



Oregon

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February 7, 2018

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OREGON PUBLIC UTILITY COMMISSION

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SALEM OR 97308-1088

**RE: Docket No. PCN 2 – In the Matter of
TILLAMOOK PEOPLE'S UTILITY DISTRICT, Petition for
Certification of Public Convenience and Necessity.**

Attached are the following exhibits for filing:

Exhibits 100 to 104 Gibbens

Exhibit 105 and one electronic spreadsheet attachment

Exhibits 106 to 111 Gibbens

Exhibits 200 to 206 Hanhan

/s/ Kay Barnes

Kay Barnes

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CASE: PCN 2
WITNESS: SCOTT GIBBENS

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 100

Opening Testimony

February 7, 2018

1 **Q. Please state your name, occupation, and business address.**

2 A. My name is Scott Gibbens. I am a Senior Utility Analyst employed in the
3 Energy Rates, Finance and Audit Division of the Public Utility Commission of
4 Oregon (OPUC or Commission). My business address is 201 High Street SE,
5 Suite 100, Salem, Oregon 97301.

6 **Q. Please describe your educational background and work experience.**

7 A. My witness qualification statement is found in Exhibit Staff/101.

8 **Q. What is the purpose of your testimony?**

9 A. My testimony will discuss Staff's review of Tillamook People's Utility District's
10 (TPUD or Tillamook PUD) Petition for a Certificate of Public Convenience and
11 Necessity (CPCN). Specifically, it will cover three aspects of the Commission's
12 investigation of the proposed transmission line: practicality and justification in
13 the public interest, and compliance with Statewide Planning Goals and
14 compatibility with local land use regulations. Nadine Hanhan will also be
15 sponsoring testimony for Staff in this docket in Exhibit Staff/200. Her testimony
16 will cover the necessity and safety in the public interest of the proposed
17 transmission line.

18 **Q. Did you prepare an exhibit for this docket?**

19 A. Yes. I prepared the following exhibits in addition to my witness qualification:

20	102.	TPUD's Response to Staff DR No. 5.
21	103.	TPUD's Response to Staff DR No. 36
22	104.	TPUD's Response to Staff DR No. 18 (a)
23	105.	TPUD's Response to Staff DR No. 3
24	106.	TPUD's Response to Staff DR No. 8
25	107.	TPUD's Response to Staff DR No. 6
26	108.	TPUD's Response to Staff DR No. 11
27	109.	TPUD's Response to Staff DR No. 43

- 1 110. State Planning Goals
- 2 111. Excerpt from TPUD's Response to Staff DR No. 44

3 **Q. How is your testimony organized?**

4 A. Staff's testimony separates the examination into five topics: necessity, safety,
5 practicability, justification, and land use planning goal compliance and local
6 land requirements. My testimony is organized as follows:

7	Background.....	3
8	Practicability.....	6
9	Justification	12
10	Land Use Planning Goal Compliance	17
11	Conclusion	34

BACKGROUND**Q. What is a CPCN?**

A. Any person providing electric utility service that proposes to construct an overhead transmission line, for which condemnation of an interest in land will be necessary, must apply for a CPCN. If the OPUC issues a CPCN, the Commission's order can be used as evidence in any condemnation proceeding that the transmission line is a public use and necessary for public convenience. Thus, a CPCN is a necessary prerequisite to initiating condemnation proceedings for land or an interest in land necessary for construction of the transmission line. If condemnation is not necessary, a CPCN is not required.

Q. How does the Commission determine whether a CPCN should be granted? What is Staff's role?

A. Commission review is triggered when condemnation of certain land interests is required to build an overhead transmission line and a petition for a CPCN is filed with the Commission. The most recent similar review occurred in 2017.¹ In such a review, under Oregon Revised Statute (ORS) 758.015 and Oregon Administrative Rule (OAR) 860-025-0030, the Commission conducts an investigation to "determine the necessity, safety, practicability and justification in the public interest for the proposed transmission line...."²

In Order No. 11-366, the Commission concludes that "these words are delegative terms, and we have broad discretion to construe and apply them in

¹ See *In the Matter of Umatilla Electric Cooperative, Petition for Certificate of Public Convenience and Necessity*, OPUC Docket No. PCN 1, Order No. 17-111(March 21, 2017).

² ORS 758.015(2).

1 the context of the laws and policies governing the condemnation of public
2 property."³ In its Order, the Commission discusses the specific meaning of
3 each of those terms⁴; Staff relies on that guidance in this testimony.

4 Staff's testimony supports this investigation by providing an independent
5 analysis of the four factors that the Commission must evaluate: necessity,
6 safety, practicability and justification. Furthermore, in consideration of the
7 Commission's guidance in Order No. 11-366, Staff considers the "public
8 interest" when addressing each of these requirements, rather than as a
9 separate standard.⁵ In its review, members of Staff's safety, resource planning,
10 and rates divisions collaborated to analyze TPUD's filing. To date, Staff has
11 issued forty-four data requests to TPUD in order to gain a better understanding
12 of all of the factors involved in the proposed line.

13 **Q. Why is TPUD requesting a CPCN?**

14 A. TPUD states in its opening testimony that an 8.6 mile 115 kilovolt (kv)
15 transmission line is needed to increase reliability, accommodate load growth,
16 and help replace aging infrastructure.⁶ Further, TPUD has stated that they are
17 currently unable to provide reliable power to approximately 1,600 customers
18 being served by an aging radial line in the Oceanside/Netarts area.⁷ Absent the
19 proposed line, potential safety issues, protracted losses of power, and

³ *In the Matter of PacifiCorp dba Pacific Power, Petition for Certificate of Public Convenience and Necessity*, Docket UM 1495, Order No. 11-366 at 3 (September 22, 2011).

⁴ *Ibid.*

⁵ *Id.*, at 2-3.

⁶ TPUD/100, Simmons/2-3.

⁷ See Staff/102, TPUD's response to Staff DR No. 5.

1 excessive expenses may occur.⁸ It has petitioned for a CPCN in order to aid in
2 the process of construction, should condemnation be needed for siting.

⁸ *Ibid.*

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PRACTICABILITY

Q. What is the relevant "practicable" standard?

A. Staff relies upon the standard set forth by the Commission in Order No. 11-366: "...to establish the practicability of a Project, the petitioner must show the project is feasible and will be effectively and efficiently constructed."⁹

Q. Why has TPUD asserted that the project is practicable?

A. TPUD has asserted that the project is practicable because:

Tillamook PUD, in collaboration with the community and its leaders, has developed a route that is practical and has the least overall impact on the community. The starting and ending points are guided by Tillamook PUD's and BPA's existing infrastructure. As noted below, the Wilson River Substation is approaching capacity. The closest substation to the Netarts/Oceanside area where capacity can be gained is BPA's Tillamook Substation. By utilizing that substation, Tillamook PUD can rely on existing infrastructure and construct a shorter line than if other starting points were chosen. The preferred route also allows Tillamook PUD to rely on existing rights of way in many areas, thereby reducing potential conflicts and impacts on surrounding uses.¹⁰

Q. How did Staff analyze the practicability of the proposed line?

⁹ Order No. 11-366 at 4.
¹⁰ TPUD/200, Fagen/2.

1 A. Staff reviewed whether the line is feasible and will be effectively and efficiently
2 constructed. To determine if the line is feasible, Staff reviewed the estimated
3 cost of the line and the impact to customer rates in order to identify financial
4 feasibility. Staff then reviewed TPUD's conditional use and development permit
5 application to Tillamook County, which includes a description of construction
6 activity and the chosen route, to determine feasibility of the selected path.¹¹ To
7 determine efficiency and effectiveness, Staff reviewed TPUD's history of
8 operations and construction of similar projects as well as the proposed process
9 for constructing the line.

10 **Q. Is this proposed line financially feasible?**

11 A. Yes. Financially, construction of the line will have a modest impact to
12 customer's rates that is within a reasonable range. The projected cost is
13 \$13.2 million.¹² Based on the utility's rate spread, this equates to an average
14 cost of \$2.57 per month per residential customer over the first 10 years.¹³
15 Although not expected, Staff analyzed how cost overruns of 50 percent of the
16 estimated total would impact ratepayers. These overruns would result in a
17 monthly impact of approximately \$3.86 on average for the first 10 years which
18 would equate to around a 3.5 percent rate increase for residential customers.

19 **Q. Is this proposed line path feasible?**

20 A. Yes. TPUD's selection of BPA's Tillamook Substation as the eastern terminus
21 of the line is reasonable given the need to connect to the transmission network

¹¹ TPUD/105, Simmons/1-89.

¹² TPUD/200, Fagen/12.

¹³ TPUD/100, Simmons/3.

1 at a location close to the area affected by reliability issues.¹⁴ In determining the
2 route, TPUD examined the ease of: obtaining corridor approval, necessary
3 permits, access, and construction. By prioritizing these metrics in the selection
4 process of the route, the result is a path that is feasible to construct. Further, in
5 the route selection process, TPUD attempted to locate the path along current
6 distribution paths, which obviously is land that has already been deemed
7 feasible for utility lines.¹⁵ In these sections, the easement may only need to be
8 widened as opposed to establishing easements in an area where they do not
9 exist. In looking at route alternatives, Staff notes that the utility did not always
10 choose the path which maximized the colocation along existing power line
11 corridors, however as Staff explains further in the following section, this was
12 the result of other factors taking precedent.

13 **Q. Does Staff believe that the proposed line will be constructed efficiently**
14 **and effectively?**

15 A. Yes. TPUD has constructed two similar transmission projects in the last
16 30 years: the Nestucca and Nehalem 115kv transmission lines. The lines are
17 shorter; however, combined they exceed the length of the proposed line. The
18 Nestucca line is 5.6 miles long, while the Nehalem transmission line is
19 4.27 miles. TPUD notes in response to Staff Data Request No. 36 that together
20 the lines cross farms, timber lands, near residential homes, and waterways and
21 traverses along county and state roads. Both projects were designed and

¹⁴ TPUD/100, Simmons/5.

¹⁵ TPUD/205, Fagen/85.

1 construction management was performed by TPUD staff and was constructed
2 by contractors and TPUD.¹⁶ Both lines were built in the 1990s and provide
3 experience in building the proposed line.

4 For the current line, the preliminary design work for the proposed line has
5 already been completed by a certified engineering firm. A description of
6 construction activity has also been included with the application. This includes
7 considerations of the workforce, traffic impacts, staging areas, project
8 schedule, equipment, and installation. Staff believes that with TPUD's history of
9 implementing similar projects, the proposed construction plan will lead to
10 effective and efficient construction of the line.

11 **Q. Is the Project practicable without the CPCN?**

12 A. No. Currently, TPUD has not acquired any of the easements necessary to build
13 the transmission line.¹⁷ It has received one signed letter of intent from an
14 affected land owner, out of a total of 32 required permanent easements. Based
15 on landowner responses to the proposed route, a large percentage of the
16 easements may be difficult to obtain without the use of condemnation.¹⁸

17 **Q. Is TPUD able to avoid the need for obtaining land or an interest in land
18 by using an alternate route?**

19 A. No. Assuming necessity of a transmission line, there is no possible route
20 between the starting and ending points that does not cross private lands. The
21 proposed line route alternatives were split into three different segments: east,

¹⁶ Staff/103, TPUD response to Staff DR No.36.

¹⁷ Staff/104, TPUD response to Staff DR No. 18 (a).

¹⁸ TPUD/103, Simmons/3, 5; TPUD/205, Fagen/10, 15.

1 central, and west. For the eastern section, TPUD evaluated three different
2 alternatives, while for the central and western sections TPUD evaluated two
3 each. All of the route segments require at least 47 percent of easements
4 crossing privately-owned lands.¹⁹

5 **Q. Does Staff find that there is no better alternative to construction of the**
6 **transmission line?**

7 A. Yes. As previously mentioned, TPUD examined seven alternative route
8 segments which were divided into the three route sections.

9 Table 1.

Alternative	Cost²⁰(millions)	% Private Land	Total Tax lots	Length²¹
E1	\$1.3	56.1	27	2.29
E2	\$ 1.5	47	27	2.27
E3	\$ 1.4	54.5	30	2.27
C1	\$ 2.9	84.2	21	2.45
C2	\$ 2.6	72.3	17	2.24
W1	\$1.4	100	7	3.74
W2	\$1.9	100	8	4.08

10
11 The table above shows the relative costs, lengths, and customer impacts for
12 each alternative route segment. The utility also considered co-location with
13 existing lines and along roads, number of stream crossings, number of
14 buildings within 200 feet, and visual impacts among others. The route selected
15 is highlighted in bold in the above list. The east and central segments are the

¹⁹ TPUD/205, Fagen/81, see Table 1 for further information.

²⁰ TPUD/205, Fagen/64-70.

²¹ *Ibid.*

1 cheapest alternatives, however, segment E1 has the highest percentage of
2 private land utilization of the three eastern options. The preferred route for the
3 west portion is more expensive than the other option. TPUD chose W2 for a
4 few reasons: 1) this route travels along an existing road for a greater
5 percentage of the distance and has less stream crossing and environmental
6 impact; and 2) two landowners own all of the land located in the west segment
7 and they both stated a preference for W2 as it would have a lower impact on
8 their businesses.²²

9 **Q. Did Staff examine other alternatives beyond the three presented by**
10 **TPUD?**

11 A. Yes, Staff looked for other possible options; however, given the relatively short
12 distance between starting and ending points, along with the geography of the
13 area surrounding the termination points, no other viable alternatives were
14 identified.

15 **Q. What is Staff's recommendation related to practicability?**

16 A. Staff recommends the Commission find that the proposed Project is practicable
17 because it uses a feasible route and can be effectively and efficiently
18 constructed.

²² Stimson Lumber Company and Green Crow Corporation both operate in the timber industry. See TPUD/205, Fagen/16.

JUSTIFICATION**Q. How did Staff evaluate the justification for the proposed project?**

A. Staff utilized the discussion of this standard set forth in Commission Order No. 11-366:

"Justification" means "the act of or instance of justifying." "Justify," in turn, means "to prove or show to be valid, sound, or confirming to fact or reason." Thus, to show that a project is justified, the petitioner must show sufficient reason for the project to be built. To make this determination, we consider the public benefits and costs of the project. Where possible, we rely on benefits and costs that can be quantified in economic terms.²³

In reviewing the justification for the proposed project, Staff attempted to identify if TPUD had provided an acceptable reason for constructing the line. Starting with the assumption that the line is necessary, as Staff finds in its testimony on that issue,²⁴ Staff examined whether the project is justified in the public interest. Staff then reviewed whether TPUD made every attempt to limit the impact on individual customers and comply with the public interest.

Q. Why did Staff not perform a traditional cost/benefit study?

A. A standard measure to identify justification is to perform a cost/benefit study. However, the majority of the benefits of the line are somewhat unquantifiable. Improvements to reliability, reductions in outages, flexibility in serving load and performing maintenance are benefits which are difficult to assign a monetary value, making a cost/benefit study of limited value. Further, there are negative externalities associated with the construction and siting of a transmission line on which it is difficult to place a value. Visual impacts, environmental impacts,

²³ Order No. 11-366 at 4.

²⁴ See Staff/200, Hanhan.

1 traffic resulting from construction, among many other things, could be
2 estimated in terms of a dollar value, but have no concrete cost in a traditional
3 sense. Finally, the traditional accounting costs, which are easily quantified in
4 dollar terms, are not a primary concern for Staff because TPUD is not a rate-
5 regulated investor-owned utility. As a utility district, TPUD is assumed to be
6 acting on the behalf of all of its customers, and any costs that it incurs are the
7 result of actions taken in some sense by the representatives of the customers
8 themselves.²⁵ TPUD is a not for profit entity, with a goal of providing reliable
9 power at cost.²⁶ So while Commission Staff did consider the total costs in its
10 assessment of the practicability of the filing, the cost, though important, does
11 not bear the same importance as it would if TPUD were an investor-owned
12 utility.

13 **Q. Please describe Staff's Cost/Benefit Analysis.**

14 A. The line imposes many costs, namely: increase in customer rates, impact to
15 private property owners including potential loss of land interests, safety
16 concerns, possible loss of land value, and related impacts, impact to natural
17 areas, and construction impacts to the community. However due to the
18 necessity of the line, the consequence of inaction results in loss of power,
19 safety concerns, increases to customer rates, and inability to provide power to
20 new customers. Further, a transmission line will be constructed and operated in
21 compliance with all applicable safety standards. Finally, state land use goals

²⁵ Order No. 17-111 at 5-6.

²⁶ Information available at: <https://www.tpud.org/aboutus/what-is-a-pud/>.

1 contemplate the tradeoff between alternative uses for natural areas and aim to
2 achieve a balance through zoning regulation standards. Staff discusses land
3 use compliance in the following section of my testimony.

4 The benefits of the line include increased reliability, avoidance of safety
5 hazards; it ensures that power is available to future customers, increases
6 flexibility in the system, and reduces outages. These benefits exist for over
7 12,000 customers in the central Tillamook valley.²⁷ Staff finds the benefits
8 outweigh the costs, given that the majority of the impacts can be mitigated.
9 Staff however, believes that in order to justify the use of eminent domain, it is
10 incumbent upon the utility to limit the impacts to the extent possible to those
11 negatively affected by the transmission line.

12 **Q. Does Staff believe this is the best option to fulfill the needs of the TPUD?**

13 A. Yes. In the East segment, E1 is the lowest cost, has the fewest interaction with
14 other private structures, and has limited environmental impact in terms of
15 stream crossings and passage through wetlands. Lastly, the visual impacts of
16 having a transmission line routed along Highway 101 in E3 was unwanted
17 based on public comment.

18 In the central segment, C2 is also the lowest cost and has the smaller impact to
19 wetlands. Further the option has a smaller percentage of private land, and
20 fewer transmission structures so it is preferred over C1.

21 W2 is not the most economical alternative, however a balance between
22 customer and environmental impact and cost must be struck. The additional

²⁷ Staff Exhibit/105, TPUD response to Staff DR. No. 3.

1 cost of selecting W2 over W1 equates to roughly ten cents per month for the
2 average residential customer. As noted earlier, W2 travels along an existing
3 road for a greater percentage of the distance and has less stream crossing and
4 environmental impacts and was also preferred by the land owners that
5 provided input on this issue. Given the added benefits, this added expense is
6 reasonable.

7 **Q. Has TPUD performed due diligence in minimizing the impact to**
8 **customers, businesses, and anyone affected by the proposal?**

9 A. The use of condemnation to place construct overhead transmission lines
10 should be used as a last resort. However, any condemnation proceeding that
11 would follow as a result of the Commission's granting of TPUD's Petition would
12 follow legal standards on compensating landowners for the value of property
13 interests taken due to the placement of the transmission line. Staff is
14 concerned by the lack of support from affected property owners for the
15 proposed transmission line. It points to potential issues with public engagement
16 and collaboration. However, after reviewing the process that TPUD underwent
17 to work with the public, Staff believes that the utility has performed its due
18 diligence. TPUD began with an initial round of contact with every affected
19 landowner who were willing to meet one-on-one.²⁸ TPUD's representative offer
20 at one time to place stakes at the proposed location of the structures for any
21 landowner who was interested as well as adjusted structure placement when

²⁸ Staff Exhibit/106, TPUD Response to Staff DR No. 8.

1 possible to accommodate the wishes of the land owner.²⁹ It formed a citizen's
2 advisory group to better understand the public's point-of-view regarding route
3 selection. They also held several public meetings, including one which was
4 solely for affected landowners.³⁰ Further when siting the poles for the line
5 TPUD attempted to locate poles at the edges of property lines in order to
6 reduce the impact to the land owners.³¹

7 **Q. Does Staff find the proposal justifiable?**

8 A. Yes. Given that the line is necessary, and there is no better alternative, along
9 with the fact that TPUD has attempted to limit the impact to all customers, Staff
10 finds the proposed transmission line justified and is in the public interest.

²⁹ Oral Comment of KC Fagen, TPUD, PUC public comment hearing, November 14, 2017.

³⁰ Staff Exhibit/107, TPUD Response to Staff DR No. 6.

³¹ Staff Exhibit 108, TPUD Response to Staff DR No. 11.

LAND USE PLANNING GOAL COMPLIANCE

Q. What does the Commission require in order to adopt the land use findings described at OAR 860-025-0030(2)?

A. To issue a CPCN, the Commission must adopt findings that a proposed transmission line complies with Statewide Planning Goals and is compatible with the acknowledged comprehensive plan and land use regulations of each local government where the project will be located.³² The available processes for making such findings are set forth in OAR 860-025-0030(3):

“The Commission’s land use findings assuring the proposed project’s goal compliance and plan compatibility shall be based on the hearing record, which shall include at least one of the following:

(a) A copy of the local land use permit from each affected city or county planning agency, building department, or governing body stating that the proposed transmission project has received the jurisdiction’s approval; or

(b) A copy of a letter from each affected local planning agency, building department, or governing body stating that the proposed transmission project is permitted under the jurisdiction’s comprehensive plan, land use regulations, and development codes, but does not require specific approval by the jurisdiction; or

(c) Other written or oral land use information and documentation equivalent to OAR 860-025-0030(3)(a) or (b) above properly presented to the Commission from an authorized representative from each affected city or county; or

(d) Commission goal compliance findings adopted pursuant to OAR 660-030-0065(3) in situations when the Commission is unable to assure Goal compliance by acting compatibly with one or more of the affected comprehensive plans.”

³² OAR 860-025-0030(2).

1 **Q. Has TPUD provided documentation to support findings under**
2 ****OAR 860-025-0030(3)(a), (b), or (c)?****

3 A. Not at this time. TPUD identified two local authorities that have planning
4 jurisdiction over the proposed line: the City of Tillamook, and Tillamook
5 County.³³ To date, no land use permits have been issued by either jurisdiction
6 for the project. Tillamook County requires a conditional use and development
7 permit for the project, for which TPUD has submitted and supplemented its
8 application.³⁴ Staff reserves judgment on this issue as it is possible that
9 Tillamook County will issue a decision on the application while this docket
10 remains pending.

11 Three poles for the proposed line on the proposed route are located in the
12 City of Tillamook, where the line crosses Highway 101.³⁵ Two of the three poles
13 are within a right of way.³⁶ TPUD indicates that the transmission line is an
14 “outright permitted use” under its current franchise agreement that will not
15 require separate land use approval, though a development permit may be
16 required depending on the specific location of some of the poles.³⁷ TPUD has
17 requested written confirmation from the City regarding its position, and received
18 an email consistent with TPUD’s position that indicates a formal statement is
19 forthcoming.³⁸

³³ PCN 2 Petition for a Certificate of Public Convenience and Necessity at 24-25.

³⁴ TPUD/106, Simmons and Exhibit Staff/111.

³⁵ PCN 2 Petition for a Certificate of Public Convenience and Necessity at 25.

³⁶ TPUD/100, Simmons/6.

³⁷ Exhibit Staff/109, Gibbens/2, TPUD Response to DR 43.

³⁸ Exhibit Staff/109, Gibbens/3, TPUD Response to DR 43 (a).

1 **Q. Does TPUD provide adequate support for the Project's goal compliance**
2 **and plan compatibility within Tillamook County?**

3 A. Tillamook County's Comprehensive Plan and related Land Use Ordinance
4 were first acknowledged by the Land Conservation and Development Commission
5 (LCDC) as being in compliance with the Statewide Planning Goals in 1984, and
6 changes to the County's plan and code provisions have since been approved as
7 meeting the statewide planning goals.³⁹ It appears that the proposed line is
8 generally compatible with the County's comprehensive plan and land use
9 ordinance, though permitting remains required.

10 The various zones that the proposed line would impact include: Farm Zone
11 (F-1), Forest Zone (F), Rural Residential 2-acre Zone (RR-2), Rural
12 Commercial Zone (RC), Estuary Natural Zone (EN), Estuary Conservation 1
13 Zone (EC1).⁴⁰ TPUD represents it has conferred with the County to confirm the
14 proposed line is a permitted use in zones F-1 and EC1, subject to certain
15 standards. In the remaining zones, the line is a conditional use.⁴¹ TPUD will
16 need to comply with all County permit requirements before proceeding with
17 construction of the transmission line.

18 **Q. Of the 19 Oregon Statewide Planning Goals, which are relevant to this**
19 **application?**

20 A. Of the State's 19 Statewide Planning Goals, the following are or may be
21 applicable to its petition: Goal 1: Citizen Involvement, Goal 2: Land Use

³⁹ See http://www.oregon.gov/LCD/OCMP/docs/Public_Notice/TillCo_RPCAnalysis_20170222.pdf.

⁴⁰ TPUD/106, Simmons/27.

⁴¹ TPUD/106, Simmons/27-28, 73.

1 Planning and Exceptions, Goal 3: Agricultural Lands, Goal 4: Forest Lands;
2 Goal 5: Open Spaces, Scenic and Historic Areas, and Natural Resources,
3 Goal 6: Air, Water, and Land Resources, Goal 7: Areas Subject to Natural
4 Disasters and Hazards, Goal 8: Recreational Needs, Goal 9: Economy of the
5 State, Goal 11: Public Facilities, Goal 12: Transportation, Goal 13: Energy
6 Conservation, Goal 16: Estuarine Resources and Goal 17: Coastal
7 Shorelands.

8 **Q. What is the aim of Goal 1: Citizen Involvement?**

9 A. It is "To develop a citizen involvement program that insures the opportunity for
10 citizens to be involved in all phases of the planning process."⁴²

11 **Q. How does TPUD assert this Goal is satisfied?**

12 A. TPUD asserts that this Goal will generally be met when local governments
13 follow their public involvement procedures in their acknowledged plans and
14 land use regulations. TPUD notes that the proposed line is being noticed to
15 affected property owners as part of the CPCN process, and that the County
16 land use permitting process causes broader notice and will allow participation
17 by anyone in the county.⁴³

18 **Q. Does Staff agree the project is compatible with this Goal?**

19 A. Yes. Tillamook County is reviewing TPUD's conditional use permit application,
20 which allows for a public hearing and review process that provides for citizen

⁴² Department of Land Conservation and Development's publication, Oregon's Statewide Planning Goals & Guidelines, accessed at <https://www.oregon.gov/LCD/docs/goals/goal01.pdf>, included as Exhibit Staff/110, Gibbens/1.

⁴³ PCN2 Petition for Certificate of Public Convenience and Necessity, at 26.

1 involvement.⁴⁴ In addition to agreeing with TPUD's assertions regarding ways
2 the public can participate, Staff also notes that the CPCN process affords the
3 public the opportunity to attend an open public hearing and affected parties the
4 opportunity to intervene and participate in a contested case.

5 **Q. What is the aim of Goal 2: Land Use Planning and Exceptions?**

6 A. It is "To establish a land use planning process and policy framework as a basis
7 for all decision and actions related to use of land and to assure an adequate
8 factual base for such decisions and actions."⁴⁵ This goal can be met through
9 the application of land use regulations under the conditional use permit
10 process and the process in this proceeding, provided an exception is not
11 required under Part II of Goal 2.

12 **Q. How does TPUD assert this Goal is satisfied?**

13 A. TPUD states that the transmission line will be consistent with the goals and
14 policies in Tillamook County's Comprehensive Plan as it is a necessity to
15 obtaining a conditional use permit. An exception under Goal 2, part II is not
16 necessary, given that the project is generally compatible with the framework of
17 the County's Comprehensive Plan and implementing Land Use Ordinance.
18 Both that process, and the CPCN process are based on a factual record.⁴⁶

19 **Q. Does Staff agree this Goal is satisfied?**

⁴⁴ TPUD/106, Simmons/1; see notice of public hearing available at:
<http://www.co.tillamook.or.us/gov/ComDev/documents/planning/TPUD/851-17-000448-PLNG%2001.09.18%20hearingnotice.pdf>.

⁴⁵ Department of Land Conservation and Development's publication, Oregon's Statewide Planning Goals & Guidelines, accessed at <http://www.oregon.gov/LCD/docs/goals/goal2.pdf>, included as Exhibit Staff/110, Gibbens/5.

⁴⁶ PCN2 Petition for Certificate of Public Convenience and Necessity, at 27.

1 A. Yes, Staff agrees that both processes satisfy the requirements set forth in
2 Goal 2.

3 **Q. What is the aim of Goal 3: Agricultural Lands?**

4 A. "To preserve and maintain agricultural lands."⁴⁷ Agricultural lands are to be
5 generally preserved and maintained for farm use, consistent with existing and
6 future needs. Counties may authorize nonfarm uses that will not have
7 significant adverse effects on accepted farm or forest practices.

8 **Q. How does TPUD assert it has met this Goal?**

9 A. TPUD states that utility facilities are allowed on lands zoned as exclusive farm
10 use (EFU) under certain conditions. By seeking to obtain a Tillamook County
11 conditional use permit it seeks to ensure those standards are met. TPUD
12 located poles and other facilities to the extent possible on the edges of the
13 properties in order to minimize the impact on farming operations. It also
14 conducted a study that determined that the transmission line would have no
15 significant impact on farm practices.⁴⁸

16 **Q. Does Staff agree the project is compatible with this Goal?**

17 A. Tillamook County's Land Use Ordinance allows the construction of electric
18 transmission facilities under 200 feet high that are necessary for public service
19 to be sited in the exclusive farm use zone, consistent with the requirements for

⁴⁷ Department of Land Conservation and Development's publication, Oregon's Statewide Planning Goals & Guidelines, accessed at <http://www.oregon.gov/LCD/docs/goals/goal3.pdf>, included as Exhibit Staff/110, Gibbens/10.

