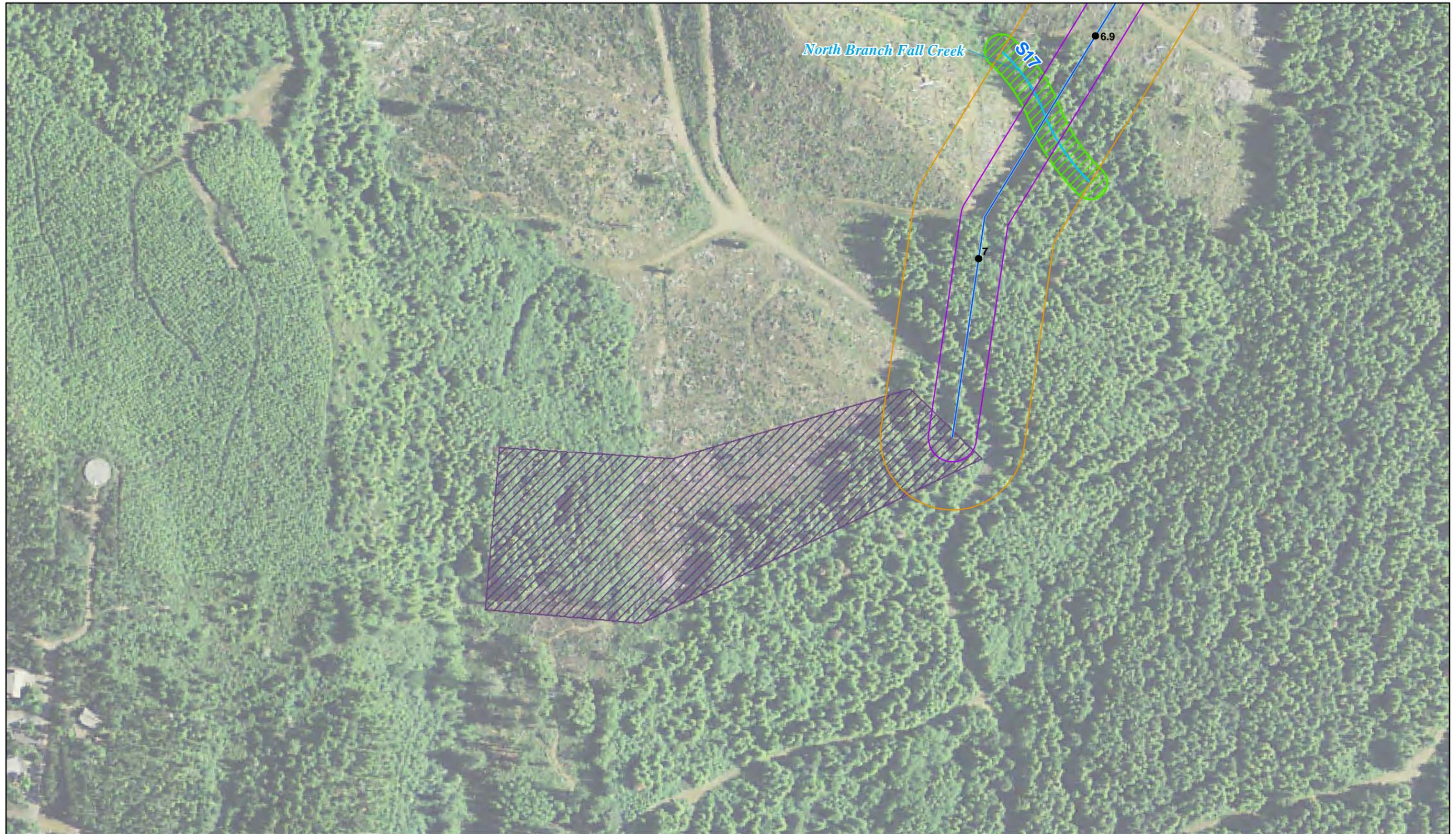
**LEGEND**

Top of Bank	Riparian Corridor	300-foot Study Corridor
Delineated Stream	1/10 Milepost Station	100-foot Easement
Delineated Waterbody	Proposed Transmission Route	Proposed Substation Location
Stream Buffer	Alternate Transmission Route	