⁴⁸ PCN 2, Petition for Certificate of Public Convenience and Necessity, at 27.

1 utility facilities in such zones as set out in ORS 215.275.⁴⁹ A conditional use
2 permit may be issued if the applicant shows that reasonable alternatives have
3 been considered one or more relevant factors require the siting as proposed.
4 Here, the transmission line follows a route crossing exclusive farm use zoning
5 with transmission towers under 200 feet. TPUD alleges the proposed route is
6 necessary and there is no feasible alternative that does not cross high-value
7 farmland.⁵⁰ Staff finds the conditional use permit process ensures compatibility
8 with this goal.

9 **Q. What is the aim of Goal 4: Forest Lands?**

10 A. The purpose of Goal 4 is "To conserve forest lands by maintaining the forest
11 land base and to protect the state's forest economy by making possible
12 economically efficient forest practices that assure the continuous growing and
13 harvesting of forest tree species as the leading use on forest land consistent
14 with sound management of soil, air, water, and fish and wildlife resources and
15 to provide for recreational opportunities and agriculture."⁵¹ This goal is
16 intended to ensure forest lands are available now and in the future for forest
17 operations. The use of utility rights of way should be maximized before
18 permitting new ones.⁵²

19 **Q. How does TPUD assert it has met this Goal?**

⁴⁹ Available at:

<http://www.co.tillamook.or.us/gov/ComDev/documents/luo/05272015LUO/Section%203.002%20Farm%20Zone%202017.pdf>.

⁵⁰ TPUD/106, Simmons/29-33.

⁵¹ Department of Land Conservation and Development's publication, Oregon's Statewide Planning Goals & Guidelines, accessed at <http://www.oregon.gov/LCD/docs/goals/goal4.pdf>, included as Exhibit Staff/110, Gibbens/12.

⁵²*ibid.*

1 A. TPUD does not address this goal in its petition, but in its conditional use
2 permit application to Tillamook County, TPUD asserts Goal 4 is satisfied
3 given TPUD must comply with the criteria in Tillamook County Land-Use
4 Ordinance 3.004(8) and 6.40, given a utility facility necessary for public service
5 is permitted as a conditional use.⁵³ TPUD asserts it “has made significant
6 efforts to route the proposed Project along existing road corridors through the
7 forest to minimize impacts to surrounding forestlands.”⁵⁴

8 **Q. Does Staff agree the project is compatible with this Goal?**

9 A. The proposed project extends a transmission line 4.2 miles through forest
10 lands in the Tillamook County Forest Zone.⁵⁵ Staff testimony finds the project
11 is necessary and follows a practicable route, and therefore it may be permitted
12 as a conditional use, in compliance with this goal. TPUD’s efforts to minimize
13 impacts to forestlands are also consistent with this goal.

14 **Q. What is the aim of Goal 5: Open Spaces, Scenic and Historic Area, and**
15 **Natural Resources?**

16 A. It is “To protect natural resources and conserve scenic and historic areas and
17 open spaces.”⁵⁶

18 **Q. How does TPUD assert this Goal is satisfied?**

⁵³ TPUD/106, Simmons/79.

⁵⁴ TPUD/106, Simmons/80.

⁵⁵ TPUD/106, Simmons/79.

⁵⁶ Department of Land Conservation and Development’s publication, Oregon’s Statewide Planning Goals & Guidelines, accessed at <http://www.oregon.gov/LCD/docs/goals/goal5.pdf>, included as Exhibit Staff/110, Gibbens/14.

1 A. TPUD has stated that they will obtain the appropriate permits for developing
2 within inventoried significant natural resource areas.⁵⁷

3 **Q. Does Staff agree this Goal is satisfied?**

4 A. Tillamook County's Land Use Ordinance contains provisions that require no
5 more than minimal impacts on fish and wildlife habitat, and on scenic, historic
6 and cultural areas, with additional protections for high value areas. TPUD's
7 proposed line will cross water bodies with riparian buffers, and some removal
8 of vegetation for construction and maintenance will be necessary.⁵⁸ The height
9 and spacing of poles and associated wiring should allow for the passage of
10 resident wildlife.⁵⁹ The Oregon Department of Fish and Wildlife (ODFW) has
11 reviewed TPUD's mitigation plan for riparian areas.⁶⁰ TPUD did not identify
12 any scenic conservation designations, conservancy sites, nor any significant
13 historic, archaeological or cultural resources within or near the project area.⁶¹
14 In light of these measures, Staff anticipates any impacts on wildlife, open
15 spaces and natural resources can be addressed in the conditional use
16 permitting process, and the project is generally compatible with Goal 5.

17 **Q. What is the aim of Goal 6: Air, Water, and Land Resources?**

⁵⁷ PCN 2 Petition for Certificate of Public Convenience and Necessity, at 27-28.

⁵⁸ TPUD/106, Simmons/81.

⁵⁹ TPUD/106, Simmons/80.

⁶⁰ Exhibit Staff/111, Letter from ODFW to Tillamook County Planning Department, TPUD Response to Staff DR No. 44.

⁶¹ TPUD/106, Simmons/82-83.

1 A. It is “To maintain and improve the quality of the air, water and land resources
2 of the state.”⁶²

3 **Q. How does TPUD assert this Goal will be met?**

4 A. TPUD notes that little or no waste or material discharge will occur as a result
5 of the transmission line’s operation, though it does cross water bodies,
6 including wetlands and riparian areas. The Tillamook County Land Use
7 Ordinance establishes criteria for the protection of riparian areas. TPUD will
8 seek to obtain permits as necessary from applicable federal and state
9 environmental standards, including those necessary to protect air and water
10 quality.⁶³

11 **Q. Does Staff agree TPUD has met this Goal?**

12 A. Yes, TPUD commits in its petition to comply with all applicable statutes,
13 regulations and standards, and has submitted its conditional use permit
14 application as required, which indicates TPUD is acting in compliance with this
15 goal.⁶⁴

16 **Q. What is the aim of Goal 7: Areas Subject to Natural Disasters and**
17 **Hazards?**

⁶² Department of Land Conservation and Development’s publication, Oregon’s Statewide Planning Goals & Guidelines, accessed at <http://www.oregon.gov/LCD/docs/goals/goal6.pdf>, included as Exhibit Staff/110, Gibbens/17.

⁶³ PCN 2, Petition for Certificate of Public Convenience and Necessity at 28.

⁶⁴ PCN 2, Petition for Certificate of Public Convenience and Necessity, at 28; TPUD/106, Simmons/84.

1 A. It is “To protect people and property from natural hazards.”⁶⁵ For the purposes
2 of Goal 7, “natural hazards” refers to floods (coastal and riverine), landslides,
3 earthquakes and related hazards, tsunamis, coastal erosion, and wildfires.⁶⁶
4 Such hazards should be identified and an assessment made as to whether the
5 risk to the public can be mitigated.

6 **Q. How does TPUD assert this Goal will be met?**

7 A. Although the project may be located through geologic hazard areas, TPUD
8 believes it has taken the necessary steps to ensure that the risks have been
9 avoided and mitigated. TPUD worked with an engineering firm – TriAxis – to
10 select a route that parallels existing access roads, wherever possible, where it
11 crosses the industrial forest and steeper topography. Further, it has selected
12 pole locations which avoid known or suspected landslide zones. Finally, the
13 support pole types and support pole foundations will be selected to safely
14 support the line and maintain the overall integrity of the project.⁶⁷

15 **Q. Does Staff agree TPUD has met this Goal?**

16 A. Yes, TPUD has taken steps to identify natural hazards in the project area, and
17 to design and locate the project in a manner that is consistent with applicable
18 construction standards for the location and that minimizes any potential impact
19 from landslides, which is consistent with Goal 7.

⁶⁵ Department of Land Conservation and Development’s publication, Oregon’s Statewide Planning Goals & Guidelines, <http://www.oregon.gov/LCD/docs/goals/goal7.pdf>, included as Exhibit Staff/110, Gibbens/19.

⁶⁶ *Ibid.*

⁶⁷ PCN 2, Petition for Certificate of Public Convenience and Necessity, at 28-29; TPUD/106, Simmons/84-85.

1 **Q. What is the aim of Goal 8: Recreational Needs?**

2 A. It is "To satisfy the recreational needs of the citizens of the state and visitors
3 and, where appropriate, to provide for the siting of necessary recreational
4 facilities including destination resorts."⁶⁸

5 **Q. How does TPUD assert this Goal has been satisfied?**

6 A. TPUD states that the proposed line will not have any material impact on
7 recreational opportunities in and around the area that will be developed.⁶⁹

8 **Q. Does Staff agree the project is compatible with this Goal?**

9 A. Yes. Co-location among other transmission lines and long right-of-ways, as is
10 proposed, limits the impact to recreational activities. Staff does not foresee the
11 proposed project having an impact on recreational opportunities in the area.

12 **Q. What is the aim of Goal 9: Economy of the State?**

13 A. It is "To provide adequate opportunities throughout the state for a variety of
14 economic activities vital to the health, welfare, and prosperity of Oregon's
15 citizens."⁷⁰

16 **Q. How does TPUD assert this Goal has been satisfied?**

17 A. TPUD states that the Transmission Line will increase reliability of electric
18 service in the area and support future economic growth by commercial and
19 industrial loads.⁷¹

⁶⁸ Department of Land Conservation and Development's publication, Oregon's Statewide Planning Goals & Guidelines, accessed at <http://www.oregon.gov/LCD/docs/goals/goal8.pdf>, included as Exhibit Staff/110, Gibbens/21.

⁶⁹ PCN 2, Petition for Certificate of Public Convenience and Necessity, at 29.

⁷⁰ Department of Land Conservation and Development's publication, Oregon's Statewide Planning Goals & Guidelines, accessed at <http://www.oregon.gov/LCD/docs/goals/goal9.pdf>, included as Exhibit Staff/110, Gibbens/29.

⁷¹ PCN 2, Petition for Certificate of Public Convenience and Necessity, at 29.

1 **Q. Does Staff agree the project is compatible with this Goal?**

2 A. Yes. Staff agrees with TPUD's assertions, and notes that the construction of
3 the Project itself is also a positive economic activity.

4 **Q. What is the purpose of Goal 11: Public Facilities and Services?**

5 A. The purpose of this goal is "To plan and develop a timely, orderly and efficient
6 arrangement of public facilities and services to serve as a framework for urban
7 and rural development."⁷² Public services should to be planned in accordance
8 with a community's needs and capacities rather than forcing a community to
9 respond to development as it occurs.

10 **Q. How does TPUD assert this Goal has been satisfied?**

11 A. TPUD states that the project is a more efficient arrangement of facilities and
12 will allow for continued development and growth in the project area and will
13 support additional growth in TPUD's service area in the Tillamook Valley.⁷³

14 **Q. Does Staff agree the project is compatible with this Goal?**

15 A. Yes. Development of a transmission line along an existing transmission
16 corridor and adjacent to the right of way is consistent with the goal. This
17 proposal will not limit or burden essential public facilities, such as sewer
18 facilities.

19 **Q. What is the purpose of Goal 12?**

⁷² Department of Land Conservation and Development's publication, Oregon's Statewide Planning Goals & Guidelines, accessed at <http://www.oregon.gov/LCD/docs/goals/goal11.pdf>, included as Exhibit Staff/110, Gibbens/31.

⁷³ PCN 2, Petition for Certificate of Public Convenience and Necessity, at 30; TPUD/106, Simmons/87.

1 A. The purpose of this goal is “To provide and encourage a safe, convenient and
2 economic transportation system.”⁷⁴

3 **Q. How does TPUD assert this Goal has been satisfied?**

4 A. TPUD does not address this goal in its petition, but states in its conditional use
5 permit application that it will construct and operate the project in a manner
6 consistent with Tillamook County’s adopted Transportation System Plan, to
7 maintain consistency with the County’s Land Use Plan.⁷⁵

8 **Q. Does Staff agree the project is compatible with this Goal?**

9 A. Staff finds the proposal is generally compatible with this goal. TPUD indicates
10 that it will stage construction to minimize impacts at any particular site, and
11 work in the right of way.⁷⁶ Further the majority of the project occurs in more
12 remote areas outside of most transportation concerns.⁷⁷ Staff finds the
13 proposal is generally compatible with this goal.

14 **Q. What is the aim of Goal 13: Energy Conservation?**

15 A. It is “To conserve energy.”⁷⁸ This goal prioritizes maximum efficiency in energy
16 utilization.

17 **Q. How does TPUD assert this Goal is satisfied?**

⁷⁴ Department of Land Conservation and Development’s publication, Oregon’s Statewide Planning Goals & Guidelines, accessed at <http://www.oregon.gov/LCD/docs/goals/goal12.pdf>, included as Exhibit Staff/110, Gibbens/34.

⁷⁵ TPUD/106, Simmons/88.

⁷⁶ TPUD /106, Simmons/15.

⁷⁷ *Ibid.*

⁷⁸ Department of Land Conservation and Development’s publication, Oregon’s Statewide Planning Goals & Guidelines, accessed at <http://www.oregon.gov/LCD/docs/goals/goal13.pdf>, included as Exhibit Staff/110, Gibbens/36.

1 A. The Transmission line conserves energy by utilizing a relatively straight, short
2 path. This limits line losses and uses less materials than a longer route. The
3 selected route also limits parcelization of land, thereby retaining the efficient
4 use of the properties it crosses.⁷⁹

5 **Q. Does Staff agree the Project is compatible with this Goal?**

6 A. Yes. Short, direct routes are consistent with energy conservation principles.
7 In addition, higher voltage lines, such as is proposed, result in a smaller
8 amount of line losses.

9 **Q. What is the purpose of Goal 16: Estuarine Resources?**

10 A. The purpose of this goal is: "To recognize and protect the unique
11 environmental, economic, and social values of each estuary and associated
12 wetlands; and To protect, maintain, where appropriate develop, and where
13 appropriate restore the long-term environmental, economic, and social values,
14 diversity and benefits of Oregon's estuaries."⁸⁰

15 Under the DLCD's guidelines, where consistent with resource capabilities of
16 the area and purposes of the management unit, utility crossings may be
17 allowed in estuaries. The impact on water quality, species, habitat, biological
18 productivity must be evaluated, and whether the resource can continue to
19 function and assimilate the effects of development.

20 **Q. How does TPUD assert this Goal has been satisfied?**

⁷⁹ PCN 2, Petition for Certificate of Public Convenience and Necessity at 30.

⁸⁰ Department of Land Conservation and Development's publication, Oregon's Statewide Planning Goals & Guidelines, accessed at <http://www.oregon.gov/LCD/docs/goals/goal16.pdf>, included as Exhibit Staff/110, Gibbens/37.

1 A. TPUD states that its project, though a non-water use, will not alter, reduce or
2 degrade estuarine resources and values.⁸¹

3 **Q. Does Staff agree the project is compatible with this Goal?**

4 A. Yes, TPUD is taking steps that will prevent degradation of this resource,
5 consistent with this goal.

6 **Q. What is the purpose of Goal 17: Coastal Shorelands?**

7 A. This goal is for the purpose of conserving, protecting, restoring and
8 developing, as appropriate, coastal shorelands and their benefits.⁸² The
9 coastal shorelands planning area includes:

10 "All lands west of the Oregon Coast Highway as described in
11 ORS 366.235, except that:

12 (a) In Tillamook County, only the lands west of a line formed by
13 connecting the western boundaries of the following described roadways:
14 Brooten Road (County Road 887) northerly from its junction with the
15 Oregon Coast Highway to Pacific City, McPhillips Drive (County Road
16 915) northerly from Pacific City to its junction with Sandlake Road
17 (County Road 871), Sandlake-Cape Lookout Road, (County Road 871)
18 northerly to its junction with Cape Lookout Park, Netarts Bay Drive
19 (County Road 665) northerly from its junction with the Sandlake-Cape
20 Lookout Road (County Road 871) to its junction at Netarts with State
21 Highway 131, and northerly along State Highway 131 to its junction with
22 the Oregon Coast Highway near Tillamook."⁸³

23
24 Major resources within this area must be protected. Non-water dependent
25 uses that involve minimal capital and no permanent structures may be
26 permitted in the area. Other non-water dependent uses may be allowed for
27 development or transportation needs.

⁸¹ PCN 2, Petition for Certificate of Public Convenience and Necessity at 31; TPUD/106, Simmons/88.

⁸² Department of Land Conservation and Development's publication, Oregon's Statewide Planning Goals & Guidelines, accessed at <http://www.oregon.gov/LCD/docs/goals/goal17.pdf>, included as Exhibit Staff/110, Gibbens/45.

⁸³ *Id* at 2.

1 **Q. How does TPUD assert this Goal has been satisfied?**

2 A. TPUD states that it has designed the project to span over shoreland areas to
3 avoid or minimize impacts, consistent with this goal.⁸⁴

4 **Q. Does Staff agree the project is compatible with this Goal?**

5 A. TPUD proposes to construct eight power poles within Tillamook County's
6 shoreland overlay zone, but represents the area is not designated as major or
7 significant.⁸⁵ Staff agrees that it is necessary for the project to cross these
8 areas, but that the impact is minimal.

9 **Q. Does Staff agree with UEC's assessment that the remaining goals are not**
10 **applicable to this Project?**

11 A. Yes, Staff agrees these goals are not applicable to this petition: Goal 10:
12 Housing, Goal 14: Urbanization, Goal 15: Willamette River Greenway,
13 Goal 18: Beaches and Dunes, Goal 19: Ocean Resources. Staff reviewed the
14 remaining goals and finds, to the extent they are relevant, and that issuance of
15 a CPCN is compatible with these goals.

⁸⁴ PCN 2, Petition for Certificate of Public Convenience and Necessity at 31.

⁸⁵ TPUD/106, Simmons/88.

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CONCLUSION

Q. Please summarize Staff's findings in regards to practicability, justification, and compliance with land use planning goals.

A. Staff finds that the proposed transmission line is practicable in the public interest, i.e., that it is feasible and will be constructed in an efficient and effective manner. Further, the line is justified, in that it is in the public interest to construct the line because the proposal satisfies the need to provide safe and reliable power at the least cost and impact to customers with minimal impact to the public. Finally, Staff finds that the project will comply with state land use planning goals and is compatible with local land use planning regulations.

Q. What is Staff's recommendation?

A. Staff recommends that the Commission find the proposed transmission line justified, practicable, and in compliance with the public interest.

Q. Does this conclude your testimony?

A. Yes.

CASE: PCN 2
WITNESS: SCOTT GIBBENS

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 101

Witness Qualifications Statement

February 7, 2018

WITNESS QUALIFICATION STATEMENT

NAME: Scott Gibbens

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Economist
Energy Rates, Finance and Audit

ADDRESS: 201 High St. SE Ste. 100
Salem, OR 97301-3612

EDUCATION: Bachelor of Science, Economics, University of Oregon
Masters of Science, Economics, University of Oregon

EXPERIENCE: I have been employed at the Oregon Public Utility Commission (Commission) since August of 2015. My current responsibilities include analysis and technical support for electric power cost recovery proceedings with a focus in model evaluation. I also handle analysis and decision making of affiliated interest and property sale filings, rate spread and rate design, as well as operational auditing and evaluation. Prior to working for the OPUC I was the operations director at Bracket LLC. My responsibilities at Bracket included quarterly financial analysis, product pricing, cost study analysis, and production streamlining. Previous to working for Bracket, I was a manager for US Bank in San Francisco where my responsibilities included coaching and team leadership, branch sales and campaign oversight, and customer experience management.

CASE: PCN 2
WITNESS: SCOTT GIBBENS

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 102

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

STAFF DR TO TPUD NO. 5

Please see Tillamook PUD/100, Simmons/5, which states “As described in my testimony and in the testimony of Mr. Fagen, the proposed Transmission Line will provide many benefits to Tillamook PUD and its customer and will allow Tillamook PUD to continue to meet its obligation to provide safe and reliable service throughout its territory.” Does TPUD assert that, absent this line, it will no longer be able to provide safe and reliable service? If TPUD's response is yes, please explain the point at which it will no longer be able to provide safe and reliable service and what alternative steps would need to be taken if the transmission line is not constructed.

TPUD RESPONSE

TPUD asserts that it is currently not able to provide reliable service to the customers of Netarts/Oceanside served by Feeder W51. Feeder W51 already has two sets of voltage regulators, and at times has had a third set in order to maintain voltage levels within ANSI and Oregon limits. Further, TPUD crews cannot work on sections of the distribution line serving Netarts/Oceanside under energized conditions due to the brittle condition of the 50 plus year-old conductor. To make conditions safe while performing maintenance on this section of the feeder, TPUD must de-energize the circuit, interrupting service to approximately 1,600 of the 1,750 customers on the circuit. TPUD is monitoring the line conditions for any increase in the frequency of conductor failures during the operation of the line. If there is an increase, TPUD will have to determine if the line is in such a condition that the line cannot be operated safely. If this occurs, then TPUD will declare an emergency condition and secure outside crews to rapidly

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

rebuild about two miles of line. In addition, TPUD will likely have to rent a 10MW generator to serve the 1,600 customers during the estimated 4 to 6 week timeframe to rebuild this section of the feeder. If the Oceanside transmission line is constructed prior to any increased failure rates, the emergency declaration can be avoided as there will be a new power source to the 1,600 customers that is not dependent on Feeder W51. With the proposed new transmission line in service, the rebuild can be performed under normal conditions and avoid extra costs that would be incurred using outside crews, overtime rates, and the rental of 10MW generator.

CASE: PCN 2
WITNESS: SCOTT GIBBENS

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 103

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

STAFF DR TO TPUD NO. 36

Please provide a narrative background of the Nehalem and Nestucca transmission line construction projects.

TPUD RESPONSE

The Nehalem 115kV transmission line extends from PacifiCorp's 115kV Sugar Loaf transmission line about 3 miles north of the City of Nehalem, Oregon along the North Fork Road. The transmission line extends radially for 4.4 mile to TPUD's Nehalem distribution substation. The transmission line crosses farms, timber lands, and waterways, and traverses along county roads. The project was designed and construction management was performed by TPUD staff and was constructed by a contractor. The primary structures are wood 1, 2, and 3 pole structures, and there is a steel self-supporting pole at the tap from PacifiCorp's transmission line. There is a motor operated switch at the tap pole off of PacifiCorp's transmission line and a manually operated switch owned and operated by TPUD one structure from the tap. The transmission line was constructed and energized in the mid 1990's. TPUD workforces have been operating and performing routine maintenance on the line.

The Nestucca transmission line extends from BPA's 115kV Boyer transmission line next to TPUD's Hebo distribution substation, located 1.6 miles east of the town of Hebo, Oregon along Cedar Creek Road. The transmission line extends radially for 5.8 miles to TPUD's Nestucca distribution substation. The transmission line crosses farms, timber lands, near residential homes, and traverses along county and state roads. The project was designed and most of the line was constructed by contractors. TPUD construction crews constructed portions of the line. The primary structures are wood 1, 2, and 3 pole structures. There is a manually operated switch owned and operated by TPUD at the tap pole off of BPA's transmission line. The transmission line was constructed and energized in the late 1990's. TPUD workforces have been operating and performing routine maintenance on the line, including pole and insulator replacements.

CASE: PCN 2
WITNESS: SCOTT GIBBENS

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 104

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

Staff/104
Gibbens/1

STAFF DR TO TPUD NO. 18

Please see Tillamook PUD/205, Fagen 25, at which meeting notes from a June 23, 2015 Citizen Advisory Group meeting state “[Bart Mizee] said that he is interested to know whether the Tillamook PUD has received a warm welcome from any landowners that were noticed that the preferred proposed route/segment options might cross their property. We are forced to consider how our family, employees and cattle will continue their farming if this line is built. How can their farm continue to operate and what assurances are there that any future problems will be addressed? He mentioned that he is particularly concerned about stray voltage with their animals. He has no interest in pursuing litigation in the future and wants to know how the Tillamook PUD will work with his family to make sure that issues are addressed and resolved.”

- a. Please state how many landowners have provided an easement for the proposed transmission line. This is an ongoing request.
- b. Please explain whether or not the proposed line may restrict the ability of any agricultural property owners affected by the proposed route to continue farming the same acreage in a substantially similar way to their present practices;
- c. What is TPUD's understanding of Mr. Mizee's concern of stray voltage affecting animals? Please explain whether or not TPUD agrees that this is a valid concern.
- d. Does TPUD intend to work with all affected landowners to make sure issues with construction and operation of the transmission line are timely addressed and resolved? If so please describe TPUD's relevant policies and procedures. Please provide a comparison of TPUD's customer satisfaction record to its peers based on survey data or similar.

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

TPUD RESPONSE

a) TPUD has not requested easements at this time due to the uncertainty of the permits to be issued and given the history of siting this transmission line. A letter of intent was sent to each property owner in which TPUD asked the property owner for their agreement to terms for an easement and made them a monetary offer for the easement. One land owner has signed the letter of intent. TPUD has received permits from ODOT and the County roads for the portions of the line that would encroach or be placed on road right-of-way. In addition, TPUD has received notification from the State of Oregon and the Federal Aviation Administration indicating that the transmission line does not interfere with any air or heliports in the area. TPUD has also received permits from the US Army Corp of Engineers with stipulations of completing the water quality permit.

b) As part of the land use approval process, TPUD commissioned a Farm Impact Assessment to analyze whether the line would result in significant impacts to farm or forest practices. Below is an excerpt from the report:

5 FARM USE ASSESSMENT SUMMARY

There are numerous dairy farms throughout the area that have power lines that cross them or are adjacent to them. The original electrification to these farms many years ago resulted in the automation of many dairy operations. There are now many power transmission facilities in the area and the dairy industry is still the dominant farm use in Tillamook County. Based upon our review of the project and examination of dairy farm practices, the likelihood of significant diverse impacts to accepted farm practices in the area appears nonexistent. Our professional

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

opinion is that the proposed 115Kv Project will not significantly impact farm practices in the area nor is it likely to increase the cost of such practices.

c) The dairy industry has experienced issues with stray voltage and cattle due to the harsh and corrosive environment of housing cattle indoors. In Tillamook County, TPUD is aware of incidents where cattle have been electrocuted. When investigated by TPUD and its insurance company, all incidents were determined to be a result of improperly grounded equipment within the property owner's facilities. There have not been any issues that TPUD is aware of where near-by power lines have caused stray voltage issues, which would be the condition applicable to the transmission line project as it does not directly serve (connect) to any customer facility. A complete copy of the Farm Impact Assessment is included as Exhibit TPUD-Staff-DR18c.

d) Yes, when entering private land to perform construction or maintenance, TPUD notifies the property owner that it will be entering their property, explains what work will be performed, and how long the work will take. TPUD often has to schedule maintenance activities to coincide with the property owner's activities so that TPUD is not driving over crops or damaging on-going farming operations. There are two scenarios where TPUD would not necessarily contact the property owner first: 1) 10-year inspections where TPUD drives a pick-up truck or walks to a pole; or 2) when performing emergency repairs where access is alongside existing roadways. In either scenario, TPUD attempts to contact the property owners first as a courtesy.

CASE: PCN 2
WITNESS: SCOTT GIBBENS

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 105

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

Staff/105
Gibbens/1

STAFF DR TO TPUD NO. 3

Please see Tillamook PUD/100, Simmons/3, which states “The customers who will benefit from the Transmission Line are diverse and include residential, small commercial, large commercial, industrial, water and sewer districts, and irrigation uses. Please provide the following:

- a. Count of customers by class;
- b. Average load by class; and
- c. Location, i.e. whether the class would be served by the proposed 24.9 kV transmission line or elsewhere on the system.

TPUD RESPONSE

The customers that will benefit from the transmission line and substation include all of TPUD's customers within the central Tillamook valley, which are currently being served by TPUD's Garibaldi, Wilson 1, Wilson 2, and Trask substations. Attached as Exhibit TPUD-Staff-DR3 is a breakdown of customer classes for the impacted area as well as a breakdown by those to be directly served by the Oceanside substation under normal operating conditions.

Attachment to Exhibit 105

Is an Excel spreadsheet

(Provided in electronic format)

TILLAMOOK PUD - AVERAGE ANNUAL KWH BY RATE CLASS

Entire Service Territory

December 2016 to November 2017

RATE CLASS	TOTAL ANNUAL KWH	QTY CUSTOMERS	AVG ANNUAL KWH BY CLASS
12 - Residential Seasonal	62,479,117	7,250	8,618
13 - Residential	187,044,907	12,212	15,316
21 - Residential Irrigation	8,503	7	1,215
22 - Small Commercial Irrigation 1P	8,493	2	4,247
23 - Small Commercial Drain Pump 3P	61,093	2	30,547
25 - Small Commercial Irrigation 3P	887,303	77	11,523
27 - Small Commercial Manure Pump 3P	12,422	6	2,070
30 - Small Commercial < 100 KW 3P	43,431,110	647	67,127
31 - Small Commercial < 100 KW 1P	40,446,739	1,442	28,049
32 - Medium Commercial 100-350 KW	28,182,936	88	320,261
33 - Large Commercial 350-1000 KW	10,893,960	9	1,210,440
34 - Large Power Commercial > 1000 KW	109,654,709	17	6,450,277
61 - TPUD - Interdepartmental	942,127	12	78,511
TOTALS	484,053,419	21,771	

TILLAMOOK PUD - AVERAGE ANNUAL KWH BY RATE CLASS

Benefit Area - WILSON, TRASK, GARIBALDI SUBSTATIONS

December 2016 to November 2017

RATE CLASS	TOTAL ANNUAL KWH	QTY CUSTOMERS	AVG ANNUAL KWH BY CLASS
12 - Residential Seasonal	23,847,029	2,982	7,997
13 - Residential	122,355,052	7,904	15,480
21 - Residential Irrigation	7,908	2	3,954
22 - Small Commercial Irrigation 1P	8,493	2	4,247
25 - Small Commercial Irrigation 3P	372,628	41	9,088
30 - Small Commercial < 100 KW 3P	30,895,015	469	65,874
31 - Small Commercial < 100 KW 1P	25,211,985	860	29,316
32 - Medium Commercial 100-350 KW	22,631,096	71	318,748
33 - Large Commercial 350-1000 KW	10,303,720	7	1,471,960
34 - Large Power Commercial > 1000 KW	109,654,709	17	6,450,277
61 - TPUD - Interdepartmental	824,358	7	117,765
TOTALS	346,111,993	12,362	
% of Total System	72%	57%	

TILLAMOOK PUD - AVERAGE ANNUAL KWH BY RATE CLASS
OCEANSIDE, NETARTS, WHISKEY CREEK

FEEDER 51 - PAST STATION 2 02 10 04 5402

December 2016 to November 2017

RATE SCHEDULE	ANNUAL KWH	QTY CUSTOMERS	AVG ANNUAL KWH BY CLASS
12 - Residential Seasonal	7,435,100	812	9,157
13 - Residential	10,987,493	759	14,476
30 - Small Commercial < 100 KW 3P	289,741	12	24,145
31 - Small Commercial < 100 KW 1P	2,442,104	53	46,077
32 - Medium Commercial 100-350 KW	1,537,240	3	512,413
TOTALS	22,691,678	1,639	

% of Total System 4.7% 7.5%

CASE: PCN 2
WITNESS: SCOTT GIBBENS

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 106

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

STAFF DR TO TPUD NO. 8

Please see Tillamook PUD/103, Simmons/3, at which the TPUD board meeting minutes state, "There was no personal notification to property owners when staff presented the route to the Board at the November Board Meeting."

- a. Is this statement accurate?
- b. If so, was any type of notification provided to potentially impacted property owners?

TPUD RESPONSE

a) TPUD does not agree with Mr. Mizze's statement. All property owners that were willing to meet with TPUD one-on-one, which included Mr. Mizze, were personally notified of the upcoming meetings, which including the three Board workshops, that TPUD staff would be making a recommendation at the regularly scheduled November Board meeting, and that the Board would be making a final decision at the December Board meeting. The Next Steps slide that was presented at the three public Board workshops reiterated this information as well. See TPUD/205, Fagen/91.

b) In addition, TPUD advertised the agenda of the November Board meeting as it always does for each Board meeting, which included the presentation of the route recommendation.

CASE: PCN 2
WITNESS: SCOTT GIBBENS

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 107

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

STAFF DR TO TPUD NO. 6

Please see Tillamook PUD/103, Simmons/3, at which the TPUD board meeting minutes state, “[Kurt Mizze] felt that there should have been one meeting with only the landowners that would be directly impacted.” Please indicate whether or not there was a meeting with only the directly affected landowners, and if not, explain why not.

TPUD RESPONSE

There were at least two series of meetings that were designated for land owners whom would be directly impacted.

First, from August through September of 2016, TPUD staff KC Fagen, Barb Johnson, and Terry Blanc met individually with each land owner that would agree to meet to discuss easements that were being considered. Those meetings did not result in a consensus from property owners regarding optional routes. During those discussions, each property owner selected the route that kept the transmission line farthest from their property.

Second, there were two public workshop meetings scheduled in the fall of 2016 that were focused on determining the final route selection based on TPUD's Decision Table information. The first meeting was on October 13, 2016 where the focus was the general public. The second meeting on October 17, 2016 was focused on the affected property owners where easements would be needed. A final public meeting was held on October 25, 2016 where the results of the Decision Table were presented. With few exceptions, the meetings of TPUD's Board are open to the public. While TPUD advertised and expressed that one meeting was for the general public

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

and the second meeting was for affected property owners, there were a few general public members who participated in the land owner workshop and a few property owners who participated in the general public workshop.

CASE: PCN 2
WITNESS: SCOTT GIBBENS

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 108

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

STAFF DR TO TPUD NO. 11

Please see Tillamook PUD/103, Simmons/5, at which the TPUD board meeting minutes state, “[Mizee responded that they] currently have two sets of lines running across their property and the transmission line would add a third.” Please explain how the concentration of lines on specific property owners’ lands enters into the calculus of line route planning. Specifically address:

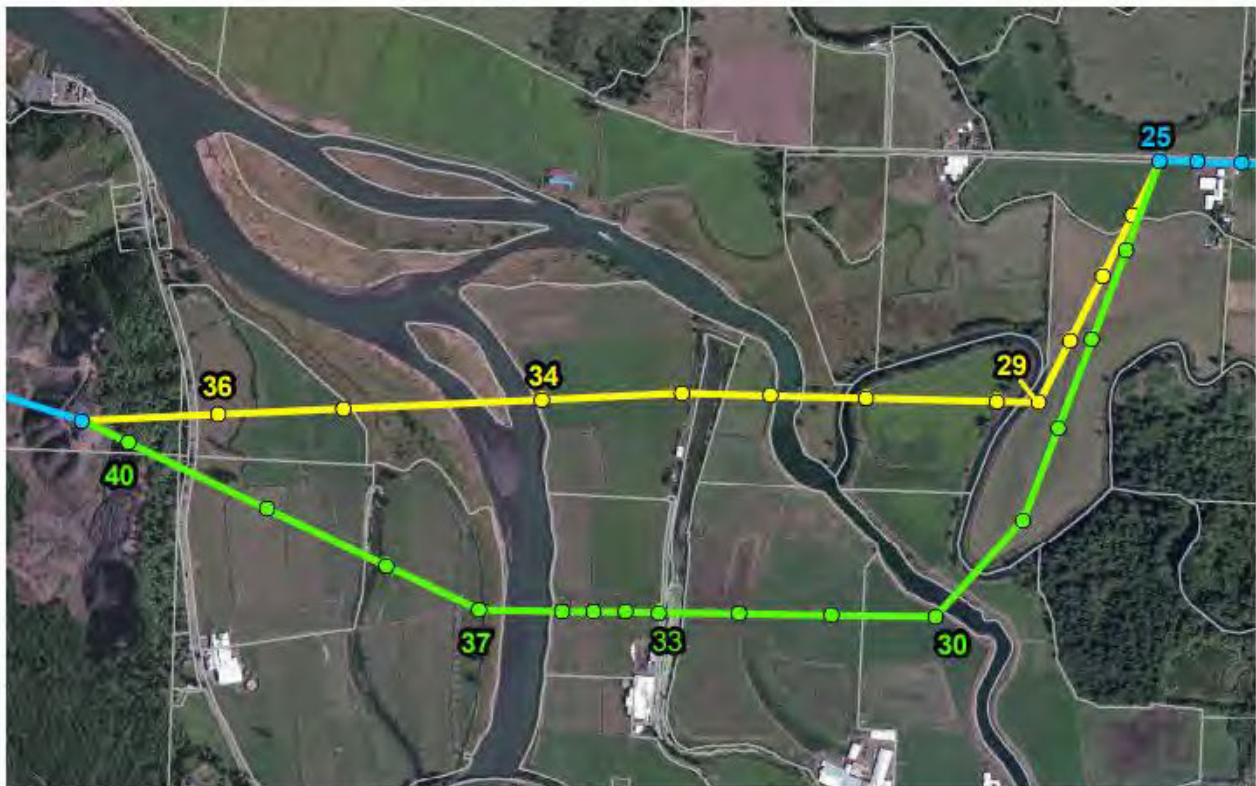
- a. Whether the number of lines affects siting on the property or construction.
- b. Whether the line will be added to existing structures in the same right of way. And if not, does the line limit or reduce the landowners’ use of their property?
- c. What is the remaining available use for each affected parcel of land?

TPUD RESPONSE

a) The number of existing TPUD facilities on properties is always a factor to be considered. This metric of co-lineation was used in the Decision Table process, see TPUD/205, Fagen/85. The existing distribution lines on the Mizee property serve both their facilities and local pumping stations/wells on the Mizee property and on neighboring properties. The original transmission route through the Mizee property was located such that it would be located over a few short spans of a tap off the existing distribution line (about 800 feet). This route would have added on a third of a mile to the overall transmission line route at a cost of about \$200,000. More importantly, three farms would have had more poles on their property, where some of the poles would have been in the middle of the farm property, including the Mizee property, as compared

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

to the final route selected. See the figure below for the original routes in the Central area of the proposed project from testimony TPUD/205, Fagen/7. The final route has placed all poles at the edge of farm properties, no poles in the middle of farm properties, and only one location where a pole is located about 20 feet from the edge of the farm property (location 29 in the figure below). The co-location with the existing distribution line would have been for structures 33-36 along the southern route shown in green.



b) Yes, where possible TPUD has co-located the transmission line with existing distribution facilities. In the Central section of the route, the route that had a potential for co-location of existing distribution lines (shown in green in the figure above) would have co-located approximately 800 feet of the transmission line on the Mizze property with an existing

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

distribution line, which would have had added two additional transmission structures to the Mizze property (though co-located with existing distribution), one structure to the neighboring Peterson property, one structure on the Rocha property, and one structure (structure 30 in the figure above) to the Marolf property which otherwise would not have any transmission line or structures on their property.

c) Because TPUD intends that the farm property owners are able to continue to farm their property under the transmission line and next to the transmission line structures, nearly the entire property is still usable for farming and agriculture. This, too, was a metric used in the Decision Table process. See TPUD/205, Fagen/86.

CASE: PCN 2
WITNESS: SCOTT GIBBENS

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 109

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

STAFF DR TO TPUD NO. 43

Regarding TPUD/100, Simmons/6, specifically in reference to: “the location of the Transmission Line within the City’s limits is governed by a Franchise Agreement between the City and Tillamook PUD, which the City has confirmed.”

- a. Please provide a copy of the city’s confirmation, if it was provided in writing.
- b. If the city’s confirmation is not in writing, please provide the name of the city representative TPUD contacted and date that the representative provided confirmation.
- c. Please confirm whether or not any land use review is required for the three poles proposed to be located within the City of Tillamook.
- d. Please provide a copy of the franchise agreement between TPUD and the City of Tillamook.

TPUD RESPONSE

- a. The City’s initial confirmation was not in writing and occurred during a conversation regarding easements and permits needed from the City for the existing route where it crosses through the city limits. Prompted by this data request, TPUD has since requested confirmation from the City in writing and will update this response when it receives written confirmation. Attached as Exhibit TPUD-Staff DR43a is a copy of the request made to the City and the City’s initial response.

- b. Please refer to Exhibit TPUD-Staff DR43a provided in response to subsection (a) above for the City contact information. The initial discussion with the City in which it provided confirmation was on or about September 9, 2016.
- c. Based on the City's confirmation referred to in the data requests and responses in subsections (a) and (b) above, the transmission line is an outright permitted use and will not require separate land use approval from the City. However, depending on the specific location of some of the poles, a development permit may be required. For example, if a pole is located in an area within the City mapped as a floodplain hazard area, TPUD will have to demonstrate that the placement of the pole will be consistent with the City's floodplain development regulations. TPUD may have to obtain other permits allowing construction activities in City streets.
- d. Please see Exhibit TPUD-Staff DR43d.

KC Fagen

From: Paul Wyntergreen <pwyntergreen@tillamookor.gov>
Sent: Tuesday, January 23, 2018 2:33 PM
To: KC Fagen
Cc: Melissa Jenck
Subject: Re: City of Tillamook/PUD Franchise Agreement

I will have our planner, Melissa, provide you with something formal. She and I have discussed the provision in the code that defers to the franchise agreement for improvements in the right-of-way. She can also provide the permitted outright interpretation for those portions that cross zoned property outside the right-of-way.

Paul Wyntergreen
City Manager
City of Tillamook
210 Laurel Avenue
Tillamook, OR 97141
(503) 842-2472 Ext. 3460
FAX (503) 842-3445
Email: pwyntergreen@tillamookor.gov

From: KC Fagen <kcfagen@tpud.org>
Date: Tuesday, January 23, 2018 at 2:25 PM
To: Paul Wyntergreen <pwyntergreen@tillamookor.gov>
Subject: City of Tillamook/PUD Franchise Agreement

Paul;
I got a strange question from the PUC regarding the transmission line. They are asking for a written documentation that the transmission line is allowed outright by the Franchise Agreement. I know you and I have discussed this issue have concurred this is the case, but I don't recall this being a in a written form, but thought I would check with you. Let me know. I have searched my emails, but couldn't find anything in writing.

Thx

KC Fagen | *Engineering Manager*
Tillamook People's Utility District
A Consumer-Owned Electric Utility
P.O. Box 433 • 1115 Pacific Avenue • Tillamook, Oregon 97141
phone: 503.815.8628 | fax: 503.815.8648

Visit our website at www.tpud.org to learn more about Tillamook PUD

CASE: PCN 2
WITNESS: SCOTT GIBBENS

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 110

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

Oregon's Statewide Planning Goals & Guidelines

GOAL 1: CITIZEN INVOLVEMENT

OAR 660-015-0000(1)

To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

The governing body charged with preparing and adopting a comprehensive plan shall adopt and publicize a program for citizen involvement that clearly defines the procedures by which the general public will be involved in the on-going land-use planning process.

The citizen involvement program shall be appropriate to the scale of the planning effort. The program shall provide for continuity of citizen participation and of information that enables citizens to identify and comprehend the issues.

Federal, state and regional agencies and special-purpose districts shall coordinate their planning efforts with the affected governing bodies and make use of existing local citizen involvement programs established by counties and cities.

The citizen involvement program shall incorporate the following components:

1. Citizen Involvement -- To provide for widespread citizen involvement.

The citizen involvement program shall involve a cross-section of affected citizens in all phases of the planning process. As a component, the program for citizen involvement shall include an officially recognized committee for citizen involvement (CCI) broadly

representative of geographic areas and interests related to land use and land-use decisions. Committee members shall be selected by an open, well-publicized public process.

The committee for citizen involvement shall be responsible for assisting the governing body with the development of a program that promotes and enhances citizen involvement in land-use planning, assisting in the implementation of the citizen involvement program, and evaluating the process being used for citizen involvement.

If the governing body wishes to assume the responsibility for, development as well as adoption and implementation of the citizen involvement program or to assign such responsibilities to a planning commission, a letter shall be submitted to the Land Conservation and Development Commission for the state Citizen Involvement Advisory Committee's review and recommendation stating the rationale for selecting this option, as well as indicating the mechanism to be used for an evaluation of the citizen involvement program. If the planning commission is to be used in lieu of an independent CCI, its members shall be selected by an open, well-publicized public process.

2. Communication -- To assure effective two-way communication with citizens.

Mechanisms shall be established which provide for effective communication between citizens and elected and appointed officials.

3. Citizen Influence -- To provide the opportunity for citizens to be involved in all phases of the planning process.

Citizens shall have the opportunity to be involved in the phases of the planning process as set forth and defined in the goals and guidelines for Land Use Planning, including Preparation of Plans and Implementation Measures, Plan Content, Plan Adoption, Minor Changes and Major Revisions in the Plan, and Implementation Measures.

4. Technical Information -- To assure that technical information is available in an understandable form.

Information necessary to reach policy decisions shall be available in a simplified, understandable form. Assistance shall be provided to interpret and effectively use technical information. A copy of all technical information shall be available at a local public library or other location open to the public.

5. Feedback Mechanisms -- To assure that citizens will receive a response from policy-makers.

Recommendations resulting from the citizen involvement program shall be retained and made available for public assessment. Citizens who have participated in this program shall receive a response from policy-makers. The

rationale used to reach land-use policy decisions shall be available in the form of a written record.

6. Financial Support -- To insure funding for the citizen involvement program.

Adequate human, financial, and informational resources shall be allocated for the citizen involvement program. These allocations shall be an integral component of the planning budget. The governing body shall be responsible for obtaining and providing these resources.

GUIDELINES

A. CITIZEN INVOLVEMENT

1. A program for stimulating citizen involvement should be developed using a range of available media (including television, radio, newspapers, mailings and meetings).

2. Universities, colleges, community colleges, secondary and primary educational institutions and other agencies and institutions with interests in land-use planning should provide information on land-use education to citizens, as well as develop and offer courses in land-use education which provide for a diversity of educational backgrounds in land-use planning.

3. In the selection of members for the committee for citizen involvement, the following selection process should be observed: citizens should receive notice they can understand of the opportunity to serve on the CCI; committee appointees should receive official notification of their selection; and

committee appointments should be well publicized.

B. COMMUNICATION

Newsletters, mailings, posters, mail-back questionnaires, and other available media should be used in the citizen involvement program.

C. CITIZEN INFLUENCE

1. Data Collection - The general public through the local citizen involvement programs should have the opportunity to be involved in inventorying, recording, mapping, describing, analyzing and evaluating the elements necessary for the development of the plans.

2. Plan Preparation – The general public, through the local citizen involvement programs, should have the opportunity to participate in developing a body of sound information to identify public goals, develop policy guidelines, and evaluate alternative land conservation and development plans for the preparation of the comprehensive land-use plans.

3. Adoption Process – The general public, through the local citizen involvement programs, should have the opportunity to review and recommend changes to the proposed comprehensive land-use plans prior to the public hearing process to adopt comprehensive land-use plans.

4. Implementation - The general public, through the local citizen involvement programs, should have the opportunity to participate in the development, adoption, and application of legislation that is needed to carry out a comprehensive land-use plan. The

general public, through the local citizen involvement programs, should have the opportunity to review each proposal and application for a land conservation and development action prior to the formal consideration of such proposal and application.

5. Evaluation - The general public, through the local citizen involvement programs, should have the opportunity to be involved in the evaluation of the comprehensive land use plans.

6. Revision - The general public, through the local citizen involvement programs, should have the opportunity to review and make recommendations on proposed changes in comprehensive land-use plans prior to the public hearing process to formally consider the proposed changes.

D. TECHNICAL INFORMATION

1. Agencies that either evaluate or implement public projects or programs (such as, but not limited to, road, sewer, and water construction, transportation, subdivision studies, and one changes) should provide assistance to the citizen involvement program. The roles, responsibilities and timeline in the planning process of these agencies should be clearly defined and publicized.

2. Technical information should include, but not be limited to, energy, natural environment, political, legal, economic and social data, and places of cultural significance, as well as those maps and photos necessary for effective planning.

E. FEEDBACK MECHANISM

1. At the onset of the citizen involvement program, the governing body should clearly state the mechanism through which the citizens will receive a response from the policy-makers.

2. A process for quantifying and synthesizing citizens' attitudes should be developed and reported to the general public.

F. FINANCIAL SUPPORT

1. The level of funding and human resources allocated to the citizen involvement program should be sufficient to make citizen involvement an integral part of the planning process.

Oregon's Statewide Planning Goals & Guidelines

GOAL 2: LAND USE PLANNING

OAR 660-015-0000(2)

PART I -- PLANNING

To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.

City, county, state and federal agency and special district plans and actions related to land use shall be consistent with the comprehensive plans of cities and counties and regional plans adopted under ORS Chapter 268.

All land use plans shall include identification of issues and problems, inventories and other factual information for each applicable statewide planning goal, evaluation of alternative courses of action and ultimate policy choices, taking into consideration social, economic, energy and environmental needs. The required information shall be contained in the plan document or in supporting documents. The plans, supporting documents and implementation ordinances shall be filed in a public office or other place easily accessible to the public. The plans shall be the basis for specific implementation measures. These measures shall be consistent with and adequate to carry out the plans. Each plan and related implementation measure shall be coordinated with the plans of affected governmental units.

All land-use plans and implementation ordinances shall be adopted by the governing body after

public hearing and shall be reviewed and, as needed, revised on a periodic cycle to take into account changing public policies and circumstances, in accord with a schedule set forth in the plan. Opportunities shall be provided for review and comment by citizens and affected governmental units during preparation, review and revision of plans and implementation ordinances.

Affected Governmental Units -- are those local governments, state and federal agencies and special districts which have programs, land ownerships, or responsibilities within the area included in the plan.

Comprehensive Plan -- as defined in ORS 197.015(5).

Coordinated -- as defined in ORS 197.015(5). Note: It is included in the definition of comprehensive plan.

Implementation Measures -- are the means used to carry out the plan. These are of two general types: (1) management implementation measures such as ordinances, regulations or project plans, and (2) site or area specific implementation measures such as permits and grants for construction, construction of public facilities or provision of services.

Plans -- as used here encompass all plans which guide land-use decisions, including both comprehensive and single-purpose plans of cities, counties, state and federal agencies and special districts.

PART II -- EXCEPTIONS

A local government may adopt an exception to a goal when:

(a) The land subject to the exception is physically developed to the extent that it is no longer available for uses allowed by the applicable goal;

(b) The land subject to the exception is irrevocably committed to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable; or

(c) The following standards are met:

(1) Reasons justify why the state policy embodied in the applicable goals should not apply;

(2) Areas which do not require a new exception cannot reasonably accommodate the use;

(3) The long-term environmental, economic, social and energy consequences resulting from the use of the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located in areas requiring a goal exception other than the proposed site; and

(4) The proposed uses are compatible with other adjacent uses or will be so rendered through measures designed to reduce adverse impacts.

Compatible, as used in subparagraph (4) is not intended as an absolute term meaning no interference or adverse impacts of any type with adjacent uses.

A local government approving or denying a proposed exception shall set forth findings of fact and a statement of reasons which demonstrate that the

standards for an exception have or have not been met.

Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.

Upon review of a decision approving or denying an exception:

(a) The commission shall be bound by any finding of fact for which there is substantial evidence in the record of the local government proceedings resulting in approval or denial of the exception;

(b) The commission shall determine whether the local government's findings and reasons demonstrate that the standards for an exception have or have not been met; and

(c) The commission shall adopt a clear statement of reasons which sets forth the basis for the determination that the standards for an exception have or have not been met.

Exception means a comprehensive plan provision, including an amendment to an acknowledged comprehensive plan, that;

(a) Is applicable to specific properties or situations and does not establish a planning or zoning policy of general applicability;

(b) Does not comply with some or all goal requirements applicable to the subject properties or situations; and

(c) Complies with standards for an exception.

PART III -- USE OF GUIDELINES

Governmental units shall review the guidelines set forth for the goals and either utilize the guidelines or develop alternative means that will achieve the

goals. All land-use plans shall state how the guidelines or alternative means utilized achieve the goals.

Guidelines -- are suggested directions that would aid local governments in activating the mandated goals. They are intended to be instructive, directional and positive, not limiting local government to a single course of action when some other course would achieve the same result. Above all, guidelines are not intended to be a grant of power to the state to carry out zoning from the state level under the guise of guidelines. (Guidelines or the alternative means selected by governmental bodies will be part of the Land Conservation and Development Commission's process of evaluating plans for compliance with goals.)

GUIDELINES

A. PREPARATION OF PLANS AND IMPLEMENTATION MEASURES

Preparation of plans and implementation measures should be based on a series of broad phases, proceeding from the very general identification of problems and issues to the specific provisions for dealing with these issues and for interrelating the various elements of the plan. During each phase opportunities should be provided for review and comment by citizens and affected governmental units.

The various implementation measures which will be used to carry out the plan should be considered during each of the planning phases.

The number of phases needed will vary with the complexity and size of the area, number of people involved, other governmental units to be

consulted, and availability of the necessary information.

Sufficient time should be allotted for:

- (1) collection of the necessary factual information
- (2) gradual refinement of the problems and issues and the alternative solutions and strategies for development
- (3) incorporation of citizen needs and desires and development of broad citizen support
- (4) identification and resolution of possible conflicts with plans of affected governmental units.

B. REGIONAL, STATE AND FEDERAL PLAN CONFORMANCE

It is expected that regional, state and federal agency plans will conform to the comprehensive plans of cities and counties. Cities and counties are expected to take into account the regional, state and national needs. Regional, state and federal agencies are expected to make their needs known during the preparation and revision of city and county comprehensive plans. During the preparation of their plans, federal, state and regional agencies are expected to create opportunities for review and comment by cities and counties. In the event existing plans are in conflict or an agreement cannot be reached during the plan preparation process, then the Land Conservation and Development Commission expects the affected government units to take steps to resolve the issues. If an agreement cannot be reached, the appeals procedures in ORS Chapter 197 may be used.

C. PLAN CONTENT

1. Factual Basis for the Plan

Inventories and other forms of data are needed as the basis for the policies and other decisions set forth in the plan. This factual base should include data on the following as they relate to the goals and other provisions of the plan:

- (a) Natural resources, their capabilities and limitations
- (b) Man-made structures and utilities, their location and condition
- (c) Population and economic characteristics of the area
- (d) Roles and responsibilities of governmental units.

2. Elements of the Plan

The following elements should be included in the plan:

- (a) Applicable statewide planning goals
- (b) Any critical geographic area designated by the Legislature
- (c) Elements that address any special needs or desires of the people in the area
- (d) Time periods of the plan, reflecting the anticipated situation at appropriate future intervals.

All of the elements should fit together and relate to one another to form a consistent whole at all times.

D. FILING OF PLANS

City and county plans should be filed, but not recorded, in the Office of the County Recorder. Copies of all plans should be available to the public and to affected governmental units.

E. MAJOR REVISIONS AND MINOR CHANGES IN THE PLAN AND IMPLEMENTATION MEASURES

The citizens in the area and any affected governmental unit should be given an opportunity to review and

comment prior to any changes in the plan and implementation ordinances. There should be at least 30 days notice of the public hearing on the proposed change.

1. Major Revisions

Major revisions include land use changes that have widespread and significant impact beyond the immediate area, such as quantitative changes producing large volumes of traffic; a qualitative change in the character of the land use itself, such as conversion of residential to industrial use; or a spatial change that affects large areas or many different ownerships.

The plan and implementation measures should be revised when public needs and desires change and when development occurs at a different rate than contemplated by the plan. Areas experiencing rapid growth and development should provide for a frequent review so needed revisions can be made to keep the plan up to date; however, major revisions should not be made more frequently than every two years, if at all possible.

2. Minor Changes

Minor changes, i.e., those which do not have significant effect beyond the immediate area of the change, should be based on special studies or other information which will serve as the factual basis to support the change. The public need and justification for the particular change should be established. Minor changes should not be made more frequently than once a year, if at all possible.

F. IMPLEMENTATION MEASURES

The following types of measure should be considered for carrying out plans:

1. Management Implementation Measures

(a) Ordinances controlling the use and construction on the land, such as building codes, sign ordinances, subdivision and zoning ordinances. ORS Chapter 197 requires that the provisions of the zoning and subdivision ordinances conform to the comprehensive plan.

(b) Plans for public facilities that are more specific than those included in the comprehensive plan. They show the size, location, and capacity serving each property but are not as detailed as construction drawings.

(c) Capital improvement budgets which set out the projects to be constructed during the budget period.

(d) State and federal regulations affecting land use.

(e) Annexations, consolidations, mergers and other reorganization measures.

2. Site and Area Specific implementation Measures

(a) Building permits, septic tank permits, driveway permits, etc; the review of subdivisions and land partitioning applications; the changing of zones and granting of conditional uses, etc.

(b) The construction of public facilities (schools, roads, water lines, etc.).

(c) The provision of land-related public services such as fire and police.

(d) The awarding of state and federal grants to local governments to provide these facilities and services.

(e) Leasing of public lands.

G. USE OF GUIDELINES FOR THE STATEWIDE PLANNING GOALS

Guidelines for most statewide planning goals are found in two sections-planning and implementation. Planning guidelines relate primarily to the process of developing plans that incorporate the provisions of the goals. Implementation guidelines should relate primarily to the process of carrying out the goals once they have been incorporated into the plans. Techniques to carry out the goals and plans should be considered during the preparation of the plan.

Oregon's Statewide Planning Goals & Guidelines

GOAL 3: AGRICULTURAL LANDS

OAR 660-015-0000(3)

To preserve and maintain agricultural lands.

Agricultural lands shall be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space and with the state's agricultural land use policy expressed in ORS 215.243 and 215.700.