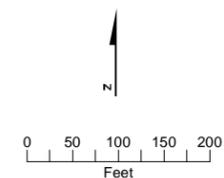


**FIGURE 2m**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD



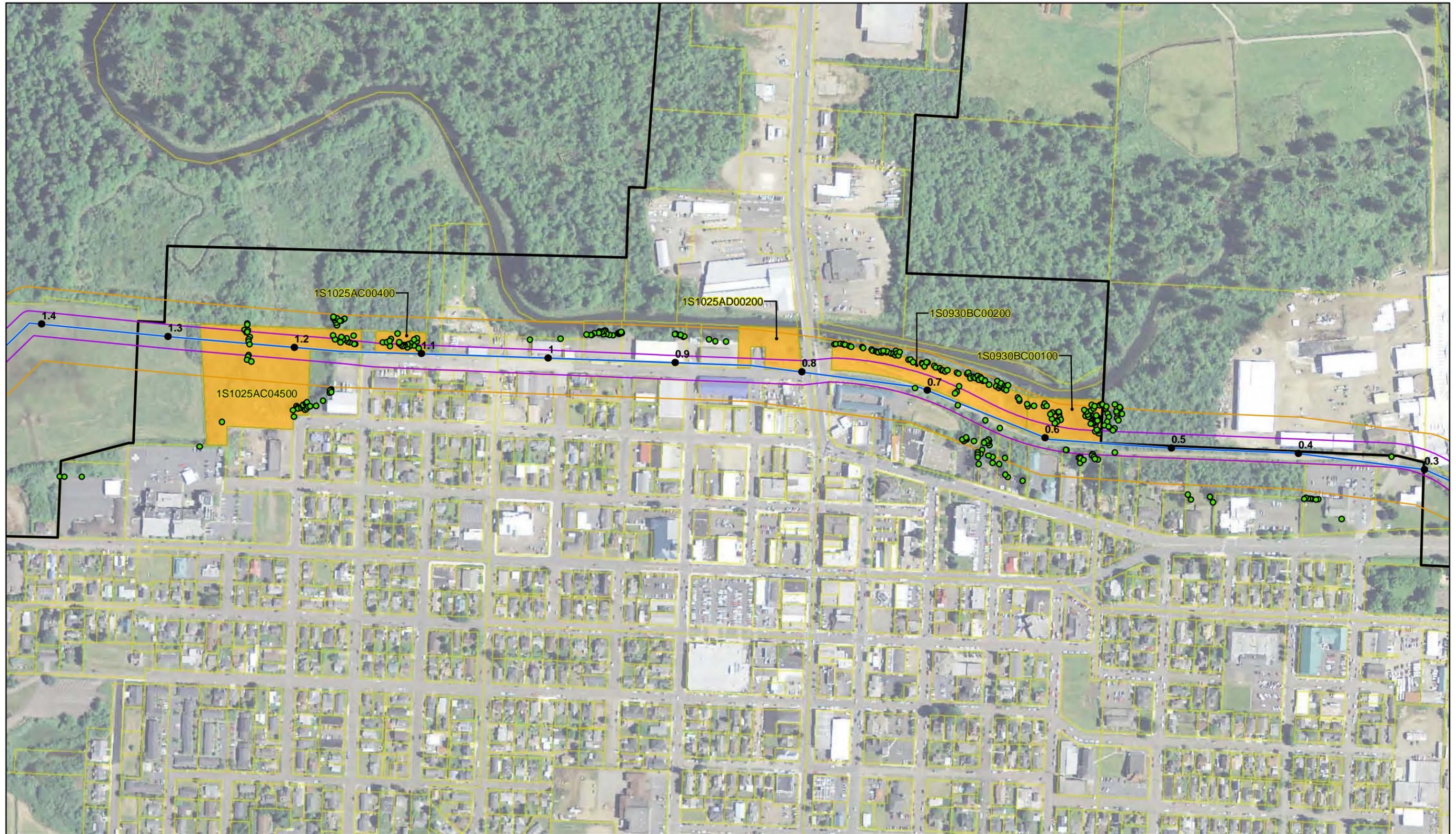


LEGEND					
	Top of Bank		Riparian Corridor		300-foot Study Corridor
	Delineated Stream		1/10 Milepost Station		100-foot Easement
	Delineated Waterbody		Proposed Transmission Route		Proposed Substation Location
	Stream Buffer		Alternate Transmission Route		



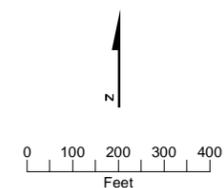
**FIGURE 2n**  
**Riparian Buffers Map**  
 Habitat Report  
 Tillamook-Oceanside Transmission Line  
 Tillamook PUD





- LEGEND**
- Trees Greater than 6-Inch DBH
  - 1/10 Milepost Station
  - Proposed Transmission Route
  - Tillamook City Limit
  - 300-foot Study Corridor
  - 100-foot Easement
  - Tax Lot<sup>1</sup>
  - City-owned Tax Lot<sup>1</sup>