USES

Counties may authorize farm uses and those nonfarm uses defined by commission rule that will not have significant adverse effects on accepted farm or forest practices.

IMPLEMENTATION

Zoning applied to agricultural land shall limit uses which can have significant adverse effects on agricultural and forest land, farm and forest uses or accepted farming or forest practices.

Counties shall establish minimum sizes for new lots or parcels in each agricultural land designation. The minimum parcel size established for farm uses in farmland zones shall be consistent with applicable statutes. If a county proposes a minimum lot or parcel size less than 80 acres, or 160 acres for rangeland, the minimum shall be appropriate to maintain the existing commercial agricultural enterprise within the area and meet the requirements of ORS 215.243.

Counties authorized by ORS 215.316 may designate

agricultural land as marginal land and allow those uses and land divisions on the designated marginal land as allowed by law.

LCDC shall review and approve plan designations and revisions to land use regulations in the manner provided by ORS Chapter 197.

DEFINITIONS

Agricultural Land -- in western Oregon is land of predominantly Class I, II, III and IV soils and in eastern Oregon is land of predominantly Class I, II, III, IV, V and VI soils as identified in the Soil Capability Classification System of the United States Soil Conservation Service, and other lands which are suitable for farm use taking into consideration soil fertility, suitability for grazing, climatic conditions, existing and future availability of water for farm irrigation purposes, existing land-use patterns, technological and energy inputs required, or accepted farming practices. Lands in other classes which are necessary to permit farm practices to be undertaken on adjacent or nearby lands, shall be included as agricultural land in any event.

More detailed soil data to define agricultural land may be utilized by local governments if such data permits achievement of this goal.

Agricultural land does not include land within acknowledged urban growth boundaries or land within acknowledged exceptions to Goals 3 or 4.

Farm Use -- is as set forth in ORS 215.203.

High-Value Farmlands -- are areas of agricultural land defined by statute and Commission rule.

growth. The interchange of such lands should not be subject to tax penalties.

GUIDELINES

A. PLANNING

1. Urban growth should be separated from agricultural lands by buffer or transitional areas of open space.
2. Plans providing for the preservation and maintenance of farm land for farm use, should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. IMPLEMENTATION

1. Non-farm uses permitted within farm use zones under ORS 215.213(2) and (3) and 215.283(2) and (3) should be minimized to allow for maximum agricultural productivity.
2. Extension of services, such as sewer and water supplies into rural areas should be appropriate for the needs of agriculture, farm use and non-farm uses established under ORS 215.213 and 215.283.
3. Services that need to pass through agricultural lands should not be connected with any use that is not allowed under ORS 215.203, 215.213, and 215.283, should not be assessed as part of the farm unit and should be limited in capacity to serve specific service areas and identified needs.
4. Forest and open space uses should be permitted on agricultural land that is being preserved for future agricultural

Oregon's Statewide Planning Goals & Guidelines

GOAL 4: FOREST LANDS

OAR 660-015-0000(4)

To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.

Forest lands are those lands acknowledged as forest lands as of the date of adoption of this goal amendment. Where a plan is not acknowledged or a plan amendment involving forest lands is proposed, forest land shall include lands which are suitable for commercial forest uses including adjacent or nearby lands which are necessary to permit forest operations or practices and other forested lands that maintain soil, air, water and fish and wildlife resources.

USES

Forest operations, practices and auxiliary uses shall be allowed on forest lands subject only to such regulation of uses as are found in ORS 527.722.

Uses which may be allowed subject to standards set forth in this goal and administrative rule are: (1) uses related to and in support of forest operations; (2) uses to conserve soil, water and air quality, and to provide for fish and wildlife resources, agriculture

and recreational opportunities appropriate in a forest environment; (3) locationally dependent uses; (4) dwellings authorized by law.

IMPLEMENTATION

Comprehensive plans and zoning provide certainty to assure that forest lands will be available now and in the future for the growing and harvesting of trees. Local governments shall inventory, designate and zone forest lands. Local governments shall adopt zones which contain provisions to address the uses allowed by the goal and administrative rule and apply those zones to designated forest lands.

Zoning applied to forest land shall contain provisions which limit, to the extent permitted by ORS 527.722, uses which can have significant adverse effects on forest land, operations or practices. Such zones shall contain numeric standards for land divisions and standards for the review and siting of land uses. Such land divisions and siting standards shall be consistent with the applicable statutes, goal and administrative rule. If a county proposes a minimum lot or parcel size less than 80 acres, the minimum shall meet the requirements of ORS 527.630 and conserve values found on forest lands. Siting standards shall be designed to make allowed uses compatible with forest operations, agriculture and to conserve values found on forest lands.

Local governments authorized by ORS 215.316 may inventory, designate

and zone forest lands as marginal land, and may adopt a zone which contains provisions for those uses and land divisions authorized by law.

GUIDELINES

A. PLANNING

1. Forest lands should be inventoried so as to provide for the preservation of such lands for forest uses.
2. Plans providing for the preservation of forest lands for forest uses should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. IMPLEMENTATION

1. Before forest land is changed to another use, the productive capacity of the land in each use should be considered and evaluated.
2. Developments that are allowable under the forest lands classification should be limited to those activities for forest production and protection and other land management uses that are compatible with forest production. Forest lands should be available for recreation and other uses that do not hinder growth.
3. Forestation or reforestation should be encouraged on land suitable for such purposes, including marginal agricultural land not needed for farm use.
4. Road standards should be limited to the minimum width necessary for management and safety.
5. Highways through forest lands should be designed to minimize impact on such lands.

6. Rights-of-way should be designed so as not to preclude forest growth whenever possible.

7. Maximum utilization of utility rights-of-way should be required before permitting new ones.

8. Comprehensive plans should consider other land uses that are adjacent to forest lands so that conflicts with forest harvest and management are avoided.

Oregon's Statewide Planning Goals & Guidelines

GOAL 5: NATURAL RESOURCES, SCENIC AND HISTORIC AREAS, AND OPEN SPACES

OAR 660-015-0000(5)

(Please Note: Amendments Effective 08/30/96)

To protect natural resources and conserve scenic and historic areas and open spaces.

Local governments shall adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations. These resources promote a healthy environment and natural landscape that contributes to Oregon's livability.

The following resources shall be inventoried:

- a. Riparian corridors, including water and riparian areas and fish habitat;
- b. Wetlands;
- c. Wildlife Habitat;
- d. Federal Wild and Scenic Rivers;
- e. State Scenic Waterways;
- f. Groundwater Resources;
- g. Approved Oregon Recreation Trails;
- h. Natural Areas;
- i. Wilderness Areas;
- j. Mineral and Aggregate Resources;
- k. Energy sources;
- l. Cultural areas.

Local governments and state agencies are encouraged to maintain

current inventories of the following resources:

- a. Historic Resources;
- b. Open Space;
- c. Scenic Views and Sites.

Following procedures, standards, and definitions contained in commission rules, local governments shall determine significant sites for inventoried resources and develop programs to achieve the goal.

GUIDELINES FOR GOAL 5

A. PLANNING

1. The need for open space in the planning area should be determined, and standards developed for the amount, distribution, and type of open space.

2. Criteria should be developed and utilized to determine what uses are consistent with open space values and to evaluate the effect of converting open space lands to inconsistent uses. The maintenance and development of open space in urban areas should be encouraged.

3. Natural resources and required sites for the generation of energy (i.e. natural gas, oil, coal, hydro, geothermal, uranium, solar and others) should be conserved and protected;

reservoir sites should be identified and protected against irreversible loss.

4. Plans providing for open space, scenic and historic areas and natural resources should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

5. The National Register of Historic Places and the recommendations of the State Advisory Committee on Historic Preservation should be utilized in designating historic sites.

6. In conjunction with the inventory of mineral and aggregate resources, sites for removal and processing of such resources should be identified and protected.

7. As a general rule, plans should prohibit outdoor advertising signs except in commercial or industrial zones. Plans should not provide for the reclassification of land for the purpose of accommodating an outdoor advertising sign. The term "outdoor advertising sign" has the meaning set forth in ORS 377.710(23).

B. IMPLEMENTATION

1. Development should be planned and directed so as to conserve the needed amount of open space.

2. The conservation of both renewable and non-renewable natural resources and physical limitations of the land should be used as the basis for determining the quantity, quality, location, rate and type of growth in the planning area.

3. The efficient consumption of energy should be considered when utilizing natural resources.

4. Fish and wildlife areas and habitats should be protected and managed in accordance with the Oregon Wildlife Commission's fish and wildlife management plans.

5. Stream flow and water levels should be protected and managed at a level adequate for fish, wildlife, pollution abatement, recreation, aesthetics and agriculture.

6. Significant natural areas that are historically, ecologically or scientifically unique, outstanding or important, including those identified by the State Natural Area Preserves Advisory Committee, should be inventoried and evaluated. Plans should provide for the preservation of natural areas consistent with an inventory of scientific, educational, ecological, and recreational needs for significant natural areas.

7. Local, regional and state governments should be encouraged to investigate and utilize fee acquisition, easements, cluster developments, preferential assessment, development rights acquisition and similar techniques to implement this goal.

8. State and federal agencies should develop statewide natural resource, open space, scenic and historic area plans and provide technical assistance to local and regional agencies. State and federal plans should be reviewed and coordinated with local and regional plans.

9. Areas identified as having non-renewable mineral and aggregate resources should be planned for interim,

transitional and "second use" utilization
as well as for the primary use.

Oregon's Statewide Planning Goals & Guidelines

GOAL 6: AIR, WATER AND LAND RESOURCES QUALITY

OAR 660-015-0000(6)

To maintain and improve the quality of the air, water and land resources of the state.

All waste and process discharges from future development, when combined with such discharges from existing developments shall not threaten to violate, or violate applicable state or federal environmental quality statutes, rules and standards. With respect to the air, water and land resources of the applicable air sheds and river basins described or included in state environmental quality statutes, rules, standards and implementation plans, such discharges shall not (1) exceed the carrying capacity of such resources, considering long range needs; (2) degrade such resources; or (3) threaten the availability of such resources.

Waste and Process Discharges -- refers to solid waste, thermal, noise, atmospheric or water pollutants, contaminants, or products therefrom. Included here also are indirect sources of air pollution which result in emissions of air contaminants for which the state has established standards.

GUIDELINES

A. PLANNING

1. Plans should designate alternative areas suitable for use in controlling pollution including but not limited to waste water treatment plants,

solid waste disposal sites and sludge disposal sites.

2. Plans should designate areas for urban and rural residential use only where approvable sewage disposal alternatives have been clearly identified in such plans.

3. Plans should buffer and separate those land uses which create or lead to conflicting requirements and impacts upon the air, water and land resources.

4. Plans which provide for the maintenance and improvement of air, land and water resources of the planning area should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

5. All plans and programs affecting waste and process discharges should be coordinated within the applicable air sheds and river basins described or included in state environmental quality statutes, rules, standards and implementation plan.

6. Plans of state agencies before they are adopted should be coordinated with and reviewed by local agencies with respect to the impact of these plans on the air, water and land resources in the planning area.

7. In all air quality maintenance areas, plans should be based on applicable state rules for reducing indirect pollution and be sufficiently comprehensive to include major transportation, industrial, institutional, commercial recreational and governmental developments and facilities.

B. IMPLEMENTATION

1. Plans should take into account methods and devices for implementing this goal, including but not limited to the following:

- (1) tax incentives and disincentives,
- (2) land use controls and ordinances,
- (3) multiple-use and joint development practices,
- (4) capital facility programming,
- (5) fee and less-than-fee acquisition techniques, and
- (6) enforcement of local health and safety ordinances.

2. A management program that details the respective implementation roles and responsibilities for carrying out this goal in the planning area should be established in the comprehensive plan.

3. Programs should manage land conservation and development activities in a manner that accurately reflects the community's desires for a quality environment and a healthy economy and is consistent with state environmental quality statutes, rules, standards and implementation plans.

Oregon's Statewide Planning Goals and Guidelines

GOAL 7: AREAS SUBJECT TO NATURAL HAZARDS

To protect people and property from natural hazards.

A. NATURAL HAZARD PLANNING

1. Local governments shall adopt comprehensive plans (inventories, policies and implementing measures) to reduce risk to people and property from natural hazards.

2. Natural hazards for purposes of this goal are: floods (coastal and riverine), landslides,¹ earthquakes and related hazards, tsunamis, coastal erosion, and wildfires. Local governments may identify and plan for other natural hazards.

B. RESPONSE TO NEW HAZARD INFORMATION

1. New hazard inventory information provided by federal and state agencies shall be reviewed by the Department in consultation with affected state and local government representatives.

2. After such consultation, the Department shall notify local governments if the new hazard information requires a local response.

3. Local governments shall respond to new inventory information on natural hazards within 36 months after being notified by the Department of Land Conservation and Development, unless extended by the Department.

C. IMPLEMENTATION

Upon receiving notice from the Department, a local government shall:

1. Evaluate the risk to people and

property based on the new inventory information and an assessment of:

a. the frequency, severity and location of the hazard;

b. the effects of the hazard on existing and future development;

c. the potential for development in the hazard area to increase the frequency and severity of the hazard; and

d. the types and intensities of land uses to be allowed in the hazard area.

2. Allow an opportunity for citizen review and comment on the new inventory information and the results of the evaluation and incorporate such information into the comprehensive plan, as necessary.

3. Adopt or amend, as necessary, based on the evaluation of risk, plan policies and implementing measures consistent with the following principles:

a. avoiding development in hazard areas where the risk to people and property cannot be mitigated; and

b. prohibiting the siting of essential facilities, major structures, hazardous facilities and special occupancy structures, as defined in the state building code (ORS 455.447(1)

(a)(b)(c) and (e)), in identified hazard areas, where the risk to public safety cannot be mitigated, unless an essential facility is needed within a hazard area in order to provide essential emergency response services in a timely manner.²

4. Local governments will be deemed to comply with Goal 7 for coastal and riverine flood hazards by adopting and

¹ For "rapidly moving landslides," the requirements of ORS 195.250-195.275 (1999 edition) apply.

² For purposes of constructing essential facilities, and special occupancy structures in tsunami inundation zones, the requirements of the state building code - ORS 455.446 and 455.447 (1999 edition) and OAR chapter 632, division 5 apply.

implementing local floodplain regulations that meet the minimum National Flood Insurance Program (NFIP) requirements.

D. COORDINATION

1. In accordance with ORS 197.180 and Goal 2, state agencies shall coordinate their natural hazard plans and programs with local governments and provide local governments with hazard inventory information and technical assistance including development of model ordinances and risk evaluation methodologies.

2. Local governments and state agencies shall follow such procedures, standards and definitions as may be contained in statewide planning goals and commission rules in developing programs to achieve this goal.

GUIDELINES

A. PLANNING

1. In adopting plan policies and implementing measures to protect people and property from natural hazards, local governments should consider:

- a. the benefits of maintaining natural hazard areas as open space, recreation and other low density uses;
- b. the beneficial effects that natural hazards can have on natural resources and the environment; and
- c. the effects of development and mitigation measures in identified hazard areas on the management of natural resources.

2. Local governments should coordinate their land use plans and decisions with emergency preparedness, response, recovery and mitigation programs.

B. IMPLEMENTATION

1. Local governments should give special attention to emergency access when considering development in identified hazard areas.

2. Local governments should consider programs to manage stormwater runoff as a means to help address flood and landslide hazards.

3. Local governments should consider nonregulatory approaches to help implement this goal, including but not limited to:

- a. providing financial incentives and disincentives;
- b. providing public information and education materials;
- c. establishing or making use of existing programs to retrofit, relocate, or acquire existing dwellings and structures at risk from natural disasters.

4. When reviewing development requests in high hazard areas, local governments should require site-specific reports, appropriate for the level and type of hazard (e.g., hydrologic reports, geotechnical reports or other scientific or engineering reports) prepared by a licensed professional. Such reports should evaluate the risk to the site as well as the risk the proposed development may pose to other properties.

5. Local governments should consider measures that exceed the National Flood Insurance Program (NFIP) such as:
- a. limiting placement of fill in floodplains;
 - b. prohibiting the storage of hazardous materials in floodplains or providing for safe storage of such materials; and
 - c. elevating structures to a level higher than that required by the NFIP and the state building code.

Flood insurance policy holders may be eligible for reduced insurance rates through the NFIP's Community Rating System Program when local governments adopt these and other flood protection measures.

Oregon's Statewide Planning Goals & Guidelines

GOAL 8: RECREATIONAL NEEDS

OAR 660-015-0000(8)

To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.

RECREATION PLANNING

The requirements for meeting such needs, now and in the future, shall be planned for by governmental agencies having responsibility for recreation areas, facilities and opportunities: (1) in coordination with private enterprise; (2) in appropriate proportions; and (3) in such quantity, quality and locations as is consistent with the availability of the resources to meet such requirements. State and federal agency recreation plans shall be coordinated with local and regional recreational needs and plans.

DESTINATION RESORT SITING

Comprehensive plans may provide for the siting of destination resorts on rural lands subject to the provisions of state law, including ORS 197.435 to 197.467, this and other Statewide Planning Goals, and without an exception to Goals 3, 4, 11, or 14.

Eligible Areas

(1) Destination resorts allowed under the provisions of this goal must be sited on lands mapped as eligible by the affected county. A map adopted by a county may not allow destination resorts approved under the provisions of this goal to be sited in any of the following areas:

(a) Within 24 air miles of an urban growth boundary with an existing population of 100,000 or more unless residential uses are limited to those necessary for the staff and management of the resort;

(b) On a site with 50 or more contiguous acres of unique or prime farm land identified and mapped by the United States Natural Resources Conservation Service or its predecessor agency; or within three miles of a High Value Crop Area except that "small destination resorts" may not be closer to a high value crop area than one-half mile for each 25 units of overnight lodging or fraction thereof;

(c) On predominantly Cubic Foot Site Class 1 or 2 forest lands, as determined by the State Forestry Department, that are not subject to an approved goal exception;

(d) In the Columbia River Gorge National Scenic Area as defined by the Columbia River Gorge National Scenic Act, P.L. 99-663;

(e) In an especially sensitive big game habitat as generally mapped by the Oregon Department of Fish and Wildlife in July 1984 and as further refined through development of comprehensive plans implementing this requirement.

(2) "Small destination resorts" may be allowed consistent with the siting requirements of section (1), above, in the following areas:

(a) On land that is not defined as agricultural or forest land under Goal 3 or 4; or

(b) On land where there has been an exception to Statewide Planning Goals 3, 4, 11, or 14.

Siting Standards

(1) Counties shall ensure that destination resorts are compatible with the site and adjacent land uses through the following measures:

(a) Important natural features, including habitat of threatened or endangered species, streams, rivers, and significant wetlands shall be maintained. Riparian vegetation within 100 feet of streams, rivers and significant wetlands shall be maintained. Alterations to important natural features, including placement of structures that maintain the overall values of the feature, may be allowed.

(b) Sites designated for protection in an acknowledged comprehensive plan designated pursuant to Goal 5 that are located on the tract used for the destination resort shall be preserved through conservation easements as set forth in ORS 271.715 to 271.795. Conservation easements adopted to implement this requirement shall be sufficient to protect the resource values of the site and shall be recorded with the property records of the tract on which the destination resort is sited.

(c) Improvements and activities shall be located and designed to avoid or minimize adverse effects of the resort on uses on surrounding lands, particularly effects on intensive farming operations in the area. At a minimum, measures to accomplish this shall include:

(i) Establishment and maintenance of buffers between the resort and adjacent land uses, including natural vegetation and where appropriate, fences, berms, landscaped areas, and other similar types of buffers.

(ii) Setbacks of structures and other improvements from adjacent land uses.

(iii) Measures that prohibit the use or operation in conjunction with the resort of a portion of a tract that is excluded from the site of a destination resort pursuant to ORS 197.435(7). Subject to this limitation, the use of the excluded property shall be governed by otherwise applicable law.

Implementing Measures

(1) Comprehensive plans allowing for destination resorts shall include implementing measures that:

(a) Adopt a map consisting of eligible lands for large destination resorts within the county. The map shall be based on reasonably available information, and shall not be subject to revision or refinement after adoption except in conformance with ORS 197.455, and 197.610 to 197.625, but not more frequently than once every 30 months. The county shall develop a process for collecting and processing concurrently all map amendments made within a 30-

month planning period. A map adopted pursuant to this section shall be the sole basis for determining whether tracts of land are eligible for siting of large destination resorts under the provisions of this goal and ORS 197.435 to 197.467.

(b) Limit uses and activities to those permitted by this goal.

(c) Assure developed recreational facilities and key facilities intended to serve the entire development and visitor oriented accommodations are physically provided or are guaranteed through surety bonding or substantially equivalent financial assurances prior to closure of sale of individual lots or units. In phased developments, developed recreational facilities and other key facilities intended to serve a particular phase shall be constructed prior to sales in that phase or guaranteed through surety bonding.

DEFINITIONS

Destination Resort -- A self-contained development providing visitor-oriented accommodations and developed recreational facilities in a setting with high natural amenities, and that qualifies under the definition of either a “large destination resort” or a “small destination resort” in this goal. Spending required under these definitions is stated in 1993 dollars. The spending required shall be adjusted to the year in which calculations are made in accordance with the United States Consumer Price Index.

Large Destination Resort -- To qualify as a “large destination resort” under this Goal, a proposed development must meet the following standards:

(1) The resort must be located on a site of 160 acres or more except within two miles of the ocean shoreline where the site shall be 40 acres or more.

(2) At least 50 percent of the site must be dedicated as permanent open space excluding yards, streets and parking areas.

(3) At least \$7 million must be spent on improvements for onsite developed recreational facilities and visitor-oriented accommodations exclusive of costs for land, sewer, and water facilities and roads. Not less than one-third of this amount shall be spent on developed recreational facilities.

(4) Commercial uses allowed are limited to types and levels necessary to meet the needs of visitors to the development. Industrial uses of any kind are not permitted.

(5) Visitor-oriented accommodations including meeting rooms, restaurants with seating for 100 persons, and 150 separate rentable units for overnight lodging must be provided. Accommodations available for residential use shall not exceed two such units for each unit of overnight lodging, or two and one-half such units on land that is in Eastern Oregon as defined by ORS 321.805. However, the rentable overnight lodging units may be phased in as follows:

(a) On land that is not in Eastern Oregon, as defined in ORS 321.805:

(A) A total of 150 units of overnight lodging must be provided.

(B) At least 75 units of overnight lodging, not including any individually owned homes, lots or units must be constructed or guaranteed through surety

bonding or equivalent financial assurance prior to the closure of sale of individual lots or units.

(C) The remaining overnight lodging units must be provided as individually owned lots or units subject to deed restrictions that limit their use to overnight lodging units. The deed restrictions may be rescinded when the resort has constructed 150 units of permanent overnight lodging as required by this section.

(D) The number of units approved for residential sale may not be more than two units for each unit of permanent overnight lodging provided under this section.

(E) The development approval shall provide for the construction of other required overnight lodging units within five years of the initial lot sales.

(b) On lands in Eastern Oregon, as defined in ORS 321.805:

(A) A total of 150 units of overnight lodging must be provided.

(B) At least 50 units of overnight lodging must be constructed prior to the closure of sale of individual lots or units.

(C) At least 50 of the remaining 100 required overnight lodging units must be constructed or guaranteed through surety bonding or equivalent financial assurance within five years of the initial lot sales.

(D) The remaining required overnight lodging units must be constructed or guaranteed through surety bonding or equivalent financial assurances within 10 years of the initial lot sales.

(E) The number of units approved for residential sale may not be more than 2-1/2 units for each unit of permanent overnight lodging provided under this section.

(F) If the developer of a resort guarantees the overnight lodging units required under paragraphs (C) and (D) of this subsection through surety bonding or other equivalent financial assurance, the overnight lodging units must be constructed within four years of the date of execution of the surety bond or other equivalent financial assurance.

(6) When making a land use decision authorizing construction of a "large destination resort" in Eastern Oregon, as defined in ORS 321.805, the governing body of the county or its designee shall require the resort developer to provide an annual accounting to document compliance with the overnight lodging standards of this definition. The annual accounting requirement commences one year after the initial lot or unit sales. The annual accounting must contain:

(a) Documentation showing that the resort contains a minimum of 150 permanent units of overnight lodging or, during the phase-in period, documentation showing the resort is not yet required to have constructed 150 units of overnight lodging.

(b) Documentation showing that the resort meets the lodging ratio described in section (5)(b) of this definition.

(c) For a resort counting individually owned units as qualified overnight lodging units, the number of weeks that each overnight lodging unit is available for rental to the general public as described in section (2) of the definition for "overnight lodgings" in this goal.

Small Destination Resort -- To qualify as a “small destination resort” under Goal 8, a proposed development must meet standards (2) and (4) under the definition of “large destination resort” and the following standards:

- (1) The resort must be located on a site of 20 acres or more.
- (2) At least \$2 million must be spent on improvements for onsite developed recreational facilities and visitor-oriented accommodations exclusive of costs for land, sewer, and water facilities and roads. Not less than one-third of this amount must be spent on developed recreation facilities.
- (3) At least 25 but not more than 75 units of overnight lodging shall be provided.
- (4) Restaurant and meeting rooms with at least one seat for each unit of overnight lodging must be provided.
- (5) Residential uses must be limited to those necessary for the staff and management of the resort.
- (6) The county governing body or its designee must review the proposed resort and determine that the primary purpose of the resort is to provide lodging and other services oriented to a recreational resource that can only reasonably be enjoyed in a rural area. Such recreational resources include, but are not limited to, a hot spring, a ski slope or a fishing stream.
- (7) The resort shall be constructed and located so that it is not designed to attract highway traffic. Resorts shall not use any manner of outdoor advertising signing except:
 - (a) Tourist oriented directional signs as provided in ORS 377.715 to 377.830; and
 - (b) Onsite identification and directional signs.

Developed Recreation Facilities -- are improvements constructed for the purpose of recreation and may include but are not limited to golf courses, tennis courts, swimming pools, marinas, ski runs and bicycle paths.

High-Value Crop Area -- an area in which there is a concentration of commercial farms capable of producing crops or products with a minimum gross value of \$1,000 per acre per year. These crops and products include field crops, small fruits, berries, tree fruits, nuts, or vegetables, dairying, livestock feedlots, or Christmas trees as these terms are used in the 1983 County and State Agricultural Estimates prepared by the Oregon State University Extension Service. The High-Value Crop Area Designation is used for the purpose of minimizing conflicting uses in resort siting and is not meant to revise the requirements of Goal 3 or administrative rules interpreting the goal.

Map of Eligible Lands -- a map of the county adopted pursuant to ORS 197.455.

Open Space -- means any land that is retained in a substantially natural condition or is improved for recreational uses such as golf courses, hiking or

nature trails or equestrian or bicycle paths or is specifically required to be protected by a conservation easement. Open spaces may include ponds, lands protected as important natural features, land preserved for farm or forest use and lands used as buffers. Open space does not include residential lots or yards, streets or parking areas.

Overnight Lodgings -- are permanent, separately rentable accommodations that are not available for residential use. Overnight lodgings include hotel or motel rooms, cabins, and time-share units. Tent sites, recreational vehicle parks, manufactured dwellings, dormitory rooms, and similar accommodations do not qualify as overnight lodgings for the purpose of this definition. Individually owned units may be considered overnight lodgings if:

(1) With respect to lands not in Eastern Oregon, as defined in ORS 321.805, they are available for overnight rental use by the general public for at least 45 weeks per calendar year through a central reservation and check-in service, or

(2) With respect to lands in Eastern Oregon, as defined in ORS 321.805, they are available for overnight rental use by the general public for at least 38 weeks per calendar year through a central reservation system operated by the destination resort or by a real estate property manager, as defined in ORS 696.010.

Recreation Areas, Facilities and Opportunities -- provide for human development and enrichment, and include but are not limited to: open space and scenic landscapes; recreational lands; history, archaeology and natural science resources; scenic roads and travelers; sports and cultural events; camping, picnicking and recreational lodging; tourist facilities and accommodations; trails; waterway use facilities; hunting; angling; winter sports; mineral resources; active and passive games and activities.

Recreation Needs -- refers to existing and future demand by citizens and visitors for recreations areas, facilities and opportunities.

Self-contained Development -- means a development for which community sewer and water facilities are provided onsite and are limited to meet the needs of the development or are provided by existing public sewer or water service as long as all costs related to service extension and any capacity increases are borne by the development. A "self-contained development" must have developed recreational facilities provided on-site.

Tract -- means a lot or parcel or more than one contiguous lot or parcel in a single ownership. A tract may include property that is not included in the proposed site for a destination resort if the property to be excluded is on the boundary of the tract and constitutes less than 30 percent of the total tract.

Visitor-Oriented Accommodations -- are overnight lodging, restaurants, meeting facilities which are designed to and provide for the needs of visitors rather than year-round residents.

GUIDELINES FOR GOAL 8

A. PLANNING

1. An inventory of recreation needs in the planning area should be made based upon adequate research and analysis of public wants and desires.

2. An inventory of recreation opportunities should be made based upon adequate research and analysis of the resources in the planning area that are available to meet recreation needs.

3. Recreation land use to meet recreational needs and development standards, roles and responsibilities should be developed by all agencies in coordination with each other and with the private interests. Long range plans and action programs to meet recreational needs should be developed by each agency responsible for developing comprehensive plans.

4. The planning for lands and resources capable of accommodating multiple uses should include provision for appropriate recreation opportunities.

5. The *State Comprehensive Outdoor Recreation Plan* could be used as a guide when planning, acquiring and developing recreation resources, areas and facilities.

6. When developing recreation plans, energy consequences should be considered, and to the greatest extent possible non-motorized types of recreational activities should be preferred over motorized activities.

7. Planning and provision for recreation facilities and opportunities should give priority to areas, facilities and uses that

(a) Meet recreational needs requirements for high density population centers,

(b) Meet recreational needs of persons of limited mobility and finances,

(c) Meet recreational needs requirements while providing the maximum conservation of energy both in the transportation of persons to the facility or area and in the recreational use itself,

(d) Minimize environmental deterioration,

(e) Are available to the public at nominal cost, and

(f) Meet needs of visitors to the state.

8. Unique areas or resources capable of meeting one or more specific recreational needs requirements should be inventoried and protected or acquired.

9. All state and federal agencies developing recreation plans should allow for review of recreation plans by affected local agencies.

10. Comprehensive plans should be designed to give a high priority to enhancing recreation opportunities on the public waters and shorelands of the state especially on existing and potential state and federal wild and scenic waterways, and Oregon Recreation Trails.

11. Plans that provide for satisfying the recreation needs of persons in the planning area should consider as a major determinant, the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. IMPLEMENTATION

Plans should take into account various techniques in addition to fee acquisition such as easements, cluster developments, preferential assessments, development rights acquisition, subdivision park land dedication that benefits the subdivision, and similar techniques to meet recreation requirements through tax policies, land leases, and similar programs.

C. RESORT SITING

Measures should be adopted to minimize the adverse environmental effects of resort development on the site, particularly in areas subject to natural hazards. Plans and ordinances should prohibit or discourage alterations and structures in the 100 year floodplain and on slopes exceeding 25 percent. Uses and alterations that are appropriate for these areas include:

1. Minor drainage improvements that do not significantly impact important natural features of the site;
2. Roads, bridges and utilities where there are no feasible alternative locations on the site; and
3. Outdoor recreation facilities including golf courses, bike paths, trails, boardwalks, picnic tables, temporary open sided shelters, boating facilities, ski lifts and runs. Alterations and structures permitted in these areas should be adequately protected from geologic hazards or of minimal value and designed to minimize adverse environmental effects.

Oregon's Statewide Planning Goals & Guidelines

GOAL 9: ECONOMIC DEVELOPMENT

OAR 660-015-0000(9)

To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.

Comprehensive plans and policies shall contribute to a stable and healthy economy in all regions of the state. Such plans shall be based on inventories of areas suitable for increased economic growth and activity after taking into consideration the health of the current economic base; materials and energy availability and cost; labor market factors; educational and technical training programs; availability of key public facilities; necessary support facilities; current market forces; location relative to markets; availability of renewable and non-renewable resources; availability of land; and pollution control requirements.

Comprehensive plans for urban areas shall:

1. Include an analysis of the community's economic patterns, potentialities, strengths, and deficiencies as they relate to state and national trends;
2. Contain policies concerning the economic development opportunities in the community;
3. Provide for at least an adequate supply of sites of suitable sizes, types, locations, and service levels for a variety of industrial and

commercial uses consistent with plan policies;

4. Limit uses on or near sites zoned for specific industrial and commercial uses to those which are compatible with proposed uses.

In accordance with ORS 197.180 and Goal 2, state agencies that issue permits affecting land use shall identify in their coordination programs how they will coordinate permit issuance with other state agencies, cities and counties.

GUIDELINES

A. PLANNING

1. A principal determinant in planning for major industrial and commercial developments should be the comparative advantage of the region within which the developments would be located. Comparative advantage industries are those economic activities which represent the most efficient use of resources, relative to other geographic areas.

2. The economic development projections and the comprehensive plan which is drawn from the projections should take into account the availability of the necessary natural resources to support the expanded industrial development and associated populations. The plan should also take into account the social, environmental, energy, and economic impacts upon the resident population.

3. Plans should designate the type and level of public facilities and services appropriate to support the degree of economic development being proposed.

4. Plans should strongly emphasize the expansion of and increased productivity from existing industries and firms as a means to strengthen local and regional economic development.

5. Plans directed toward diversification and improvement of the economy of the planning area should consider as a major determinant, the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. IMPLEMENTATION

1. Plans should take into account methods and devices for overcoming certain regional conditions and deficiencies for implementing this goal, including but not limited to

- (1) tax incentives and disincentives;
- (2) land use controls and ordinances;
- (3) preferential assessments;
- (4) capital improvement programming; and
- (5) fee and less-than-fee acquisition techniques.

2. Plans should provide for a detailed management program to assign respective implementation roles and responsibilities to those private and governmental bodies which operate in the planning area and have interests in carrying out this goal and in supporting and coordinating regional and local economic plans and programs.

Oregon's Statewide Planning Goals & Guidelines

GOAL 11: PUBLIC FACILITIES AND SERVICES

OAR 660-015-0000(11)

To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

Urban and rural development shall be guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable, and rural areas to be served. A provision for key facilities shall be included in each plan. Cities or counties shall develop and adopt a public facility plan for areas within an urban growth boundary containing a population greater than 2,500 persons. To meet current and long-range needs, a provision for solid waste disposal sites, including sites for inert waste, shall be included in each plan.

Counties shall develop and adopt community public facility plans regulating facilities and services for certain unincorporated communities outside urban growth boundaries as specified by Commission rules.

Local Governments shall not allow the establishment or extension of sewer systems outside urban growth boundaries or unincorporated community boundaries, or allow extensions of sewer lines from within urban growth boundaries or unincorporated community boundaries to serve land outside those boundaries, except where the new or extended

system is the only practicable alternative to mitigate a public health hazard and will not adversely affect farm or forest land.

Local governments may allow residential uses located on certain rural residential lots or parcels inside existing sewer district or sanitary authority boundaries to connect to an existing sewer line under the terms and conditions specified by Commission rules.

Local governments shall not rely upon the presence, establishment, or extension of a water or sewer system to allow residential development of land outside urban growth boundaries or unincorporated community boundaries at a density higher than authorized without service from such a system.

In accordance with ORS 197.180 and Goal 2, state agencies that provide funding for transportation, water supply, sewage and solid waste facilities shall identify in their coordination programs how they will coordinate that funding with other state agencies and with the public facility plans of cities and counties.

A Timely, Orderly, and Efficient Arrangement – refers to a system or plan that coordinates the type, locations and delivery of public facilities and services in a manner that best supports the existing and proposed land uses.

Rural Facilities and Services – refers to facilities and services suitable and appropriate solely for the needs of rural lands.

Urban Facilities and Services – Refers to key facilities and to appropriate types and levels of at least the following: police protection; sanitary facilities; storm drainage facilities; planning, zoning and subdivision control; health services; recreation facilities and services; energy and communication services; and community governmental services.

Public Facilities Plan – A public facility plan is a support document or documents to a comprehensive plan. The facility plan describes the water, sewer and transportation facilities which are to support the land uses designated in the appropriate acknowledged comprehensive plan or plans within an urban growth boundary containing a population greater than 2,500.

Community Public Facilities Plan – A support document or documents to a comprehensive plan applicable to specific unincorporated communities outside UGBs. The community public facility plan describes the water and sewer services and facilities which are to support the land uses designated in the plan for the unincorporated community.

Water system – means a system for the provision of piped water for human consumption subject to regulation under ORS 448.119 to 448.285.

Extension of a sewer or water system – means the extension of a pipe, conduit, pipeline, main, or other physical

component from or to an existing sewer or water system, as defined by Commission rules.

GUIDELINES

A. PLANNING

1. Plans providing for public facilities and services should be coordinated with plans for designation of urban boundaries, urbanizable land, rural uses and for the transition of rural land to urban uses.

2. Public facilities and services for rural areas should be provided at levels appropriate for rural use only and should not support urban uses.

3. Public facilities and services in urban areas should be provided at levels necessary and suitable for urban uses.

4. Public facilities and services in urbanizable areas should be provided at levels necessary and suitable for existing uses. The provision for future public facilities and services in these areas should be based upon: (1) the time required to provide the service; (2) reliability of service; (3) financial cost; and (4) levels of service needed and desired.

5. A public facility or service should not be provided in an urbanizable area unless there is provision for the coordinated development of all the other urban facilities and services appropriate to that area.

6. All utility lines and facilities should be located on or adjacent to existing public or private rights-of-way to avoid dividing existing farm units.

7. Plans providing for public facilities and services should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land

conservation and development action provided for by such plans should not exceed the carrying capacity of such resources.

B. IMPLEMENTATION

1. Capital improvement programming and budgeting should be utilized to achieve desired types and levels of public facilities and services in urban, urbanizable and rural areas.
2. Public facilities and services should be appropriate to support sufficient amounts of land to maintain an adequate housing market in areas undergoing development or redevelopment.
3. The level of key facilities that can be provided should be considered as a principal factor in planning for various densities and types of urban and rural land uses.
4. Plans should designate sites of power generation facilities and the location of electric transmission lines in areas intended to support desired levels of urban and rural development.
5. Additional methods and devices for achieving desired types and levels of public facilities and services should include but not be limited to the following: (1) tax incentives and disincentives; (2) land use controls and ordinances; (3) multiple use and joint development practices; (4) fee and less-than-fee acquisition techniques; and (5) enforcement of local health and safety codes.
6. Plans should provide for a detailed management program to assign respective implementation roles and responsibilities to those governmental bodies operating in the planning area and having interests in carrying out the goal

Oregon's Statewide Planning Goals & Guidelines

GOAL 12: TRANSPORTATION

OAR 660-015-0000(12)

To provide and encourage a safe, convenient and economic transportation system.

A transportation plan shall (1) consider all modes of transportation including mass transit, air, water, pipeline, rail, highway, bicycle and pedestrian; (2) be based upon an inventory of local, regional and state transportation needs; (3) consider the differences in social consequences that would result from utilizing differing combinations of transportation modes; (4) avoid principal reliance upon any one mode of transportation; (5) minimize adverse social, economic and environmental impacts and costs; (6) conserve energy; (7) meet the needs of the transportation disadvantaged by improving transportation services; (8) facilitate the flow of goods and services so as to strengthen the local and regional economy; and (9) conform with local and regional comprehensive land use plans. Each plan shall include a provision for transportation as a key facility.

Transportation -- refers to the movement of people and goods.

Transportation Facility -- refers to any physical facility that moves or assists in the movement of people and goods excluding electricity, sewage and water.

Transportation System -- refers to one or more transportation facilities that are planned, developed, operated and maintained in a coordinated manner to supply continuity of movement between modes, and within and between geographic and jurisdictional areas.

Mass Transit -- refers to any form of passenger transportation which

carries members of the public on a regular and continuing basis.

Transportation Disadvantaged -- refers to those individuals who have difficulty in obtaining transportation because of their age, income, physical or mental disability.

GUIDELINES

A. PLANNING

1. All current area-wide transportation studies and plans should be revised in coordination with local and regional comprehensive plans and submitted to local and regional agencies for review and approval.

2. Transportation systems, to the fullest extent possible, should be planned to utilize existing facilities and rights-of-way within the state provided that such use is not inconsistent with the environmental, energy, land-use, economic or social policies of the state.

3. No major transportation facility should be planned or developed outside urban boundaries on Class 1 and II agricultural land, as defined by the U.S. Soil Conservation Service unless no feasible alternative exists.

4. Major transportation facilities should avoid dividing existing economic farm units and urban social units unless no feasible alternative exists.

5. Population densities and peak hour travel patterns of existing and planned developments should be considered in the choice of transportation modes for trips taken by persons. While high density developments with concentrated trip origins and destinations should be designed to be principally served by mass transit,

low-density developments with dispersed origins and destinations should be principally served by the auto.

6. Plans providing for a transportation system should consider as a major determinant the carrying capacity of the air, land and water resources of the planning area. The land conservation and development actions provided for by such plans should not exceed the carrying capacity of such resources.

B. IMPLEMENTATION

1. The number and location of major transportation facilities should conform to applicable state or local land use plans and policies designed to direct urban expansion to areas identified as necessary and suitable for urban development. The planning and development of transportation facilities in rural areas should discourage urban growth while providing transportation service necessary to sustain rural and recreational uses in those areas so designated in the comprehensive plan.

2. Plans for new or for the improvement of major transportation facilities should identify the positive and negative impacts on: (1) local land use patterns, (2) environmental quality, (3) energy use and resources, (4) existing transportation systems and (5) fiscal resources in a manner sufficient to enable local governments to rationally consider the issues posed by the construction and operation of such facilities.

3. Lands adjacent to major mass transit stations, freeway interchanges, and other major air, land and water terminals should be managed and controlled so as to be consistent with and supportive of the land use and development patterns identified in the comprehensive plan of the jurisdiction within which the facilities are located.

4. Plans should provide for a detailed management program to assign respective implementation roles and responsibilities to those governmental bodies operating in the planning area and having interests in carrying out the goal.

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GOAL 13: ENERGY CONSERVATION

OAR 660-015-0000(13)

To conserve energy.

Land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.

GUIDELINES

A. PLANNING

1. Priority consideration in land use planning should be given to methods of analysis and implementation measures that will assure achievement of maximum efficiency in energy utilization.

2. The allocation of land and uses permitted on the land should seek to minimize the depletion of non-renewable sources of energy.

3. Land use planning should, to the maximum extent possible, seek to recycle and re-use vacant land and those uses which are not energy efficient.

4. Land use planning should, to the maximum extent possible, combine increasing density gradients along high capacity transportation corridors to achieve greater energy efficiency.

5. Plans directed toward energy conservation within the planning area should consider as a major determinant the existing and potential capacity of the renewable energy sources to yield useful energy output. Renewable energy sources include water, sunshine, wind, geothermal heat and municipal, forest and farm waste. Whenever possible,

land conservation and development actions provided for under such plans should utilize renewable energy sources.

B. IMPLEMENTATION

1. Land use plans should be based on utilization of the following techniques and implementation devices which can have a material impact on energy efficiency:

a. Lot size, dimension, and siting controls;

b. Building height, bulk and surface area;

c. Density of uses, particularly those which relate to housing densities;

d. Availability of light, wind and air;

e. Compatibility of and competition between competing land use activities; and

f. Systems and incentives for the collection, reuse and recycling of metallic and nonmetallic waste.

Oregon's Statewide Planning Goals & Guidelines

GOAL 16: ESTUARINE RESOURCES

OAR 660-015-0010(1)

To recognize and protect the unique environmental, economic, and social values of each estuary and associated wetlands; and

To protect, maintain, where appropriate develop, and where appropriate restore the long-term environmental, economic, and social values, diversity and benefits of Oregon's estuaries.

Comprehensive management programs to achieve these objectives shall be developed by appropriate local, state, and federal agencies for all estuaries.

To assure diversity among the estuaries of the State, by June 15, 1977, LCDC with the cooperation and participation of local governments, special districts, and state and federal agencies shall classify the Oregon estuaries to specify the most intensive level of development or alteration which may be allowed to occur within each estuary. After completion for all estuaries of the inventories and initial planning efforts, including identification of needs and potential conflicts among needs and goals and upon request of any coastal jurisdiction, the Commission will review the overall Oregon Estuary Classification.

Comprehensive plans and activities for each estuary shall provide for appropriate uses (including preservation) with as much diversity as is consistent with the overall Oregon Estuary Classification, as well as with the biological economic, recreational,

and aesthetic benefits of the estuary. Estuary plans and activities shall protect the estuarine ecosystem, including its natural biological productivity, habitat, diversity, unique features and water quality.

The general priorities (from highest to lowest) for management and use of estuarine resources as implemented through the management unit designation and permissible use requirements listed below shall be:

1. Uses which maintain the integrity of the estuarine ecosystem;
2. Water-dependent uses requiring estuarine location, as consistent with the overall Oregon Estuary Classification;
3. Water-related uses which do not degrade or reduce the natural estuarine resources and values;
4. Nondependent, nonrelated uses which do not alter, reduce or degrade estuarine resources and values.

INVENTORY REQUIREMENTS

Inventories shall be conducted to provide information necessary for designating estuary uses and policies. These inventories shall provide information on the nature, location, and extent of physical, biological, social, and economic resources in sufficient detail to establish a sound basis for estuarine management and to enable the identification of areas for preservation and areas of exceptional potential for development.

State and federal agencies shall assist in the inventories of estuarine resources. The Department of Land Conservation and Development, with assistance from local government, state and federal agencies, shall establish common inventory standards and techniques, so that inventory data collected by different agencies or units of government, or data between estuaries, will be comparable.

COMPREHENSIVE PLAN REQUIREMENTS

Based upon inventories, the limits imposed by the overall Oregon Estuary Classification, and needs identified in the planning process, comprehensive plans for coastal areas shall:

1. Identify each estuarine area:
2. Describe and maintain the diversity of important and unique environmental, economic and social features within the estuary;
3. Classify the estuary into management units; and
4. Establish policies and use priorities for each management unit using the standards and procedures set forth below.
5. Consider and describe in the plan the potential cumulative impacts of the alterations and development activities envisioned. Such a description may be general but shall be based on the best available information and projections.

MANAGEMENT UNITS

Diverse resources, values, and benefits shall be maintained by classifying the estuary into distinct water use management units. When classifying estuarine areas into management units, the following shall

be considered in addition to the inventories:

1. Adjacent upland characteristics and existing land uses;
2. Compatibility with adjacent uses;
3. Energy costs and benefits; and
4. The extent to which the limited water surface area of the estuary shall be committed to different surface uses.

As a minimum, the following kinds of management units shall be established:

1. **Natural** -- in all estuaries, areas shall be designated to assure the protection of significant fish and wildlife habitats, of continued biological productivity within the estuary, and of scientific, research, and educational needs. These shall be managed to preserve the natural resources in recognition of dynamic, natural, geological, and evolutionary processes. Such areas shall include, at a minimum, all major tracts of salt marsh, tideflats, and seagrass and algae beds.

Permissible uses in natural management units shall include the following:

- a. undeveloped low-intensity, water-dependent recreation;
- b. research and educational observations;
- c. navigation aids, such as beacons and buoys;
- d. protection of habitat, nutrient, fish, wildlife and aesthetic resources;
- e. passive restoration measures;
- f. dredging necessary for on-site maintenance of existing functional tidegates and associated drainage channels and bridge crossing support structures;

- g. riprap for protection of uses existing as of October 7, 1977, unique natural resources, historical and archeological values; and public facilities; and
- h. bridge crossings.

Where consistent with the resource capabilities of the area and the purposes of this management unit the following uses may be allowed:

- a. aquaculture which does not involve dredge or fill or other estuarine alteration other than incidental dredging for harvest of benthic species or removable in-water structures such as stakes or racks;
- b. communication facilities;
- c. active restoration of fish and wildlife habitat or water quality and estuarine enhancement;
- d. boat ramps for public use where no dredging or fill for navigational access is needed; and,
- e. pipelines, cables and utility crossings, including incidental dredging necessary for their installation.
- f. installation of tidegates in existing functional dikes.
- g. temporary alterations.
- h. bridge crossing support structures and dredging necessary for their installation.

A use or activity is consistent with the resource capabilities of the area when either the impacts of the use on estuarine species, habitats, biological productivity and water quality are not significant or that the resources of the area are able to assimilate the use and activity and their effects and continue to function in a manner to protect significant wildlife habitats, natural biological productivity, and values for scientific research and education.

2. Conservation -- In all estuaries, except those in the overall Oregon Estuary Classification which are classed for preservation, areas shall be designated for long-term uses of renewable resources that do not require major alteration of the estuary, except for the purpose of restoration. These areas shall be managed to conserve the natural resources and benefits. These shall include areas needed for maintenance and enhancement of biological productivity, recreational and aesthetic uses, and aquaculture. They shall include tracts of significant habitat smaller or of less biological importance than those in (1) above, and recreational or commercial oyster and clam beds not included in (1) above. Areas that are partially altered and adjacent to existing development of moderate intensity which do not possess the resource characteristics of natural or development units shall also be included in this classification.

Permissible uses in conservation management units shall be all uses listed in (1) above except temporary alterations.

Where consistent with the resource capabilities of the area and the purposes of this management unit the following uses may be allowed:

- a. High-intensity water-dependent recreation, including boat ramps, marinas and new dredging for boat ramps and marinas;
- b. Minor navigational improvements;
- c. Mining and mineral extraction, including dredging necessary for mineral extraction;
- d. Other water dependent uses requiring occupation of water surface area by means other than dredge or fill;

- e. Aquaculture requiring dredge or fill or other alteration of the estuary;
- f. Active restoration for purposes other than those listed in 1(d).
- g. Temporary alterations.

A use or activity is consistent with the resource capabilities of the area when either the impacts of the use on estuarine species, habitats, biological productivity, and water quality are not significant or that the resources of the area are able to assimilate the use and activity and their effects and continue to function in a manner which conserves long-term renewable resources, natural biologic productivity, recreational and aesthetic values and aquaculture.

3. **Development** -- in estuaries classified in the overall Oregon Estuary Classification for more intense development or alteration, areas shall be designated to provide for navigation and other identified needs for public, commercial, and industrial water-dependent uses, consistent with the level of development or alteration allowed by the overall Oregon Estuary Classification. Such areas shall include deep-water areas adjacent or in proximity to the shoreline, navigation channels, subtidal areas for in-water disposal of dredged material and areas of minimal biological significance needed for uses requiring alterations of the estuary not included in (1) and (2) above.

Permissible uses in areas managed for water-dependent activities shall be navigation and water-dependent commercial and industrial uses.

As appropriate the following uses shall also be permissible in development management units:

- a. Dredge or fill, as allowed elsewhere in the goal;
- b. Navigation and water-dependent commercial enterprises and activities;
- c. Water transport channels where dredging may be necessary;
- d. Flow-lane disposal of dredged material monitored to assure that estuarine sedimentation is consistent with the resource capabilities and purposes of affected natural and conservation management units.
- e. Water storage areas where needed for products used in or resulting from industry, commerce, and recreation;
- f. Marinas.

Where consistent with the purposes of this management unit and adjacent shorelands designated especially suited for water-dependent uses or designated for waterfront redevelopment, water-related and nondependent, nonrelated uses not requiring dredge or fill; mining and mineral extraction; and activities identified in (1) and (2) above shall also be appropriate.

In designating areas for these uses, local governments shall consider the potential for using upland sites to reduce or limit the commitment of the estuarine surface area for surface uses.

IMPLEMENTATION REQUIREMENTS

1. Unless fully addressed during the development and adoption of comprehensive plans, actions which would potentially alter the estuarine ecosystem shall be preceded by a clear presentation of the impacts of the proposed alteration. Such activities include dredging, fill, in-water structures, riprap, log storage, application of pesticides and herbicides, water intake

or withdrawal and effluent discharge, flow-lane disposal of dredged material, and other activities which could affect the estuary's physical processes or biological resources.

The impact assessment need not be lengthy or complex, but it should enable reviewers to gain a clear understanding of the impacts to be expected. It shall include information on:

- a. The type and extent of alterations expected;
- b. The type of resource(s) affected;
- c. The expected extent of impacts of the proposed alteration on water quality and other physical characteristics of the estuary, living resources, recreation and aesthetic use, navigation and other existing and potential uses of the estuary; and
- d. The methods which could be employed to avoid or minimize adverse impacts.

2. Dredging and/or filling shall be allowed only:

- a. If required for navigation or other water-dependent uses that require an estuarine location or if specifically allowed by the applicable management unit requirements of this goal; and,
- b. If a need (i.e., a substantial public benefit) is demonstrated and the use or alteration does not unreasonably interfere with public trust rights; and
- c. If no feasible alternative upland locations exist; and,
- d. If adverse impacts are minimized.

Other uses and activities which could alter the estuary shall only be allowed if the requirements in (b), (c), and (d) are met. All or portions of these requirements may be applied at the time of plan development for actions identified in the plan. Otherwise, they

shall be applied at the time of permit review.

3. State and federal agencies shall review, revise, and implement their plans, actions, and management authorities to maintain water quality and minimize man-induced sedimentation in estuaries. Local government shall recognize these authorities in managing lands rather than developing new or duplicatory management techniques or controls.

Existing programs which shall be utilized include:

- a. The Oregon Forest Practices Act and Administrative Rules, for forest lands as defined in ORS 527.610-527.730 and 527.990 and the Forest Lands Goal;
- b. The programs of the Soil and Water Conservation Commission and local districts and the Soil Conservation Service, for Agricultural Lands Goal;
- c. The nonpoint source discharge water quality program administered by the Department of Environmental Quality under Section 208 of the Federal Water Quality Act as amended in 1972 (PL92-500); and
- d. The Fill and Removal Permit Program administered by the Division of State Lands under ORS 541.605 - 541.665.

4. The State Water Policy Review Board, assisted by the staff of the Oregon Department of Water Resources, and the Oregon Department of Fish and Wildlife, the Oregon Department of Environmental Quality, the Division of State Lands, and the U.S. Geological Survey, shall consider establishing minimum fresh-water flow rates and standards so that resources and uses of the estuary, including navigation, fish and wildlife

characteristics, and recreation, will be maintained.

5. When dredge or fill activities are permitted in intertidal or tidal marsh areas, their effects shall be mitigated by creation, restoration or enhancement of another area to ensure that the integrity of the estuarine ecosystem is maintained. Comprehensive plans shall designate and protect specific sites for mitigation which generally correspond to the types and quantity of intertidal area proposed for dredging or filling, or make findings demonstrating that it is not possible to do so.

6. Local government and state and federal agencies shall develop comprehensive programs, including specific sites and procedures for disposal and stock-piling of dredged materials. These programs shall encourage the disposal of dredged material in uplands or ocean waters, and shall permit disposal in estuary waters only where such disposal will clearly be consistent with the objectives of this goal and state and federal law. Dredged material shall not be disposed in intertidal or tidal marsh estuarine areas unless part of an approved fill project.

7. Local government and state and federal agencies shall act to restrict the proliferation of individual single-purpose docks and piers by encouraging community facilities common to several uses and interests. The size and shape of a dock or pier shall be limited to that required for the intended use. Alternatives to docks and piers, such as mooring buoys, dryland storage, and launching ramps shall be investigated and considered.

8. State and federal agencies shall assist local government in identifying areas for restoration.

Restoration is appropriate in areas where activities have adversely affected some aspect of the estuarine system, and where it would contribute to a greater achievement of the objective of this goal. Appropriate sites include areas of heavy erosion or sedimentation, degraded fish and wildlife habitat, anadromous fish spawning areas, abandoned diked estuarine marsh areas, and areas where water quality restricts the use of estuarine waters for fish and shellfish harvest and production, or for human recreation.

9. State agencies with planning, permit, or review authorities affected by this goal shall review their procedures and standards to assure that the objectives and requirements of the goal are fully addressed. In estuarine areas the following authorities are of special concern:

Division of State Lands

Fill and Removal Law ORS
541.605-541.665

Mineral Resources ORS 273.551;
ORS 273.775 - 273.780

Submersible and Submerged
Lands ORS 274.005 - 274.940

Economic Development Department

Ports Planning ORS 777.835

Water Resources Department

Appropriation of Water ORS
37.010-537.990; ORS 543.010-543.620

**Department of Geology and Mineral
Industries**

Mineral Extraction ORS 520.005-
Oil and Gas Drilling ORS 520.095

Department of Forestry

Forest Practices Act ORS
527.610-527.730

Department of Energy

Regulation of Thermal Power and
Nuclear Installation ORS 469.300-
469.570

Department of Environmental Quality

Water Quality ORS
468.700-468.775

Sewage Treatment and Disposal
Systems ORS 454.010-454.755

GUIDELINES

The requirements of the
Estuarine Resources Goal should be
addressed with the same consideration
applied to previously adopted goals and
guidelines. The planning process
described in the Land Use Planning
Goal (Goal 2), including the exceptions
provisions described in Goal 2, applies
to estuarine areas and implementation
of the Estuarine Resources Goal.

Because of the strong
relationship between estuaries and
adjacent coastal shorelands, the
inventories and planning requirements
for these resources should be closely
coordinated. These inventories and
plans should also be fully coordinated
with the requirements in other state
planning goals, especially the Goals for
Open Spaces, Scenic and Historic
Areas and Natural Resources; Air,
Water, and Land Resources Quality;
Recreational Needs; Transportation;
and Economy of the State.

A. INVENTORIES

In detail appropriate to the level of
development or alteration proposed, the
inventories for estuarine features should
include:

1. Physical characteristics
a. Size, shape, surface area, and
contour, including water depths;
b. Water characteristics
including, but not limited to, salinity,
temperature, and dissolved oxygen.
Data should reflect average and
extreme values for the months of March,
June, September, and December as a
minimum; and
c. Substrate mapping showing
location and extent of rock, gravel, sand,
and mud.