Sources:  
1) Tillamook County



**FIGURE 3**  
**Native Trees Map**  
**City of Tillamook**  
Habitat Report  
Tillamook-Oceanside Transmission Line  
*Tillamook PUD*



APPENDIX B

**Species Occurrence Data from the United States  
Fish and Wildlife Service and Oregon  
Biodiversity Data Center**

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**FEDERALLY LISTED, PROPOSED, CANDIDATE SPECIES  
AND SPECIES OF CONCERN  
UNDER THE JURISDICTION OF THE FISH AND WILDLIFE SERVICE  
WHICH MAY OCCUR WITHIN TILLAMOOK COUNTY, OREGON**

**LISTED SPECIES**

**Birds**

Marbled murrelet	<i>Brachyramphus marmoratus</i>	CH T
Western snowy (coastal) plover	<i>Charadrius alexandrinus nivosus</i>	CH T
Short-tailed albatross	<i>Phoebastria albatrus</i>	E
Northern spotted owl	<i>Strix occidentalis caurina</i>	CH T

**Reptiles and Amphibians**

**Marine:**

Loggerhead sea turtle	<i>Caretta caretta</i>	E
Green sea turtle	<i>Chelonia mydas</i>	T
Leatherback sea turtle	<i>Dermochelys coriacea</i>	E
Olive (=Pacific) ridley sea turtle	<i>Lepidochelys olivacea</i>	T

**Invertebrates**

**Insects:**

Oregon silverspot butterfly	<i>Speyeria zerene hippolyta</i>	CH T
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**Plants**

Nelson's checker-mallow	<i>Sidalcea nelsoniana</i>	T
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**PROPOSED SPECIES**

**None**

No Proposed Endangered Species		PE
No Proposed Threatened Species		PT

**SPECIES OF CONCERN**

**Mammals**

White-footed vole	<i>Arborimus albipes</i>
Red tree vole	<i>Arborimus longicaudus</i>
Townsend's western big-eared bat	<i>Corynorhinus townsendii townsendii</i>
Silver-haired bat	<i>Lasionycteris noctivagans</i>
Long-eared myotis bat	<i>Myotis evotis</i>
Fringed myotis bat	<i>Myotis thysanodes</i>
Long-legged myotis bat	<i>Myotis volans</i>
Yuma myotis bat	<i>Myotis yumanensis</i>

**Birds**

Olive-sided flycatcher	<i>Contopus cooperi</i>
Black oystercatcher	<i>Haematopus bachmani</i>
Harlequin duck	<i>Histrionicus histrionicus</i>
Lewis' woodpecker	<i>Melanerpes lewis</i>
Mountain quail	<i>Oreortyx pictus</i>
Band-tailed pigeon	<i>Patagioenas fasciata</i>

**FEDERALLY LISTED, PROPOSED, CANDIDATE SPECIES  
AND SPECIES OF CONCERN  
UNDER THE JURISDICTION OF THE FISH AND WILDLIFE SERVICE  
WHICH MAY OCCUR WITHIN TILLAMOOK COUNTY, OREGON**

Purple martin

*Progne subis*

**Reptiles and Amphibians**

Northern Pacific pond turtle

*Actinemys marmorata marmorata*

Coastal tailed frog

*Ascaphus truei*

Northern red-legged frog

*Rana aurora aurora*

Southern torrent (seep) salamander

*Rhyacotriton variegatus*

**Fish**

River lamprey

*Lampetra ayresi*

Pacific lamprey

*Lampetra tridentata*

Coastal cutthroat trout

*Oncorhynchus clarki ssp*

**Plants**

Pink sand-verbena

*Abronia umbellata ssp. breviflora*

Bog anemone

*Anemone oregana var. felix*

Saddle Mountain bittercress

*Cardamine pattersonii*

Pt. Reyes bird's-beak

*Cordylanthus maritimus ssp. palustris*

Frigid shootingstar

*Dodecatheon austrofrigidum*

Coast Range fawn lily

*Erythronium elegans*

Queen-of-the-forest

*Filipendula occidentalis*

Frye's Limbella

*Limbella fryei*

San Francisco bluegrass

*Poa unilateralis*

Saddle Mountain saxifrage

*Saxifraga hitchcockiana*

Henderson's checker-mallow

*Sidalcea hendersonii*

Bristly-stemmed sidalcea

*Sidalcea hirtipes*

Cascade Head catchfly

*Silene douglasii var. oraria*

**DELISTED SPECIES**

**Birds**

Aleutian Canada goose

*Branta canadensis leucopareia*

American Peregrine falcon

*Falco peregrinus anatum*

Bald eagle

*Haliaeetus leucocephalus*

Brown pelican

*Pelecanus occidentalis*

**Definitions:**

Listed Species: An endangered species is one that is in danger of extinction throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered in the foreseeable future.