2. Biological
characteristic--Location, Description,
and Extent of:
a. The common species of
benthic (living in or on bottom) flora and
fauna;
b. The fish and wildlife species,
including part-time residents;
c. The important resting, feeding,
and nesting areas for migrating and
resident shorebirds, wading birds and
wildlife;
d. The areas important for
recreational fishing and hunting,
including areas used for clam digging
and crabbing;
e. Estuarine wetlands;
f. Fish and shellfish spawning
areas;
g. Significant natural areas; and
h. Areas presently in commercial
aquaculture.

3. Social and economic
characteristics--Location, Description,
and Extent of:
a. The importance of the estuary
to the economy of the area:
b. Existing land uses
surrounding the estuary;
c. Man-made alterations of the
natural estuarine system;

- d. Water-dependent industrial and/or commercial enterprises;
- e. Public access;
- f. Historical or archaeological sites associated with the estuary; and
- g. Existing transportation systems.

- 1. That the short-term damage to resources is consistent with resource capabilities of the area; and
- 2. That the area and affected resources can be restored to their original condition.

B. HISTORIC, UNIQUE, AND SCENIC WATERFRONT COMMUNITIES

Local government comprehensive plans should encourage the maintenance and enhancement of historic, unique, and scenic waterfront communities, allowing for nonwater-dependent uses as appropriate in keeping with such communities.

C. TRANSPORTATION

Local governments and state and federal agencies should closely coordinate and integrate navigation and port needs with shoreland and upland transportation facilities and the requirements of the Transportation Goal. The cumulative effects of such plans and facilities on the estuarine resources and values should be considered.

D. TEMPORARY ALTERATIONS

The provision for temporary alterations in the Goal is intended to allow alterations to areas and resources that the Goal otherwise requires to be preserved or conserved. This exemption is limited to alterations in support of uses permitted by the Goal; it is not intended to allow uses which are not otherwise permitted by the Goal.

Application of the resource capabilities test to temporary alterations should ensure:

Oregon's Statewide Planning Goals & Guidelines

GOAL 17: COASTAL SHORELANDS

OAR 660-015-0010(2)

(Please Note: Amended 08/05/99; Effective 08/20/99)

To conserve, protect, where appropriate, develop and where appropriate restore the resources and benefits of all coastal shorelands, recognizing their value for protection and maintenance of water quality, fish and wildlife habitat, water-dependent uses, economic resources and recreation and aesthetics. The management of these shoreland areas shall be compatible with the characteristics of the adjacent coastal waters; and

To reduce the hazard to human life and property, and the adverse effects upon water quality and fish and wildlife habitat, resulting from the use and enjoyment of Oregon's coastal shorelands.

Programs to achieve these objectives shall be developed by local, state, and federal agencies having jurisdiction over coastal shorelands.

Land use plans, implementing actions and permit reviews shall include consideration of the critical relationships between coastal shorelands and resources of coastal waters, and of the geologic and hydrologic hazards associated with coastal shorelands. Local, state and federal agencies shall within the limit of their authorities maintain the diverse environmental, economic, and social values of coastal shorelands and water quality in coastal waters. Within those limits, they shall also minimize

man-induced sedimentation in estuaries, near shore ocean waters, and coastal lakes.

General priorities for the overall use of coastal shorelands (from highest to lowest) shall be to:

1. Promote uses which maintain the integrity of estuaries and coastal waters;
2. Provide for water-dependent uses;
3. Provide for water-related uses;
4. Provide for nondependent, nonrelated uses which retain flexibility of future use and do not prematurely or inalterably commit shorelands to more intensive uses;
5. Provide for development, including nondependent, nonrelated uses, in urban areas compatible with existing or committed uses;
6. Permit nondependent, nonrelated uses which cause a permanent or long-term change in the features of coastal shorelands only upon a demonstration of public need.

INVENTORY REQUIREMENTS

Inventories shall be conducted to provide information necessary for identifying coastal shorelands and designating uses and policies. These inventories shall provide information on the nature, location, and extent of geologic and hydrologic hazards and shoreland values, including fish and

wildlife habitat, water-dependent uses, economic resources, recreational uses, and aesthetics in sufficient detail to establish a sound basis for land and water use management.

The inventory requirements shall be applied within an area known as a coastal shorelands planning area. This planning area is not an area within which development or use is prohibited. It is an area for inventory, study, and initial planning for development and use to meet the Coastal Shorelands Goal.

The planning area shall be defined by the following:

1. All lands west of the Oregon Coast Highway as described in ORS 366.235, except that:

(a) In Tillamook County, only the lands west of a line formed by connecting the western boundaries of the following described roadways: Brooten Road (County Road 887) northerly from its junction with the Oregon Coast Highway to Pacific City, McPhillips Drive (County Road 915) northerly from Pacific City to its junction with Sandlake Road (County Road 871), Sandlake-Cape Lookout Road, (County Road 871) northerly to its junction with Cape Lookout Park, Netarts Bay Drive (County Road 665) northerly from its junction with the Sandlake-Cape Lookout Road (County Road 871) to its junction at Netarts with State Highway 131, and northerly along State Highway 131 to its junction with the Oregon Coast Highway near Tillamook.

(b) In Coos County, only the lands west of a line formed by connecting the western boundaries of the following described roadways: Oregon State 240, Cape Arago Secondary (FAS 263) southerly from its

junction with the Oregon Coast Highway to Charleston; Seven Devils Road (County Road 33) southerly from its junction with Oregon State 240 (FAS 263) to its junction with the Oregon Coast Highway, near Bandon; and

2. All lands within an area defined by a line measured horizontally
(a) 1000 feet from the shoreline of estuaries; and

(b) 500 feet from the shoreline of coastal lakes.

COMPREHENSIVE PLAN REQUIREMENTS

Based upon inventories, comprehensive plans for coastal areas adjacent to the ocean, estuaries, or coastal lakes shall:

1. Identify coastal shorelands;
2. Establish policies and uses of coastal shorelands in accordance with standards set forth below:

Identification of Coastal Shorelands.

Lands contiguous with the ocean, estuaries, and coastal lakes shall be identified as coastal shorelands. The extent of shorelands shall include at least:

1. Areas subject to ocean flooding and lands within 100 feet of the ocean shore or within 50 feet of an estuary or a coastal lake;
2. Adjacent areas of geologic instability where the geologic instability is related to or will impact a coastal water body;
3. Natural or man-made riparian resources, especially vegetation necessary to stabilize the shoreline and to maintain water quality and temperature necessary for the maintenance of fish habitat and spawning areas;

4. Areas of significant shoreland and wetland biological habitats whose habitat quality is primarily derived from or related to the association with coastal water areas;

5. Areas necessary for water-dependent and water-related uses, including areas of recreational importance which utilize coastal water or riparian resources, areas appropriate for navigation and port facilities, dredge material disposal and mitigation sites, and areas having characteristics suitable for aquaculture;

6. Areas of exceptional aesthetic or scenic quality, where the quality is primarily derived from or related to the association with coastal water areas; and

7. Coastal headlands.

Coastal Shoreland Uses

1. Major marshes, significant wildlife habitat, coastal headlands, and exceptional aesthetic resources inventoried in the Identification Section, shall be protected. Uses in these areas shall be consistent with protection of natural values. Such uses may include propagation and selective harvesting of forest products consistent with the Oregon Forest Practices Act, grazing, harvesting, wild crops, and low intensity water-dependent recreation.

2. Water-Dependent Shorelands.

Location. Shorelands in the following areas that are suitable for water-dependent uses shall be protected for water-dependent recreational, commercial, and industrial uses:

- (a) urban or urbanizable areas;
- (b) rural areas built upon or irrevocably committed to non-resource use; and

(c) any unincorporated community subject to OAR Chapter 660, Division 022 (Unincorporated Communities).

Minimum Acreage. Within each estuary, the minimum amount of shorelands to be protected shall be equivalent to the following combination of factors as they may exist:

(a) Acreage of estuarine shorelands that are currently being used for water-dependent uses; and

(b) Acreage of estuarine shorelands that at any time were used for water-dependent uses and still possess structures or facilities that provide or provided water-dependent uses with access to the adjacent coastal water body. Examples of such facilities or structures that provide water-dependent access would be wharves, piers, docks, mooring piling, boat ramps, water intake or discharge structures, or navigational aids.

Suitability. Any shoreland area within the estuary may be designated to provide the minimum amount of protected shorelands. However, any such designated shoreland area shall be suitable for water dependent uses. At a minimum, such water-dependent shoreland areas shall possess, or be capable of possessing, structures or facilities that provide water-dependent uses with physical access to the adjacent coastal water body. Such designations shall comply with applicable Statewide Planning Goals.

Permissible Nonwater-Dependent Uses. Other uses which may be permitted in these areas are temporary uses which involve minimal capital investment and no permanent

structures, or a use in conjunction with and incidental and subordinate to a water-dependent use.

Applicability. Local cities and counties are not mandated by this requirement to make changes to their acknowledged local comprehensive plans or land use regulations for existing water-dependent shorelands. However, if a local government chooses to revise the boundary of or allowed uses of a designated water-dependent shoreland site, then this requirement shall apply.

3. Local governments shall determine whether there are any existing, developed commercial/industrial waterfront areas which are suitable for redevelopment which are not designated as especially suited for water-dependent uses. Plans shall be prepared for these areas which allow for a mix of water-dependent, water-related, and water oriented nondependent uses and shall provide for public access to the shoreline.

4. Shorelands in rural areas other than those built upon or irrevocably committed to nonresource use and those designated in (1) above shall be used as appropriate for:

- (a) farm uses as provided in ORS Chapter 215;
- (b) propagation and harvesting of forest products consistent with the Oregon Forest Practices Act;
- (c) private and public water-dependent recreation developments;
- (d) aquaculture;
- (e) water-dependent commercial and industrial uses, water-related uses and other uses only upon a finding by the county that such uses satisfy a

need which cannot be accommodated on uplands or in urban and urbanizable areas or in rural areas built upon or irrevocably committed to non-resource use.

IMPLEMENTATION REQUIREMENTS

1. The Oregon Department of Forestry shall recognize the unique and special values provided by coastal shorelands when developing standards and policies to regulate uses of forest lands within coastal shorelands. With other state and federal agencies, the Department of Forestry shall develop forest management practices and policies including, where necessary, amendments to the FPA rules and programs which protect and maintain the special shoreland values and forest uses especially for natural shorelands and riparian vegetation.

2. Local government, with assistance from state and federal agencies, shall identify coastal shoreland areas which may be used to fulfill the mitigation requirement of the Estuarine Resources Goal. These areas shall be protected from new uses and activities which would prevent their ultimate restoration or addition to the estuarine ecosystem.

3. Coastal shorelands identified under the Estuarine Resources Goal for dredged material disposal shall be protected from new uses and activities which would prevent their ultimate use for dredged material disposal.

4. Because of the importance of the vegetative fringe adjacent to coastal waters to water quality, fish and wildlife habitat, recreational use and aesthetic resources, riparian vegetation shall be maintained; and where appropriate ,

restored and enhanced, consistent with water-dependent uses.

5. Land-use management practices and non-structural solutions to problems of erosion and flooding shall be preferred to structural solutions. Where shown to be necessary, water and erosion control structures, such as jetties, bulkheads, seawalls, and similar protective structures; and fill, whether located in the waterways or on shorelands above ordinary high water mark, shall be designed to minimize adverse impacts on water currents, erosion, and accretion patterns.

6. Local government in coordination with the Parks and Recreation Division shall develop and implement a program to provide increased public access. Existing public ownerships, rights of way, and similar public easements in coastal shorelands which provide access to or along coastal waters shall be retained or replaced if sold, exchanged or transferred. Rights of way may be vacated to permit redevelopment of shoreland areas provided public access across the affected site is retained.

GUIDELINES FOR GOAL 17

The requirements of the Coastal Shorelands Goal should be addressed with the same consideration applied to previously adopted goals and guidelines. The planning process described in the Land Use Planning Goal (Goal 2), including the exceptions provisions described in Goal 2, applies to coastal shoreland areas and implementation of the Coastal Shorelands Goal.

Because of the strong relation of estuarine shorelands to adjacent

estuaries, the inventory and planning requirements for estuaries and estuarine shorelands should also be fully coordinated. Coastal shoreland inventories and planning should also be fully coordinated with those required in other statewide planning goals, supplementing them where necessary. Of special importance are the plan requirements of the Goals for Agricultural Lands; Forest Lands; Open Spaces, Scenic and Historic Areas and Natural Resources; Air, Water, and Land Resources Quality; Areas Subject to Natural Disasters and Hazards; Recreational Needs; and Economy of the State.

A. INVENTORIES

In coastal shoreland areas the following inventory needs should be reviewed. The level of detail of information needed will differ depending on the development or alteration proposed and the degree of conflict over the potential designation.

1. Hazard areas, including at least:
 - (a) Areas the use of which may result in significant hydraulic alteration of other lands or water bodies;
 - (b) Areas of geological instability in, or adjacent to shorelines; and
 - (c) The 100-Year Floodplain.
2. Existing land uses and ownership patterns, economic resources, development needs, public facilities, topography, hydrography, and similar information affecting shorelands;
3. Areas of aesthetic and scenic importance;
4. Coastal shoreland and wetland biological habitats which are dependent upon the adjacent water body, plus other coastal shoreland and

adjacent aquatic areas of biological importance (feeding grounds, nesting sites, areas of high productivity, etc.) natural areas and fish and wildlife habitats;

5. Areas of recreational importance;
6. Areas of vegetative cover which are riparian in nature or which function to maintain water quality and to stabilize the shoreline;
7. Sedimentation sources;
8. Areas of present public access and recreational use;
9. The location of archaeological and historical sites; and
10. Coastal headlands.

B. FLOODPLAIN

In the development of comprehensive plans, the management of uses and development in floodplain areas should be expanded beyond the minimal considerations necessary to comply with the National Flood Insurance Program and the requirements of the Flood Disaster Protection Act of 1973. Communities may wish to distinguish between the floodway and floodfringe in developing coastal shoreland plans; development in the floodway should be more strictly controlled. Government projects in coastal shorelands should be examined for their impact on flooding, potential flood damage, and effect on growth patterns in the floodplain. Nonwater-dependent emergency service structures (such as hospitals, police, and fire stations) should not be constructed in the floodplain. Although they may be flood-proofed, access and egress may be prevented during a flood emergency.

C. OPEN SPACE, NATURAL AREAS AND AESTHETIC RESOURCES, AND RECREATION

Coastal shorelands provide many areas of unique or exceptional value and benefit for open space, natural areas, and aesthetic and recreational use. The requirements of the Goals for Open Spaces, Scenic and Historic Areas, and Natural Resources (Goal 5) and Recreational Needs (Goal 8) should be carefully coordinated with the coastal shoreland planning effort. The plan should provide for appropriate public access to and recreational use of coastal waters. Public access through and the use of private property shall require the consent of the owner and is a trespass unless appropriate easements and access have been acquired in accordance with law.

D. DEVELOPMENT NEEDS

In coordination with planning for the Estuarine Resources Goal, coastal shoreland plans should designate appropriate sites for water-dependent activities, and for dredged material disposal.

Historic, unique, and scenic waterfront communities should be maintained and enhanced, allowing for nonwater-dependent uses as appropriate in keeping with such communities.

E. TRANSPORTATION

The requirements of the Transportation Goal should be closely coordinated with the Coastal Shorelands Goal. Coastal transportation systems frequently utilize shoreland areas and may significantly affect the resources and values of coastal shorelands and adjacent waters; they should allow appropriate

access to coastal shorelands and adjacent waters, and be planned in full recognition of the protection needs for the special resources and benefits which shorelands provide.

F. EXAMPLES OF INCIDENTAL USES

Examples of uses that are in conjunction with and incidental to a water-dependent use include a restaurant on the second floor of an existing seafood processing plant and a retail sales room as part of a seafood processing plant. Generally, to be in conjunction with and incidental to a water dependent use, a nonwater-dependent use must be constructed at the same time or after the water-dependent use of the site is established and be carried out together with the water-dependent use. Incidental means that the size of nonwater-dependent use is small in relation to the water-dependent operation and that it does not interfere with conduct of the water-dependent use.

CASE: PCN 2
WITNESS: SCOTT GIBBENS

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 111

**Exhibits in Support
Of Opening Testimony**

February 7, 2018



Oregon

Kate Brown, Governor

Staff/111
Gibbens/1

Department of Fish and Wildlife

Northwest Region

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October 20, 2017

Hilary Foote

Tillamook County Planning Department

1510 B Third St

Tillamook, OR 97141



RE: Tillamook PUD Transmission Line Project Review

Dear Hilary:

The Oregon Department of Fish and Wildlife (ODFW) has reviewed the Tillamook PUD's proposed transmission line project (851-17-000448-PLNG) and offers the following comments for your consideration. All references to site designations, tables, and figures are from the TPUD Biological Resources Report for the Tillamook Oceanside 115-kilovolt Transmission Line Project (2nd revision October 2017).

There are a total of 6 locations (Table 5-2) along the proposed transmission line where permanent impacts would occur and would result in power poles permanently located within the riparian setback area. These sites are addressed below (tree removal, trimming and/or topping will be collectively addressed later in this letter):

Site S-01 (Hoquarten Slough) - PUD proposes to remove (or possibly trim) several trees at this location along a back eddy of the slough, and top 4 spruce trees to 20 feet in height at the edge of the main Hoquarten Slough. In addition a power pole will be located within the riparian setback area. The surrounding area is already impacted by agricultural activities and the railroad line. The existing riparian area generally appears to be less than the county standard (50 ft.), and although there is vegetation present, relatively little (if any) of the area would be considered an intact riparian area. Therefore I believe this site would meet the requirements of TCLUO 4.140 (2) (d) to allow placement of the pole at the proposed location.

Site S-01A (Hoquarten Slough) - PUD proposes to place a power pole within the required setback area. This site is highly impacted by the existing dike along the slough and the adjacent agricultural land. There are no trees. Some vegetation is present but is close to ground with limited habitat value. Therefore I believe this site would meet the requirements of TCLUO 4.140 (2) (d) to allow placement of the pole at the proposed location.

Site S-02 (Dougherty Slough) - PUD proposes to place a power pole within the riparian setback at this location. One tree would be topped to 20 ft. height. This site is similar to S-01 in that it is impacted by agricultural activities and the railroad line. Few trees are present and the proposed pole location would have little to no impact as it appears to be located on the edge of the agricultural field, and just outside the existing line of vegetation. Even if there is some impact to the vegetation at this site, it would be minor and inconsequential for the resource. Therefore I believe this site would meet the requirements of TCLUO 4.140 (2) (d) to allow placement of the pole at the proposed location.

Sites S-05B and S-05C (Hall Slough) - PUD proposes to place power poles within the riparian setback at these two sites. These sites are heavily impacted by Wilson River Loop Rd and associated right of way, as well as land cleared for agricultural purposes. The proposed pole locations, while within the 50 ft. setback, are located in areas already cleared of vegetation and alongside the roadway. There are no biological implications to the riparian area from these pole placements, and given the heavily developed nature of the proposed locations, I believe these sites would meet the requirements of TCLUO 4.140 (2) (d) to allow placement of the poles at the proposed locations.



Site S-06 (Trask River) - PUD proposes to place a power pole within the riparian setback area and to top trees on the east bank of the site. Similar to site S-01A, this site is heavily impacted from agricultural activities and the existing dike. The proposed pole location is inside the dike and appears to be within the area already cleared. No impact to the little existing riparian vegetation would be expected. Therefore I believe this site would meet the requirements of TCLUO 4.140 (2) (d) to allow placement of the pole at the proposed location.

Temporary Impacts – PUD proposes temporary impacts at several sites (Table 5-3) within riparian buffers, primarily access road construction. My understanding is that the temporary construction features will be removed and the sites restored to pre-existing conditions once the work is completed. In addition, each of the proposed temporary impacts are located in areas already impacted by other activities, such as agricultural fields. I see little, if any, biological impacts from the temporary features proposed, and if any impact were to occur, it would be short term in nature. Therefore I believe the proposed temporary impacts would meet the requirements of TCLUO 4.140 (2) (d) to allow the construction at the proposed locations.

Tree Cutting - PUD proposes to remove, limb, and/or top trees in several locations (Table 5-4), some of which are subject to county riparian ordinance requirements. ODFW understands there are safety and/or regulatory requirements that need to be followed to maintain clear space around the transmission line. ODFW appreciates the PUD's efforts to minimize locations where tree removal will be necessary, and the flexibility to limb or top trees in locations this is possible. This effort will minimize the impacts to the riparian areas. ODFW does not object to the planned actions regarding riparian trees as outlined in the Biological Report. In areas where trees must be removed, PUD is proposing mitigation by replanting native conifer trees in the riparian buffers and as close as feasible to the impacted location (while still meeting requirements for maintaining the transmission line).

ODFW recommends that wherever possible trees be limbed or topped and left in place. For trees that must be removed, ODFW recommends requiring mitigation that will offset the loss of the trees. ODFW recommends the applicant develop and have a riparian maintenance and monitoring plan approved by the Tillamook County Department of Community Development and ODFW prior to project implementation. The plan shall describe the frequency and duration of monitoring and maintenance, as well as a description of the party that will be conducting maintenance and monitoring activities. We are available to assist with the development of the plan, but generally recommend the plan include the following. A minimum of 2 native conifer trees should be planted, as close as possible in the vicinity to where trees are removed, for each tree removed (not to include trees topped and left in place). This assumes a survival rate of at least 50% for the planted trees so that in the long term there is at least one tree growing for each tree removed. If during any of the first three years survival falls below the 50% threshold, replacement plantings shall be conducted at a ratio of 1:1 during the next available planting period. If after three years, survival is below 50%, ODFW recommends the applicant be responsible for developing and implementing a revised planting, monitoring, and maintenance plan that will bring the project into compliance over the following three year period. Protective measures may be necessary to ensure survival (i.e. cages to reduce animal browsing). All newly planted trees shall be maintained for a minimum of five years (from the time of planting), at which point they will be considered free to grow, so long as the 1:1 replacement target has been met.

Additionally, at site S-01A there is a stretch of powerline that parallels the riparian area (unlike all other crossings that are roughly perpendicular to the waterway crossed, which minimizes the impacted area). While this area is currently devoid of trees (likely due to the dike and land cleared for agriculture), the presence of the lines could limit future establishment and growth of trees. ODFW acknowledges that it is unlikely that trees will become established at this location under current land use practices and thus does not object to the placement of the line. However, if and when trees do become established, ODFW recommends that the trees be allowed to grow to the maximum height that is compatible with maintenance of the transmission line (likely 20-25 ft. based on the height of trees proposed to be topped at other sites within the project). PUD has indicated they are amenable to this action.

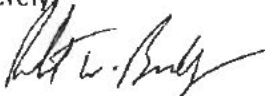
Fish Passage – There is one permanent stream crossing (with culvert installation) proposed at site S-19. ODFW rules require fish passage to be addressed when it comes to obstructions, including culverts, placed in streams. The PUD will be required to work with ODFW to assess this location for current or historic fish use to determine if fish passage will be required. If this location is determined to require fish passage, PUD will need to work through the fish passage process for approval from ODFW prior to construction.

Other topics – ODFW has received comments from anglers concerned about the transmission line crossings over the sloughs, Trask River, and Tillamook River tidewater areas and their effect on fish and/or fishing. I am unaware of any evidence to suggest that the proposed lines would influence fish migration, angler success, or have other impacts on fish in the vicinity of these crossings. I would also point out that there are numerous locations in the county and probably around the state where lines cross streams or estuaries, including some higher voltage lines than the one proposed. Some concern has also been expressed regarding the aesthetics of the lines. This is not a biological issue and thus ODFW has no comment.

This review has been requested to address riparian issues associated with the proposed transmission line. As such I have focused on comments related to that topic, as well as other fish related parts of the proposal. There are also potentially wildlife related impacts that could result from this project. ODFW's wildlife staff may provide further comment on the project as necessary to address any concerns they might have. Herman Biederbeck is the ODFW District Wildlife Biologist, and can be contacted at 503-842-2741 x227 or Herman.H.Biederbeck@state.or.us.

Thank you for the opportunity to review and comment on this application.

Sincerely,



Robert W. Bradley
District Fish Biologist
North Coast Watershed District

DOCKET: PCN 2
WITNESS: NADINE HANHAN

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 200

Staff Testimony

February 7, 2018

1 **Q. Please state your name, occupation, and business address.**

2 A. My name is Nadine Hanhan. I am a Senior Utility Analyst employed in the
3 Energy, Resources, and Planning Division of the Public Utility Commission of
4 Oregon (OPUC or Commission). My business address is 201 High Street SE,
5 Suite 100, Salem, Oregon 97301.

6 **Q. Please describe your educational background and work experience.**

7 A. My witness qualification statement contains this information and is found in
8 Exhibit Staff/201.

9 **Q. What is the purpose of your testimony?**

10 A. My testimony responds to the opening testimony in PCN 2 filed by Todd
11 Simmons and KC Fagen on behalf of Tillamook People's Utility District
12 ("Tillamook PUD"). My testimony specifically addresses Staff's analysis
13 regarding the safety and necessity of Tillamook PUD's application for a
14 Certificate of Public Convenience and Necessity (CPCN).

15 **Q. Did you prepare an exhibit for this docket?**

16 A. Yes. I prepared the following exhibits:

- 17
- 18 • Staff Exhibit 201: Witness Qualification
 - 19 • Staff Exhibit 202: Tillamook PUD's Response to Staff Data Request No. 27
 - 20 • Staff Exhibit 203: Excerpt from Tillamook PUD's Response to Staff Data
21 Request No. 44
 - 22 • Staff Exhibit 204: Tillamook PUD's Response to Staff Data Request No. 13
 - 23 • Staff Exhibit 205: Excerpt from Tillamook PUD's Supplemental Response to
24 Staff Data Request No. 23
 - 25 • Staff Exhibit 206: Tillamook PUD's Response to Staff Data Request No. 30

26 **Q. How is your testimony organized?**

27 A. My testimony is organized as follows:

1 Issue 1, Safety 3
2 Issue 2, Necessity 7

3 **Q. Why are you focusing on these two topics in your testimony?**

4 A. ORS 758.015(2) states:

5 The commission, in addition to considering facts presented at such [a
6 public] hearing, shall make the commission’s own investigation to
7 determine the necessity, safety, practicability, and justification in the
8 public interest for the proposed transmission line and shall enter an
9 order accordingly.

10 Staff Witness Scott Gibbens discusses the background of Tillamook PUD’s
11 proposal as well as Staff’s investigation into the practicability, conformance
12 with land use planning goals, and justification of the proposed transmission
13 line.

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ISSUE 1, SAFETY

Q. How did Staff evaluate the safety of the proposed project?

A. Staff considered the Commission’s discussion in Commission Order No. 11-366 of the term “safety.” Specifically, the order states:

“Safety” means “the condition of being safe, freedom from being exposed to danger; exemption from hurt, injury, or loss.” To establish the safety of a project, petitioner must show that the project will be constructed, operated, and maintained in a manner that protects the public from danger.¹

In its analysis, Staff utilized information provided in Tillamook PUD's Petition for a Certificate of Public Convenience and Necessity (Petition), testimony and exhibits in support of the Petition, discovery, general research, and information provided by the Public Utility Commission's Safety Division. Staff identified two aspects to safety for the purposes of the analysis: Tillamook PUD's general operation and maintenance and its proposed plans for the transmission line.

Q. Please provide Staff's analysis of Tillamook PUD's general operation and maintenance.

A. Tillamook PUD owns and operates three 115 (kilovolt) kV transmission lines totaling about 11.77 miles.² If Tillamook PUD builds the proposed 8.6-mile 115 kV line, the proposed project will make up about 42 percent of Tillamook PUD’s transmission ownership and operation. Tillamook PUD formed in 1933, has been in operation since 1936, and serves virtually all of Tillamook County in

¹ *In re PacifiCorp dba Pacific Power, Petition for Certificate of Public Convenience and Necessity*, OPUC Docket No. UM 1495, Order No. 11-366 at 4 (Sept. 22, 2011).
² See Staff Exhibit 202 (TPUD Response to Data Request No. 27).

1 addition to parts of Clatsop and Yamhill Counties.³ Staff reviewed Tillamook
2 PUD's safety manual, Construction Work Plan, history of workplace injuries,
3 and the Land Use Application Narrative⁴ and found no issues or concerning
4 items related to the safety of the proposed project. Staff also notes that the
5 project attained initial approval by the U.S. Department of Agriculture Rural
6 Utilities Service ("RUS").⁵

7 **Q. Please provide Staff's analysis of the safety of the proposed line.**

8 A. Tillamook PUD will be responsible for inspection, maintenance, and
9 emergency repairs on the transmission line power poles, hardware, and the
10 proposed Oceanside substation.⁶ Tillamook PUD states that the proposal
11 and construction process will follow RUS requirements, and all state and
12 local requirements regarding safety, clearances, strength, and design. In
13 addition, Tillamook PUD represents that the transmission line will also be
14 constructed, operated, and maintained to meet or exceed all applicable
15 National Electrical Safety Code (NESC) standards.⁷ The corridor width
16 along the transmission line will be between 50 and 120 feet,⁸ with the 100-
17 foot easement needed due to the line being located in the forested area
18 west of Bayocean Road. This would ensure adequate line clearance from
19 trees and other forest vegetation.⁹ Staff also notes that the proposed line

³ Tillamook PUD//200, Fagen/1.

⁴ Tillamook PUD/106, Simmons.

⁵ Tillamook PUD/105, Simmons.

⁶ Tillamook PUD/106, Simmons/19.

⁷ Tillamook PUD//200, Fagen/11.

⁸ See Staff Exhibit 203 (Excerpt from TPUD Response to Staff DR No. 44).

⁹ Tillamook PUD/106, Simmons/11.

1 route was the preference of the Citizen Advisory Group (“CAG”), which
2 prioritized avoidance of residential and commercial areas within the City of
3 Tillamook.¹⁰ In addition to this, the proposed route places the transmission
4 structures at the edge of farm properties and uses existing public right-of-
5 way along much of the line.¹¹

6 **Q. Has Tillamook PUD considered the safety of the environment in its**
7 **petition?**

8 A. Yes, a series of environmental impacts were reviewed by Tillamook PUD,
9 including soils/vegetation, floodplains and wetlands, cultural resources,
10 threatened and endangered species, fish and wildlife resources, air quality,
11 water quality, aesthetics, among others.¹² These were explored in
12 Tillamook PUD’s Borrower’s Environmental Report for the 2013-2016
13 Construction Work Plan, as well as the conditional use permit application
14 submitted to Tillamook County.¹³ Further, the proposed transmission line will
15 be adjacent to or co-located with existing linear developments within the
16 County’s existing right-of-ways as much as possible. The project is almost
17 exclusively along road right-of-ways such as highway and road rights-of-
18 way, utility corridors, or previously developed areas.¹⁴ The line will also use
19 avian-friendly construction standards.¹⁵

¹⁰ Tillamook PUD/106, Simmons/49.

¹¹ See Staff Exhibit 204 (TPUD Response to Data Request No. 13).

¹² See Staff Exhibit 205 (Excerpt from TPUD’s Supplemental Response to Data Request No. 23, Section 6 of Borrower’s Environmental Report Referenced in TPUD/105, Simmons/3-13).

¹³ *Ibid*; Tillamook PUD/106, Simmons.

¹⁴ Tillamook PUD/106, Simmons/9.

¹⁵ Tillamook PUD/106, Simmons/20.

1 **Q. Does Staff find the proposed line to be safe?**

2 A. Yes, the proposed construction and line will adhere to relevant safety
3 standards. As a result, Tillamook PUD has limited the external risks and the
4 landowners directly affected by proximity are unlikely to be harmed.

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ISSUE 2, NECESSITY

Q. What is the relevant “necessity” standard?

A. Regarding “necessity,” the Commission found that “the petitioner must demonstrate that Oregonians will forego something desirable and useful without [the proposed transmission Project].”¹⁶

Q. Why has Tillamook PUD asserted that the Project is necessary?

A. Tillamook PUD has asserted that the Project is necessary in order to increase reliability, accommodate load growth by adding system capacity, and address aging infrastructure.¹⁷

Q. What criteria did Staff consider when reviewing the necessity of the Project?

A. Staff used the standard the Commission previously set out for necessity discussed above. In this case need means that without the Project, members of the public in Oregon will forego something desirable or useful. In a past proceeding, the Commission concluded a proposed transmission line was necessary because it would allow the utility to help meet its open access transmission tariff (OATT) obligations and provide transmission in an area that currently operates at full capacity. In addition, failure to build the line would negatively affect customers standing to benefit from transmission and prevent increases in customer rates.¹⁸ In another proceeding, the Commission concluded the proposed transmission line was necessary because the utility

¹⁶ Docket UM 1495, Order 11-366 at 2-3.
¹⁷ PCN 2 Petition, page 8.
¹⁸ Docket UM 1495, Commission Order 11-366 at 6.

1 was experiencing rapid system growth, the existing line had limited capacity
2 and limited reliability that led to outages, and upgrading that line was an inferior
3 choice.¹⁹

4 **Q. Has Tillamook PUD's system experienced growth?**

5 A. Yes. Tillamook PUD states in its testimony that it is expecting load growth in its
6 coastal areas, particularly in its coastal area service territory near Netarts and
7 Oceanside.²⁰ Overall, Tillamook PUD is expecting a system growth rate of 1.1
8 percent and more specifically, a combined Wilson substation transformer 1 and
9 transformer 2 growth rate of .9 percent. Staff submitted data requests to verify
10 these specific numbers and is still in the process of analyzing the substantial
11 amount of data that Tillamook PUD provided in response. However, Staff's
12 initial review indicates that there is load growth for the system

13 **Q. Please briefly describe what Tillamook PUD is proposing.**

14 A. Tillamook PUD is proposing to build a 115 kV transmission line that begins at
15 BPA's Tillamook substation. Tillamook PUD is also proposing to build a
16 substation located in the Oceanside area.²¹ The proposed 115 kV line will run
17 about 8 miles between the existing Tillamook and proposed Oceanside
18 substations.²² The new substation will contain two distribution feeders.²³

¹⁹ *In the Matter of Umatilla Electric Cooperative, Petition for Certificate of Public Convenience and Necessity*, Docket PCN 1, Commission Order No. 17-111 at 3 (March 21, 2017).

²⁰ Tillamook PUD/200, Fagen/2.

²¹ Tillamook PUD/200, Fagen/1.

²² Tillamook PUD/200, Fagen/2.

²³ Tillamook PUD/200, Fagen/4.

1 **Q. What has Staff identified as the primary reasons behind the**
2 **transmission line proposal?**

3 A. Tillamook PUD states in its testimony that it is expecting load growth in its
4 coastal areas, particularly in its coastal area service territory near Netarts and
5 Oceanside.²⁴ The increased load growth has stressed the Tillamook PUD
6 system due to decreasing ability to shift load away from the Wilson River
7 substation that serves the cities of Tillamook, Bay City, and the Netarts and
8 Oceanside areas. There are currently two transformers at the Wilson River
9 substation. When one of the transformers at the Wilson River substation is not
10 available under peak conditions, the ability to transfer load to adjoining
11 substations and reliably serve customers is growing increasingly more limited
12 as a result of the load growth.²⁵

13 In addition to this load growth, another reason behind the transmission
14 proposal is the aging 14-mile radial 24.9 kV distribution line that is currently
15 connected to Tillamook PUD's Wilson River substation. The 24.9 kV line
16 contains a two-mile segment that is over 50 years old and comprised of failing
17 and rusting steel wire. Tillamook PUD cannot perform work on this failing 50-
18 year old line without subjecting its customers to prolonged outages, and safety
19 standards do not allow work on the line to be performed while the line is
20 energized.²⁶ Overall, the 24.9 kV distribution line is growing increasingly
21 limited in capacity and has resulted in a growing frequency of long outages.

²⁴ Tillamook PUD/200, Fagen/2.

²⁵ Tillamook PUD/200, Fagen/5.

²⁶ Tillamook PUD/106, Simmons/25.

1 As Staff understands it, the combined stresses of the load growth, aging and
2 rusting 24.9 kV distribution line, and increasingly limited capacity of the Wilson
3 transformers have prompted Tillamook PUD to propose building the 115 kV
4 transmission line. Tillamook PUD explained that If Tillamook PUD does
5 nothing, a moratorium on new electric connections may eventually need to be
6 imposed.²⁷

7 **Q. How will the proposed transmission line address Tillamook PUD's**
8 **concerns?**

9 A. The proposed 115 kV line and the proposed Oceanside substation will transfer
10 load from the Wilson River substation to the Oceanside substation and reduce
11 load under normal operating conditions. This will allow Tillamook PUD to meet
12 load at peak hours, avoid a moratorium on new connections, and make room
13 on its system for new development in its service area.²⁸ The transmission line
14 would also facilitate the creation of a looped system as opposed to the existing
15 radial line that delivers power to customers. This would provide an additional
16 source of power and allow sections of line to be taken out of service for
17 maintenance or repair without disruption to all customers on that line.²⁹

18 Staff Exhibit 206 provides a narrative of Tillamook PUD's analysis on the N-
19 1 difference between the existing radial distribution configuration and the
20 proposed transmission line.³⁰ N-1 means that the system is planned such that,

²⁷ Tillamook PUD/200, Fagen/2-3.

²⁸ Tillamook PUD/200, Fagen/5.

²⁹ Tillamook PUD/106, Simmons/25.

³⁰ Staff Exhibit 206 (Tillamook PUD Response to Staff Data Request No. 30).

1 with all transmission facilities in service, the system is in a secure state, and
2 should a contingency event occur (such as a transformer failure), the system
3 continues to operate at a satisfactory state.³¹ In the case of Tillamook PUD,
4 the Wilson T2 transformer at the Wilson River substation is the system's
5 largest component. Tillamook PUD performed this N-1 contingency analysis
6 where Wilson T2 was removed from service. As Staff understands it, an N-1
7 contingency analysis wherein the largest system component is removed is
8 standard practice in the electric utility industry and recommended by national
9 organizations such as the Institute of Electrical and Electronics Engineers
10 (IEEE) and RUS.³²

11 The results of Tillamook PUD's N-1 contingency analysis are such that the
12 remaining Wilson River, Garibaldi, and Trask River substation transformers are
13 loaded to within 92 percent of the combined winter capacity and exceed 95
14 percent of individual power transformer capacity.³³

15 **Q. Did Tillamook PUD consider alternatives to this transmission project to**
16 **meet its need?**

17 A. Yes. Tillamook PUD considered four different alternatives: 1) do nothing; 2)
18 building a redundant 24.9 kV feeder to Netarts and Oceanside; 3) building a
19 redundant 24.9 kV feeder line in addition to upgrading one of the Wilson River
20 substation transformers; and 4) building the proposed transmission line.

21 Tillamook PUD ultimately concluded that doing nothing and building a

³¹ See <https://www.ea.govt.nz/operations/transmission/grid-reliability-standards/>.

³² See e.g. <http://www.nerc.com/files/tpl-002-0.pdf>.

³³ Tillamook PUD/106, Simmons/23.

1 redundant 24.9 kV feeder would not address the issue of adding capacity,
2 which is one of the motivators for its proposal. Option 3 was rejected by
3 Tillamook PUD because it was determined that the 115 kV line and associated
4 Oceanside substation would ultimately provide the lowest per unit cost of
5 capacity and would possess a longer useful life.³⁴

6 **Q. Does Staff believe that conservation efforts could mitigate the need for**
7 **the transmission line?**

8 A. Tillamook PUD states in its testimony that conservation efforts are insufficient
9 to address the reliability concerns present at the Wilson River
10 substation.³⁵ Staff is still in the process of evaluating the robustness of
11 Tillamook PUD's energy efficiency/conservation programs but notes that EE
12 programs, while they generally reduce customer demand, do not address aging
13 infrastructure or reliability issues. While an overall reduction in average load is
14 helpful, Tillamook PUD is facing reliability issues that Staff believes go beyond
15 the capabilities of conservation efforts.

16 **Q. Does Staff believe Tillamook PUD has met the "necessity"**
17 **requirement?**

18 A. Yes. In the course of planning to accommodate a growing system and aging
19 infrastructure, Tillamook PUD identified the need for this Project. Alternatives to
20 this Project were found to be inadequate to support Tillamook PUD's long-term
21 needs and solution to an aging infrastructure and impending moratorium with

³⁴ Tillamook PUD/200, Fagen/6.

³⁵ Tillamook PUD/200, Fagen/8.

1 new connections. Not only does this meet the necessity requirement, but Staff
2 also believes the transmission line would improve the safety and reliability of
3 Tillamook PUD's overall system. Tillamook PUD has taken appropriate steps
4 and considered alternative routes. Without the Project, Tillamook PUD's
5 customers will likely be exposed to increasing reliability issues and outages.
6 Therefore, Staff concludes that the Project is necessary.

7 **Q. Does this conclude your testimony?**

8 A. Yes.

CASE: PCN 2
WITNESS: NADINE HAHHAN

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 201

Witness Qualifications Statement

February 7, 2018

WITNESS QUALIFICATIONS STATEMENT

NAME: Nadine Hanhan

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Utility Analyst, Transmission & Distribution
Energy Resources and Planning Division

ADDRESS: 201 High Street SE. Suite 100
Salem, OR. 97301

EDUCATION: Bachelor of Arts in Economics, CSUSB (2010)

Bachelor of Arts in Philosophy, CSUSB (2010)

Master of Science in Applied Economics, Oregon State
University (2015)

EXPERIENCE: I have nearly 6 years of utility regulation experience.
For four years, I worked at the Citizens' Utility Board of
Oregon as a ratepayer advocate for residential
customers. While there, I provided analysis, expert
testimony, and comments in a variety of dockets with
topics including gas and electric integrated resource
planning, solar resource value, renewable contribution
to capacity, smart grids, power costs, natural gas
hedging, and electric vehicles.

For nearly two years I have been employed at the
OPUC, where I have provided analysis, testimony, and
comments in a variety of dockets including smart grids,
integrated resource plans, voluntary green energy
tariffs, electric vehicles, renewable portfolio standard
rules, and renewable portfolio standard compliance,
among others.

CASE: PCN 2
WITNESS: NADINE HANHAN

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 202

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

STAFF DR TO TPUD NO. 27

Please provide the number of miles of transmission line currently owned by the TPUD.

TPUD RESPONSE

TPUD owns and operates three 115kV transmission lines totaling about 11.77 miles. The 115kV Tillamook-Trask Tie line is 5.23 mile, of which TPUD owns and operates 1.9 miles. BPA owns and operates the remainder of the line as it was installed on BPA's 230kV transmission towers. The Nestucca transmission line is 5.6 miles and the Nehalem transmission line is 4.27 miles, all of which TPUD owns and operates. TPUD's transmission lines are shown in TPUD/102, Simmons/1.

CASE: PCN 2
WITNESS: NADINE HANHAN

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 203

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

COMPLETENESS RESPONSE LETTER

Tillamook-Oceanside 115-kilovolt
Transmission Line Project:
Consolidated Administrative Review,
Conditional Use Permit, and
Development Permit Application

Submitted to

Tillamook County Department of Community
Development

November 2017

Submitted by

Tillamook People's Utility District

1115 Pacific Avenue, Tillamook, Oregon 97141

and



Attn: Sarah Absher and Hilary Foote
Tillamook County
Department of Community Development
1510 B Third Street
Tillamook, OR 97141

November 10, 2017

Subject: Completeness Response for the Tillamook-Oceanside 115-kilovolt Transmission Line Project: Consolidated Administrative Review, Conditional Use Permit, and Development Permit Application

Dear Ms. Absher and Ms. Foote:

The Tillamook People's Utility District (Tillamook PUD) submitted the *Tillamook-Oceanside 115-kilovolt Transmission Line Project: Consolidated Administrative Review, Conditional Use Permit, and Development Permit Application* (application) to the Tillamook County Department of Community Development (County) on August 30, 2017. Tillamook PUD (Applicant) proposes to construct a new aboveground 115-kilovolt (kV) transmission line from the existing Wilson River Substation, located to the east of the City of Tillamook, to a new substation (Oceanside Substation) near the community of Oceanside in Tillamook County (Project).

This letter responds to the County's completeness review of the application, dated September 29, 2017. This letter also describes a modification to the corridor width along an approximately 1.3-mile-long portion of the proposed 115-kV transmission line between power poles 43 and 50 (approximate mileposts [MPs] 3.1 to 4.3). Justification for the modified corridor widths and a description of the modification is provided below under Item 1 and shown on revised Figures 2, 3, and 4 to the application (see Attachment 1).

Each item from the completeness review is repeated below in *italics* under Item 2, followed by Tillamook PUD's response, or finding. In support of the findings, additional information is submitted in Attachments 1, 2, 3, and 4 to this letter. The attachments are as follows:

Attachment 1 – Revised Figures 2, 3, and 4 to the Application Narrative

Attachment 2 – Biological Resources Report for the Tillamook-Oceanside 115-kV Transmission Line Project (2nd Revision, October 2017)

Attachment 3 – Oregon Department of Fish and Wildlife Letter from Robert W. Bradley (October 20, 2017)

Attachment 4 – Revised Appendix D (Floodway Analysis) to the Application Narrative (Revised October 31, 2017)

Item 1. Modification to a Portion of the Proposed 115-kV Transmission Line Corridor Width

Section 3.1.1 of the application narrative submitted to the County on August 30, 2017, describes the proposed 115-kV transmission line corridor as follows:

The transmission line will require the establishment of a corridor with a width of 50 to 100 feet. The corridor will be established through the use of existing easements where available. Where the Applicant does not have an existing easement, a new easement will be obtained. The section of the transmission line that requires only a 50-foot easement is within the central Tillamook Valley floor from the BPA Tillamook Substation east of Highway 101 (approximate milepost [MP] 0.0) to Bayocean Road (approximate MP 4.3). The 100-foot easement is needed in the forested area west of Bayocean Road, located from approximate MPs 4.3 to 8.6, to ensure adequate line clearance from trees and other forest vegetation. The proposed transmission line corridor is shown on Figure 3 in Appendix A.

Since submittal of the application to the County, Tillamook PUD completed and submitted a Joint Permit Application (JPA) to the U.S. Army Corps of Engineers (USACE) and Oregon Department of State Lands (DSL), to permit proposed Project impacts to wetlands and water bodies. One of the approvals being sought from the USACE is authorization under Section 10 of the Rivers and Harbors Act of 1899 for the proposed conductor crossings of navigable waterways. As part of the Section 10 authorization request in the JPA, Tillamook PUD needed to provide the height of the proposed conductor above the surface of navigable waterways. Thus, additional engineering was conducted to verify the proposed conductor heights. As part of this effort, it was determined that there needs to be an increase in the corridor width between power poles 43 and 50 to accommodate potential conductor sway (movement of the conductors from the wind) between span lengths, and as necessary in order to meet National Electrical Safety Code (NESC), Rural Utilities Services (RUS), and Tillamook PUD standards. As previously described in the application, the corridor will be established through the use of existing easements where available. Where the Applicant does not have an existing easement, a new easement will be obtained.

The transmission line will maintain the 50-foot corridor (easement) width previously described in the application narrative from the Wilson River Substation east of Highway 101 (approximate MP 0.0) to power pole 43 located east of and adjacent to the levee along Hoquarten Slough (approximate MP 3.1).

The transmission line will also maintain the 100-foot corridor (easement) width previously described in the application narrative in the forested area west of Bayocean Road between power poles 50 and 87 ending at the proposed Oceanside Substation (approximate MPs 4.3 to 8.6), to ensure adequate line clearance from trees and other forest vegetation.

The new modifications to the proposed transmission line corridor (easement area) width occur between power poles 43 and 50 (approximate MPs 3.1 to 4.3) as follows:

- Corridor width for the Project between power poles 43 and 48 will increase from 50 feet wide to 100 feet wide.
- Corridor width between power poles 48 and 49, where the transmission line spans the Tillamook River, will increase from 50 feet wide to 120 feet wide.
- Corridor width between power poles 49 and 50 will increase from 50 feet wide to 100 feet wide.

The modified transmission line corridor widths are shown on the revised figures in Attachment 1 to this letter. The original versions of these figures were previously provided in Appendix A to the application:

- Figure 2: Tillamook County Zoning Mapbook
- Figure 3: Site Plan Mapbook
- Figure 4: Estuary Mapbook

The corridor width modifications do not add or change the location, design, or height of proposed power poles. In addition, the corridor width modifications will not alter the potential permanent or temporary disturbances associated with the Project, will not alter conclusions to findings provided in response to the applicable provisions of the County’s Farm (F-1), Estuary Conservation 1 (EC1), Estuary Natural (EN), and Shoreland Overlay (SH) zones where the modifications occur, and will not prevent agricultural landowners from continuing farm operations within the corridor areas. Again, these corridor width modifications are required to meet NESC, RUS, and Tillamook PUD standards.

Item 2. Tillamook PUD’s Completeness Responses

2.1 Required Items:

Application Narrative Section 3.3.3, 'Total Permanent and Temporary Land Disturbance', Table 3-2, 'Permanently Disturbed Areas'. This Table lists permanently disturbed area associated with various project features. Please confirm the permanent impact calculations included in Table 3-2. The associated text which indicates that a 5 foot diameter was used to calculate the impact area for each of the 84 poles appears to conflict with the calculations.

Response: Permanent disturbances associated with the 84 power poles proposed in the county are based on a range between 1.5 feet and 3.5 feet in diameter as listed in Table 3-1 of the application narrative. However, as stated in Section 3.3.3 of the application narrative, Tillamook PUD applied a 5-foot-diameter permanent disturbance area per power pole to provide an overly conservative disturbance estimate. The text of the application narrative was therefore correct and the 3.5-foot-diameter area provided in Table 3-2 of the application narrative was in error. Table 1 below shows a revised version of Table 3-2 from the application narrative, and applies the 5-foot-diameter permanent disturbance area per power pole to be consistent with the text.

Table 1. (Revised Table 3-2 in the Application Narrative) Permanently Disturbed Areas

Project Feature	Square Feet	Acres
Power Poles	1,648.5 807.8	0.04 0.02
Guys and Anchors	3,000	0.06
Access Roads (uncultivated lands)	35,957	0.8
Substation Access Road ^a	10,000	0.23
Substation Site	87,120	2
Total Permanently Disturbed Area	137,725.5 136,884.8	3.1

^a The substation access road will be a maximum of 20 feet wide and approximately 500 feet long.

The revised estimate increases the permanent disturbance associated with the 84 power poles from 0.02 to 0.04 acre. When rounded to the nearest tenth, as previously provided in Table 3-2 to the application narrative, the revised estimate does not change the Project’s “Total Permanently Disturbed Area” of approximately 3.1 acres.

Application Narrative Section 3.5, 'Fire Protection'. This section generally describes Applicant's approach to fire protection for construction and operation of the proposed project. Please describe arrangements for fire protection service along the route, particularly through the F zone which is not located within a local Fire Protection District. Has applicant yet developed a specific fire safety plan for the construction phase?

Response: Project construction, operation, and maintenance will comply with applicable federal, state, and county laws, ordinances, rules, and regulations pertaining to fire prevention, presuppression, and suppression. This response provides additional detail showing how the construction contractor and Tillamook PUD will provide fire protection service along the route during Project construction and operation. Generally, the construction contractor will be responsible for the Fire Protection Plan during Project construction, and Tillamook PUD will be responsible for fire protection during operation and maintenance of the Project.

Construction. As described in Tillamook PUD's response to TCLUO 3.004(8)(1) (p. 5-8 in the application narrative), the Project will not significantly increase fire hazard, fire-suppression costs, or risks to fire-suppression personnel. During Project construction, the construction contractor will be responsible for implementing a Fire Protection Plan in coordination with the local fire districts in the Project area. The portion of the Project not located within a local Fire Protection District includes the approximately 4.3 miles of the proposed transmission line within the County's (Forest) F zone. In the County's F zone, the construction contractor will be responsible for coordinating fire protection efforts with the Oregon Department of Forestry and will demonstrate compliance with wildfire prevention and suppression requirements under Oregon Revised Statutes Chapter 477 and its associated administrative rules. These requirements include the following:

- Provide fire-prevention equipment on machinery
- Limit or stop work during periods of elevated fire danger
- Provide firefighting tools
- Provide water supplies and pumping equipment
- Provide fire watch personnel
- Suppress wildfires originating from construction activity
- Dispose of debris in a specified manner
- Construction contractor to accept liability for the State's cost of suppressing wildfires originating from construction activity

Operation and Maintenance. As described in Tillamook PUD's response to TCLUO 3.004(8)(1) (p. 5-8 in the application narrative), Project operations and maintenance activities are subject to the same requirements as construction described above. The requirements as listed above are in practice today by Tillamook PUD for its existing distribution and transmission facilities. In addition, the Tillamook PUD Emergency Response Plan lists contacts and procedures for responding to incidents, including fire-related events. The proposed Project is of the same construction and will require the same fire protection tactics as Tillamook PUD's existing transmission lines, and there will not be a significant increase in the fire hazard or an increase in fire-suppression costs, nor will there be any significant increase in risks to fire-suppression personnel.

Tillamook PUD will also maintain the corridor such that it will be free from potential fuel in the event of a forest fire, and Tillamook PUD's ability to do so will be memorialized in easement agreements. The cleared easement in the forested area will provide a fire break, helping reduce the spread of a fire. In

addition, Tillamook PUD inspects transmission lines on an annual basis, both visually and with infrared cameras, and tests and treats wood poles every 10 years. These inspection and maintenance routines help identify any potential fire hazard issues before they arise and reduce the risk of Tillamook PUD's facilities contributing to any potential fire risk.

Application Narrative Section 5.2.1, 'Article 3 - Zone Regulations'. In this section Applicant describes their approach to compliance with the Tillamook County Land Use Ordinances (TCLUO) contained in Article 3.

- *Applicant states in several instances throughout this section that the proposed power poles do not constitute 'development'. Please note that Tillamook County Land Use Ordinance, Article XI define 'development' as 'any human-caused change to improved or unimproved land, including, but not limited to, buildings or other structures; mining; dredging; filling; grading; paving; excavation; drilling operations; construction of roads or ditches; earth-moving; or construction of dikes, berms or levees. It does not include ordinary farm or forest practices such as plowing, disking, harrowing, cutting, or planting, or other similar activities for the cultivation or preparation of the soil for farm or forest production' and 'structure' as 'anything constructed or installed or portable, the use of which requires a location on a parcel of land.' Please clarify Applicant's approach to these sections.*

Response: Tillamook PUD recognizes that the Project's proposed power poles are "development" consistent with the definition under Article XI of the TCLUO. On page 5-8 of the application narrative, Tillamook PUD incorrectly stated in response to TCLUO 3.004(3)(a) that "yard setback requirements are not applicable to the proposed transmission line corridor." On page 5-11 of the application narrative, Tillamook PUD incorrectly stated in response to TCLUO 3.010(4)(f) through (h) that power pole 20 "does not constitute a development" and the criteria are not applicable to the Project. On page 5-12 of the application narrative, Tillamook PUD incorrectly stated in response to TCLUO 3.020(4)(b) that power poles 1 and 3 "do not constitute a development" and the criteria are not applicable to the Project. Because the Project power poles constitute "development" as defined in the TCLUO, Tillamook PUD provides the following revised responses to those criteria:

TCLUO 3.004(3)(a): The proposed Project does not require land divisions and does not include development of residential structures. The minimum lot width, depth, and residential structure height requirements under TCLUO 3.004(3)(a)(1) and (3) are therefore not applicable to the Project.

The proposed Project includes 36 power poles (power poles 56 through 87) located within the County's Forest (F) zone (see Maps 4 through 8 on revised Figure 2 in Attachment 1). These power poles are consistent with the County's definition of development under TCLUO 11.030 and are therefore subject to the minimum front, rear, and side yard setback standards under TCLUO 3.004(3)(a)(2).

The majority of the Project's power poles in the F zone meet the front, rear, and side yard setback standards under TCLUO 3.004(3)(a)(2) outright. As shown on Maps 6 and 7 to revised Figure 2 in Attachment 1, only power poles 72, 83, and 84 are located within 30 feet of the nearest property line. All other poles in the F zone are more than 30 feet from a property line and, therefore, meet the yard setback standards.

For power poles 72, 83, and 84, the County can approve the location of those poles as accessory structures consistent with the definition provided under TCLUO 3.004(2)(b). The power poles are "detached" structures that are "incidental and subordinate to the established primary use," which is the forest use on the forested land. Accordingly, the power poles in the F zone are consistent with TCLUO 4.040(1)(b), which allows accessory structures to be located within rear and side yards. Therefore, the minimum yard setback standards for development provided under TCLUO 3.004(3)(a)(2) do not preclude the location of those poles as proposed and these criteria are met.

Alternatively, if the County does not wish to treat the power poles as accessory structures, it can grant a variance under Article VIII of the TCLUO for poles 72, 83, and 84. The approval standards for variances are set forth in TCLUO 8.030(1) through (4). Each of those is addressed below.

Subsection (1) is satisfied because the location of the line is driven by dimensional, topographic, and property interest concerns. Siting the Project on forest lands requires balancing several competing interests. Because the area includes steep topography, a straight route with long spans helps to minimize the footprint of land needed for the line. On the other hand, Tillamook PUD was careful to follow existing roads where it could in order to leave as much forest land intact as possible. Where no roads were available, adhering closely to property lines allows a straight path while reducing the individual impact to each property owner. Strict adherence to the yard setback would upset that balance and effectively reduce one underlying property owner's full enjoyment of their property.

Subsection (2) is satisfied because the variance will accommodate the use (a transmission line) that can be reasonably expected to occur with the forest zone. The County can make a finding that the transmission line use is reasonably expected to occur because it is an allowed use in the forest zone.