Proposed Species: Taxa for which the Fish and Wildlife Service or National Marine Fisheries Service has published a proposal to list as endangered or threatened in the Federal Register.

Candidate Species: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.

Species of Concern: Taxa whose conservation status is of concern to the U.S. Fish and Wildlife Service

**FEDERALLY LISTED, PROPOSED, CANDIDATE SPECIES  
AND SPECIES OF CONCERN  
UNDER THE JURISDICTION OF THE FISH AND WILDLIFE SERVICE  
WHICH MAY OCCUR WITHIN TILLAMOOK COUNTY, OREGON**

(many previously known as Category 2 candidates), but for which further information is still needed. Such species receive no legal protection and use of the term does not necessarily imply that a species will eventually be proposed for listing.

Delisted Species: A species that has been removed from the Federal list of endangered and threatened wildlife and plants.

**Key:**

E	Endangered
T	Threatened
CH	Critical Habitat has been designated for this species
PE	Proposed Endangered
PT	Proposed Threatened
PCH	Critical Habitat has been proposed for this species

**Notes:**

**Marine & Anadromous Species:** Please consult the National Marine Fisheries Service (NMFS) (<http://www.nmfs.noaa.gov/pr/species/>) for marine and anadromous species. The National Marine Fisheries Service (NMFS) manages mostly marine and anadromous species, while the U.S. Fish and Wildlife Service manages the remainder of the listed species, mostly terrestrial and freshwater species.

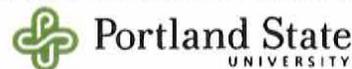
**Marine Turtle Conservation and Management:** All six species of sea turtles occurring in the U.S. are protected under the Endangered Species Act of 1973. In 1977, NOAA Fisheries and the U.S. Fish and Wildlife Service signed a Memorandum of Understanding to jointly administer the Endangered Species Act with respect to marine turtles. NOAA Fisheries has the lead responsibility for the conservation and recovery of sea turtles in the marine environment and the U.S. Fish and Wildlife Service has the lead for the conservation and recovery of sea turtles on nesting beaches. For more information, see the NOAA Fisheries webpage on sea turtles <http://www.nmfs.noaa.gov/pr/species/turtles/>.

**Gray Wolf:** On February 27, 2008, the Service published a final rule that established a distinct population segment of the gray wolf (*Canis lupis*) in the northern Rocky Mountains (which includes a portion of Eastern Oregon, east of the centerline of Highway 395 and Highway 78 north of Burns Junction and that portion of Oregon east of the centerline of Highway 95 south of Burns Junction). Any wolves found west of this line in Oregon belong to the conterminous USA population [see 73 FR 10514]. Gray wolves in Oregon are State-listed as endangered, regardless of location.

# OREGON BIODIVERSITY INFORMATION CENTER

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Institute for Natural Resources



Mail Stop: INR  
Post Office Box 751  
Portland, Oregon 97207  
503.725.9950  
<http://orbic.pdx.edu>

November 11, 2010

Adam Roberts  
Critigen, LLC  
2020 SW 4th Avenue  
Portland, OR 97201

Dear Mr. Roberts:

Thank you for requesting information from the Oregon Biodiversity Information Center (ORBIC). We have conducted a data system search for rare, threatened and endangered plant and animal records for your Transmission Line Project in Tillamook County.

Ninety-two (92) element occurrence records were noted within the study area of your project and are included on the enclosed computer printout. A GIS shapefile of the data is also included.

Please remember that a lack of rare element information from a given area does not necessarily indicate there are no significant elements present, only that there is no information known to us from the site. To ensure there are no significant elements present that may be affected by your project, you should inventory the site during the appropriate season.

This data is confidential and for the specific purposes of your project and is **not to be distributed**. Please also note that as our database is continually updated, the data in this report should be considered current for a maximum of one year from the date it was generated and should not be cited thereafter.

Please forward the included invoice to the appropriate party in your organization for payment.

If you need additional information or have any further questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Cliff Alton', with a long horizontal flourish extending to the right.

Cliff Alton  
Conservation Information Assistant  
[cliff.alton@pdx.edu](mailto:cliff.alton@pdx.edu)  
503.725.9952

encl.: **invoice (H-111110-CWA01)**  
**computer printout and data key**  
**shapefile**