Subsection (3) is satisfied because the variance complies with the purpose of the development standards enumerated in TCLUO Section 4.005. That section applies only to residential and commercial zones and does not expressly identify any purpose of having yard setbacks in a forest zone. Even so, the purposes of those standards are not offended by granting a variance for power poles. For example, those purposes include preserving open space, ensuring adequate light, and maintaining adequate separation between structures for emergency purposes, all of which will still be achieved if the Project is developed as proposed.

Finally, Subsection (4) is satisfied because there are no reasonable alternatives to the variance. Strict adherence to the yard setbacks would force Tillamook PUD to move the poles farther away from the property line, leaving only a small strip of forested land between the line and the property line next to the existing roadway. This small strip would be more difficult to log and could become commercially unviable. In short, the maintenance of forest uses in the forest zone is better achieved by allowing the Project to be constructed along a property line without including a yard setback.

TCLUO 3.010(4)(f) through (h): The proposed Project includes one power pole (power pole 20) located in the County's Rural Residential 2 Acre (RR-2) zone (see Map 2 on revised Figure 2 in Attachment 1). This power pole constitutes development consistent with the County's definition under TCLUO 11.030. However, as shown on Map 2 on revised Figure 2 in Attachment 1, power pole 20 is located within the County's existing road right-of-way associated with Wilson River Loop Road and is over 50 feet from the nearest lot zoned RR-2 located north of Wilson River Loop Road. Tillamook PUD also maintains a utility placement agreement with the Tillamook County Public Works Department for use of County right-of-way. Tillamook PUD received a County permit for Utility Facilities within a Public Right-of-way for the proposed transmission line and structures located within the County right-of-way along Wilson River Loop Road, permit number UP#5251. As described herein, power pole 20 is proposed in road right-of-way and not on an existing lot. Therefore, TCLUO 3.010(4)(f) through (h) do not apply.

TCLUO 3.020(4)(b): The proposed Project includes two power poles (power pole 1 and 3) in the County's Rural Commercial (RC) zone (see Map 1 on revised Figure 2 in Attachment 1). These power poles constitute development consistent with the County's definition of development under TCLUO 11.030 and are subject to the minimum yard setback standards under TCLUO 3.020(4)(b). As shown on Map 1 on revised Figure 2 in Attachment 1, power pole 1 is located within the fenced perimeter of the existing BPA Tillamook substation and is over 100 feet from the nearest RC zone boundary and property line to the north. Similarly, power pole 3 is located on Tillamook PUD property over 50 feet from the nearest RC

zone boundary and property line to the north. In addition, both power poles are located at the rear of the underlying properties and no rear yard setback is required under TCLUO 3.020(4)(b). Accordingly, Tillamook PUD will comply with minimum yard setback standards in the RC zone and demonstrates compliance with TCLUO 3.020(4)(b). This criterion is met.

- *Application Narrative Section 5.2.1, 'Article 3 - Zone Regulations' addressing TCLUO Section 3.004, 'Forest Zone (F)':*

-- Please provide information describing how the standards of 3.004(9)(d) were considered during the route selection and line siting.

Response: Tillamook PUD agrees with County staff that the Project's proposed power poles are "development" consistent with the definition of a "structure" under Article XI of the TCLUO. Tillamook PUD addresses the following code under TCLUO 3.004(9)(d) for completeness:

(d) Dwellings and structures shall be sited on the parcel so that:

- 1. They have the least impact on nearby or adjoining forest or agricultural lands;*
- 2. The siting ensures that adverse impacts on forest operations and accepted farming practices on the tract will be minimized;*
- 3. The amount of forest lands used to site access roads, service corridors, the dwelling and structures is minimized; and*
- 4. The risks associated with wildfire are minimized.*

The proposed transmission line route will include 36 power poles (power poles 56 through 87), developed within a 100-foot-wide easement across nine tax lots owned by two individual landowners within the County's F zone (see revised Figure 2 in Attachment 1). The site boundary of the proposed Oceanside Substation will be located within an approximately 2-acre easement on a single tax lot within the F zone (see Map 8 to revised Figure 2 in Attachment 1).

As described in Tillamook PUD's response to TCLUO 6.040(3) and (4), wherever possible, the proposed transmission line route through the County's F zone is located directly adjacent to a network of existing private forest roads to minimize impacts on surrounding lands. Parallel construction along existing forest roads increases the ease of access to the transmission line for future maintenance activities. The location of the Project across F zone parcels will allow the underlying landowners to continue forest operations in the vicinity of and directly adjacent to the Project.

Along with farm practices, the Tillamook PUD's Farm and Forest Impacts Assessment, found in Appendix C to the application narrative, analyzes potential impacts to forest practices in the F zone. That study demonstrates that the Project will not force a significant change to, or significantly increase the cost of, accepted farm and forest practices. Construction of the proposed Project may cause some minor changes to the pattern selected for timber harvest or reforestation activities on surrounding lands during the temporary construction period. However, these changes will not substantially limit allowed uses on surrounding properties and will not significantly increase the cost of forest practices on land surrounding the proposed Project. Tillamook PUD will coordinate with the two individual landowners with properties crossed in the F zone to schedule construction so potential increases in cost associated with disruptions to planned forest operations on surrounding lands are limited to the greatest extent possible. All methods of timber harvesting or reforestation activities, and the equipment used for these activities, can continue on lands surrounding the permanent easements for the proposed transmission line corridor and Oceanside Substation. Therefore, landowners will not incur costs associated with

switching to a different method of harvesting or reforestation. This will be confirmed with the establishment of easements. The presence or operation of the proposed Project will not preclude the use of any type of timber harvesting or reforestation activity on adjacent or nearby lands surrounding the permanent easement or proposed Oceanside Substation site. Furthermore, the proposed Project will not substantially limit, impair, or prevent the allowed uses of surrounding properties or the permitted uses in the F zone listed in Table 1 of TCLUO 3.004(13).

As described in Section 3.5 of the application narrative, in Tillamook PUD's response to TCLUO 3.004(8)(2), TCLUO 3.004(10)(c), and as further supported in this completeness response letter above and below under TCLUO 6.040(6), Tillamook PUD will minimize Project-related risks associated with wildfire. Therefore, the criteria under TCLUO 3.004(9)(d) are met.

-- Please indicate if the applicant will maintain 30 foot primary fuel-free break areas around pole structures and substation located in the forest zone as required by TCLUO 3.004(10)(c).

Response: Per the requirements of TCLUO 3.004(10)(c), Tillamook PUD will maintain a 30-foot primary fuel-free break area surrounding power poles 51 through 87 in the County's F zone. Construction includes vegetation removal in a 100-foot-wide corridor within the F zone to install the power poles and subsequently to protect the operational integrity of the transmission line. Specifically, trees and lower-growing vegetation will be removed within the 100-foot-wide corridor surrounding each power pole within the F zone, which exceeds the 30-foot primary fuel-free break area. Figure 2 in Attachment 2 shows that trees proposed to be topped in riparian areas within the F zone are not located within 30 feet of power poles and will not occur within the maintained primary fuel-free break. In addition, vegetation management that maintains access and clearances will be performed over the life of the Project as part of the ongoing line maintenance necessary to meet NESC, RUS, and Tillamook PUD standards for clearances. Therefore, the Project as proposed complies with TCLUO 3.004(10)(c).

- *Application Narrative Section 5.2.1, 'Article 3 - Zone Regulations' addressing TCLUO Sections 3.100-3.140 regulating areas under Estuary Zone designations: Please provide additional information describing the difference in effects and impacts between spans of high voltage transmission lines and spans of distribution lines.*

Response: As demonstrated in Section 5.2.1 of the application narrative, transmission lines are not specifically identified in TCLUO 3.102(3) or TCLUO 3.106(2). However, energy transmission lines are specifically identified in Section 3.140(6), which addresses siting and development standards for energy facilities and utilities in the County's estuary zones. In addition, TCLUO 2.040 allows the Director to permit a use not listed in a particular zone, provided that it is of the same general character, or has similar impacts on nearby properties, as do other uses permitted in the zone. In a meeting with County planning staff on February 16, 2017, and in an email from planning staff on March 14, 2017,¹ it was confirmed that the proposed 115-kV transmission line is a use similar in character to electrical distribution lines and line power poles described under TCLUO 3.102(3)(d) and 3.106(2)(h) in the EN and EC1 zones, respectively. Therefore, the Project may be permitted with standards in the EC1 zone and conditionally in the EN zone, subject to the applicable review and development standards of TCLUO 3.120 and 3.140, and the conditional use review criteria under TCLUO 6.040, which are addressed in the application narrative and supplemented herein.

An energy transmission line (and associated power poles) is a use similar in character to an electrical distribution line (and associated power poles). Specifically, the proposed Tillamook-Oceanside 115-kV transmission line is similar in function and application to that of Tillamook PUD's 24.9-kV distribution

¹ Hilary Foote, Tillamook County Planner; March 14, 2017; personal communication (email) with Paul Seilo, CH2M.

lines. If a distribution line route were constructed in place of the proposed Project, both types of line would traverse similar routes, deliver the same amount of electric power to the same location, and be constructed with similar power poles. The Project's proposed 465 all-aluminum alloy conductor (AAAC) conductor size is smaller (at 0.783 inch in diameter) than would be required for an equivalent distribution circuit using a 927 AAAC conductor (at 1.108 inches in diameter) to support the same electrical power over the same distance. The electrical current in the proposed 115-kV transmission line is lower than a 24.9-kV distribution line by a factor of 4.6, whereas the voltage is higher by the same factor. The average amperage that will be transmitted in the proposed 115-kV transmission line is similar to the average amperage required by a residential home supplied by a distribution line. The spacing between conductors is greater for a transmission line due to the higher voltage, and as described in Section 3.6 of the application narrative, the increased spacing is safer for birds because contact is less likely.

The power poles used to support the proposed 115-kV transmission line are the same type of power poles that are used to support similar distribution circuits. The only difference is that power poles for the proposed 115-kV transmission line would be 15 to 20 feet taller. The height difference is necessary to provide adequate ground clearance required by NECS, RUS, state codes, and Tillamook PUD's standards. Although the ground clearance for transmission lines is greater than for distribution lines, the effects and appearance of the lines at ground level are similar. For these reasons, the proposed Tillamook-Oceanside 115-kV transmission line is a use similar in character to a distribution line delivering the same electric power. Again, the only substantive difference is that the higher voltage of a transmission line requires additional power pole height to meet industry safety clearances.

- *Application Narrative Section 5.2.1, 'Article 3 - Zone Regulations' addressing TCLUO Section 3.545, 'Shoreland Overlay (SH)': Did Applicant identify any segments of the proposed route that cross tidally influenced wetlands located outside of areas zoned Estuary?*

Response: Tillamook PUD is unaware of any segments of the proposed route that cross tidally influenced wetlands located outside of areas zoned Estuary. Wetlands delineated by Tillamook PUD within the Project corridor and in close proximity to tidally influenced streams are located behind or landward of existing levees. Wetland draining and levee construction have allowed most areas crossed on the valley floor to be used for agricultural purposes.

Tillamook PUD has submitted a JPA to the DSL and the USACE for Removal/Fill and Section 404 permits, respectively. These permits are for proposed impacts to wetlands and waters and are only issued when sufficient mitigation is included. For wetland mitigation, the Project proposes to use the Wilson, Trask, Nestucca mitigation bank. This mitigation bank provides credits with a wetland classification of estuarine. Tillamook PUD's JPA indicates that impacts from the Project will likely be limited to non-tidal wetlands. However, the mitigation will be at the estuarine mitigation bank. Both DSL and USACE said this is acceptable out-of-kind replacement since they see the estuarine habitat as important to restore. Therefore, the Project does not cross or impact tidally influenced wetlands, but will result in estuarine wetland mitigation at the Wilson, Trask, Nestucca mitigation bank.

Application Narrative Section 5.2.2, 'Article 4-Development Standards'. In this section Applicant describes their approach to compliance with applicable ordinance regulations contained in TCLUO Article 4. Regarding Applicant's response to compliance with TCLUO Section 4.140, 'Requirements for Protection of Water Quality and Streambank Stabilization', documentation of a determination by the Oregon Department of Fish and Wildlife is required to consider an exception to the riparian setback required by TCLUO 4.140.

Response: Tillamook PUD's Biological Resources Report for the Project, which addresses TCLUO Section 4.140, was previously provided as Appendix G to the application. Following submittal with the application to the County, this report was revised in response to questions and comments from Oregon Department of Fish and Wildlife (ODFW). On October 16, 2017, Tillamook PUD submitted a revised version of the Biological Resources Report to ODFW. This version of the report is included as Attachment 2 to this completeness response. On October 20, 2017, ODFW provided the County with a letter of determination documenting its review and concurrence with Tillamook PUD's request for an exception to the riparian setbacks required under TCLUO 4.140(2)(d). ODFW's letter is included for completeness as Attachment 3 to this completeness response. ODFW concurred that the six locations listed in Table 5-2 of the revised Biological Resources Report (see Attachment 2) meet the requirements of TCLUO 4.140(2)(d) to allow placement of the power poles in the proposed locations.

In addition, ODFW's letter indicates that the temporary impacts proposed within several riparian buffers, as identified in Table 5-3 of the report, meet the requirements of TCLUO 4.140(2)(d) since these sites will be restored to preexisting conditions once Project construction is complete. ODFW's letter also verifies that the majority of these sites are located in areas already impacted by existing agricultural activities with little riparian vegetation present.

Finally, ODFW's letter states that it does not object to the planned actions regarding riparian trees as outlined in Table 5-4 of the report. The ODFW letter reiterates that in areas where trees are removed, mitigation will be provided in the form of replanting native conifer trees in the riparian buffers as close as feasible to the impacted location.

Application Narrative Section 5.2.3, 'Article 6 -Conditional Use Procedures and Criteria'. In this section Applicant describes their approach to compliance with the conditional use criteria.

- *Regarding Applicant's response to TCLUO 6.00[40]4(3) please provide information on the length and impact area in each zone.*

Response: The Project is a conditionally permitted use in the County's F, RR-2, RC, and EN zones. Accordingly, Tillamook PUD addresses the applicable conditional use review criteria under TCLUO 6.040 for the F, RR-2, RC, and EN zones. The Project was specifically routed to avoid existing structures and buildings so the easement corridor and transmission line do not limit, impair, or prevent use of the properties crossed in these zones (see revised Figures 2 and 3 to the application narrative in Attachment 1).

Tillamook PUD provides the length of the F, RR-2, RC, and EN zones crossed in the County on Table 5-1 in the application narrative. Table 2, incorporated below in this response for completeness, includes the approximate length of the proposed 115-kV transmission line crossing, and includes the approximate permanent and temporary disturbance areas, and the approximate area within the proposed 115-kV transmission line corridor in the County's F, RR-2, RC, and EN zones. The Project will permanently disturb approximately 3.1 acres in the County's F, RR-2, RC, and EN zones, which is unchanged from the initial application. The majority (approximately 2.9 acres) of permanent disturbances result from construction and operation of the permanent access roads, substation access road, and substation site in the County's F zone.

Table 2. Information on the Crossing Length and Potential Disturbance Areas in the F, RR-2, RC, and EN Zones^a

Zone/Project Corridor Width	Approximate Length of Proposed 115-kV Transmission Line Crossing (miles)	Permanent Disturbance Area within the Proposed 115-kV Transmission Line Corridor (acres)	Temporary Disturbance Area within the Proposed 115-kV Transmission Line Corridor (acres)	Approximate Area within the Proposed 115-kV Transmission Line Corridor (acres)
Forest Zone (F)/ 100 feet ^b	4.3	3.0	7.6	61.6
Rural Residential 2-Acre Zone (RR-2)/ 50 feet ^c	0.05	0.001	0.03	0.4
Rural Commercial Zone (RC)/50 feet ^d	0.1	0.1	0.07	0.8
Estuary Natural Zone (EN)/120 feet ^e	0.2	0.0	0.0	2.5
Total^b	4.7	3.1	7.7	65.3

^a Length and potential disturbance areas are conservative and do not account for overlap, are rounded to the nearest significant figure, and are approximate.

^b Forest Zone: Permanent disturbance area includes 36 power poles (5-foot-diameter disturbance area) and guys and anchors, permanent access roads, substation access road, and substation site. Temporary disturbance area includes 36 power pole installation areas and approximately 14 conductor pulling and tensioning sites (per Table 3-2, Table 3-3, and Section 3 in the application narrative).

^c Rural Residential 2-Acre Zone: Permanent disturbance area includes 1 power pole (5-foot-diameter disturbance area) with guys and anchors. Temporary disturbance area includes 1 power pole installation area (per Table 3-2, Table 3-3, and Section 3 in the application narrative).

^d Rural Commercial Zone: Permanent disturbance area includes 2 power poles (5-foot-diameter disturbance area) and guys and anchors, and permanent access roads. Temporary disturbance area includes 2 power pole installation areas and approximately 2.5 conductor pulling and tensioning sites (per Table 3-2, Table 3-3, and Section 3 in the application narrative).

^e Estuary Natural Zone: The proposed 115-kV transmission line will span the County's EN zone and no permanent or temporary disturbances will occur in this zone.

- *Regarding Applicant's response to TCLUO 6.004(4) Staff notes that the Mt Meares Quarry and the Netarts Oceanside Sanitary District plant are existing permitted uses in the Forest Zone along the transmission line route. Are any impacts to operations of these uses anticipated?*

Response: The Mt. Meares Quarry and the Netarts Oceanside Sanitary District Plant are existing permitted uses in the F zone in the general vicinity of the proposed 115-kV transmission line route. The Project will not result in any impacts to the operations of these existing uses as described below.

Mt. Meares Quarry: The Mt. Meares Quarry is located in the F zone just north of proposed power pole 72 along an existing access road. Operations and maintenance access is described in Section 3.4 of the application narrative and will occur periodically over the life of the Project. Maintenance and repair activities will require only very infrequent trips along the existing access road and will not impact future quarry operations.

Construction traffic associated with the proposed transmission line is described in Section 3.2.10 of the application narrative. Specifically, construction traffic on the access road adjacent to Mt. Meares Quarry (between power poles 70 through 82) will be minor due to the relatively short length of the transmission line, the remoteness of the majority of the Project, and the short duration of the construction at any one location, typically fewer than 20 days. Construction traffic will consist of the construction crews traveling to and from the construction sites (that is, power pole locations and staging areas). More than one construction crew might be working at various locations along the route at the same time. However, as stated above, construction would be temporary and typically limited to 20 days or fewer per pole structure.

Construction materials (e.g., power poles, cross-arms, hardware, conductors) will be delivered along the route by truck. Line trucks, cranes, and other needed equipment will also travel to the site on a daily basis during the construction period. Tillamook PUD currently has control over gate access to the portions of the Project within the F zone.

Netarts Oceanside Sanitary District Plant: The Netarts plant is located directly west of proposed power pole 87 and directly north of the proposed Oceanside Substation. The plant is accessible from an existing improved access road connected to Cape Meares Loop. Operations and maintenance access is described in Section 3.4 of the application narrative and will occur periodically over the life of the Project. Substation maintenance may include routing inspections, testing and operating of equipment, monthly visual inspections of site and equipment, annual infrared inspections, and vegetation management. These maintenance and repair activities will not occur frequently enough to alter traffic patterns, to substantially impact access to the plant, or to encumber plant operations.

Substation construction activities are described in Section 3.2.11 of the application narrative. Construction of the Oceanside Substation access road will occur south of the plant and will not impact workers' ability to access the plant for operations and maintenance. Construction materials will be delivered to the site by truck. Line trucks, cranes, excavators, and other needed equipment will typically be delivered to the site and remain onsite until no longer needed. Once onsite, construction material will be stored within the 2-acre area planned for the substation, which is south of and out of the way of the plant.

Construction traffic will be minor due to the remote location of the substation site and limited duration of the construction schedule (approximately 14 to 18 months). This traffic will consist of the construction crews traveling to and from the substation site. The peak construction crew at the substation site is estimated to be 10 to 12 people per day. This level of temporary traffic will not impact or reduce access to the plant site during operation.

In the long term, the operations and maintenance of the Netarts Oceanside Sanitary District Plant will be improved by reducing the number and duration of electrical power outages that the plant is now being subjected to. Having a highly reliable electric power source to the plant will reduce the reliance on back-up generation, thereby reducing fuel costs, reducing operation and maintenance of the back-up generator, and extending the life of electric pumps and motors by not having them turn off in a non-controlled manner.

In summary, the Project is not expected to adversely impact operations of the Mt. Meares Quarry and the Netarts Oceanside Sanitary District Plant in the County's F zone. In addition, the Project is designed to increase the reliability of power to the Netarts Oceanside area and will ensure the quarry and plant have increased access to reliable power over the life of the Project.

- *Regarding Applicant's response to TCLUO 6.004(6), please describe arrangements for fire protection service along the route, particularly through the F zone which is not located within a local Fire Protection District.]*

Response: Project construction, operation, and maintenance will comply with applicable federal, state, and county laws, ordinances, rules, and regulations pertaining to fire prevention, presuppression, and suppression. This response provides additional detail showing how the construction contractor and Tillamook PUD will provide fire protection service along the route during Project construction and operation. Generally, the construction contractor will be responsible for the Fire Protection Plan during Project construction, and Tillamook PUD will be responsible for fire protection during operation and maintenance of the Project.

Construction. As described in Tillamook PUD's response to TCLUO 3.004(8)(1) (p. 5-8 in the application narrative), the Project will not significantly increase fire hazard, fire-suppression costs, or risks to fire-suppression personnel. During Project construction, the construction contractor will be responsible for implementing a Fire Protection Plan in coordination with the local fire districts in the Project area. The portion of the Project not located within a local Fire Protection District includes the approximately 4.3 miles of the proposed transmission line within the County's (Forest) F zone. In the County's F zone, the construction contractor will be responsible for coordinating fire protection efforts with the Oregon Department of Forestry and will demonstrate compliance with wildfire prevention and suppression requirements under Oregon Revised Statutes Chapter 477 and its associated administrative rules. These requirements include the following:

- Provide fire-prevention equipment on machinery
- Limit or stop work during periods of elevated fire danger
- Provide firefighting tools
- Provide water supplies and pumping equipment
- Provide fire watch personnel
- Suppress wildfires originating from construction activity
- Dispose of debris in a specified manner
- Construction contractor to accept liability for the State's cost of suppressing wildfires originating from construction activity

Operation and Maintenance. As described in Tillamook PUD's response to TCLUO 3.004(8)(1) (p. 5-8 in the application narrative), Project operations and maintenance activities are subject to the same requirements as construction described above. The requirements as listed above are in practice today by Tillamook PUD for its existing distribution and transmission facilities. In addition, the Tillamook PUD Emergency Response Plan lists contacts and procedures for responding to incidents, including fire-related events. The proposed Project is of the same construction and will require the same fire protection tactics as Tillamook PUD's existing transmission lines, and there will not be a significant increase in the fire hazard or an increase in fire-suppression costs, nor will there be any significant increase in risks to fire-suppression personnel.

Tillamook PUD will also maintain the corridor such that it will be free from potential fuel in the event of a forest fire, and Tillamook PUD's ability to do so will be memorialized in easement agreements. The cleared easement in the forested area will provide a fire break, helping reduce the spread of a fire. In addition, Tillamook PUD inspects transmission lines on an annual basis, both visually and with infrared

cameras, and tests and treats wood poles every 10 years. These inspection and maintenance routines help identify any potential fire hazard issues before they arise and reduce the risk of Tillamook PUD’s facilities contributing to any potential fire risk.

Application Appendix D, 'Floodway Analysis' which contains the required No-Rise Analysis for infrastructure proposed for locations within the Floodway Special Flood Hazard Area: What pole diameters were used in the No-Rise analysis? If, following the completion of final engineering, a different structure diameter is required, will the results be impacted?

Response: Attachment 4 is a revised version of Appendix D (Floodway Analysis) to the application narrative, which includes Tillamook PUD’s “No-Rise Analysis” for infrastructure proposed in the County’s Special Flood Hazard Area. The floodway analysis was revised on October 31, 2017, to update Table 1: Transmission Line Poles Modeled to be consistent with the number of power poles analyzed. Per the County’s request, the specific pole diameters used in the Floodway Analysis are included below in Table 3. Tillamook PUD does not anticipate changes to the power poles and associated diameters prior to Project construction. Should any scenario increase fill following the completion of final engineering, Tillamook PUD will provide the County with an updated Floodway Analysis for review and approval prior to construction.

Table 3. Pole Diameters used in No-Rise Analysis

Power Pole Diameter (inches)	Power Pole Type (Single/Double)	Power Pole Number(s) ^a (as shown on Figure 3 in Attachment 1)
16	Single	6, 7, 9, 25
20	Single	5
22	Double	41, 42
22	Triple	43
24	Single	27, 31, 32, 33, 34, 35, 37, 38
24	Double	40, 44, 45
36	Single	8, 26, 36, 39

^a These are the power poles and associated diameters within the effective floodway analyzed in Tillamook PUD’s Floodway Analysis, as provided in Appendix D to the application narrative.

Application Appendix G, 'Biological Resources Report', Section 5 contains a description of Applicant's approach to compliance with TCLUO Section 4.140 'Requirements for Protection of Water Quality and Streambank Stabilization'. In Appendix G, 'Biological Resources Report', Section 5.2.1, 'Permanent Impacts', Applicant identifies seven locations in Table 5-2, 'Permanent Project Features Proposed in Riparian Buffers', that require an exception to the riparian setback required by TCLUO 4.140. For the seven locations where a reduction to the riparian setback is proposed, what is the distance of the proposed setback?

Response: Tillamook PUD’s Biological Resources Report for the Project, which addresses TCLUO Section 4.140, was previously provided as Appendix G to the application. Following submittal with the application to the County, this report was revised in response to questions and comments from ODFW. On October 16, 2017, Tillamook PUD submitted a revised version of the Biological Resources Report to ODFW. This version of the report is included as Attachment 2 to this completeness response. On October 20, 2017, ODFW provided the County with a letter of determination documenting its review

and concurrence with Tillamook PUD's request for an exception to the riparian setbacks required under TCLUO 4.140(2)(d). ODFW's letter is included for completeness as Attachment 3 to this completeness response. ODFW concurred that the six locations listed in Table 5-2 of the revised Biological Resources Report (see Attachment 2) meet the requirements of TCLUO 4.140(2)(d) to allow placement of the power poles in the proposed locations.

In addition, ODFW's letter indicates that the temporary impacts proposed within several riparian buffers, as identified in Table 5-3 of the report, meet the requirements of TCLUO 4.140(2)(d) since these sites will be restored to preexisting conditions once Project construction is complete.

Finally, ODFW's letter states that it does not object to the planned actions regarding riparian trees as outlined in Table 5-4 of the report. The ODFW letter reiterates that in areas where trees are removed, mitigation will be provided in the form of replanting native conifer trees in the riparian buffers as close as feasible to the impacted location.

To confirm, Tillamook PUD is not proposing to reduce the setbacks associated with the impacts listed in Table 5-2 of the Biological Resources Report (see Attachment 2). Rather, Tillamook PUD is proposing an approximately 9.6-square-foot disturbance area surrounding the six power poles proposed within the riparian setback areas corresponding with sites S01 (power pole 5), S01A (power pole 43), S02 (power pole 8), S05B (power pole 17), S05C (power pole 18), and S06 (power pole 46); see Figure 2 in Attachment 2.

2.2 Requested Items:

Application Narrative Section 3.6, 'Avian Protection'. The narrative in Section 3.6 indicates that conductor wires will be covered. This conflicts with statements in Section 3.1.3, 'Conductors', which indicate that conductor will not be covered with insulating material. Please clarify if the conductor will or will not be covered.

Response: As described in Section 3.6 of the application narrative, the proposed 115-kV transmission line will be designed and built to avian-friendly standards² and in accordance with Tillamook PUD's Avian Protection Plan,³ which provides a minimum 60-inch horizontal separation between phase conductors and 40-inch vertical separation between phase conductors and grounded hardware. Aerial markers will be used at river and slough crossings to provide visibility in accordance with the Avian Protection Plan.

As a point of clarification to the text provided in Section 3.1.3 of the application narrative, the transmission or distribution conductor wires will not be covered with insulating materials unless otherwise identified for avian protection. The conductor wire for the proposed 115-kV transmission line will consist of bare wire and will not be insulated or covered with rubberized insulation. In areas identified for avian protection in the vicinity of the Southern Flow Corridor project, a 4-foot-long plastic sleeve (cover) will be fitted over the center wire and insulator of the distribution line, where the distribution line shares the same poles as the transmission line along Goodspeed Road, extending in each direction along the conductor from the crossarm to prevent accidental electrical contact with birds. Tillamook PUD is committed to minimizing bird interaction with power lines to the greatest extent practicable and will construct the line to meet required NESC standards, and USFWS guidelines for avian protection.

² Avian Power Line Interaction Committee, 2006, *Suggested Practices for Avian Protection on Power Lines*.

³ Tillamook PUD, 2017, *Avian Protection Plan*.

Application Narrative Section 3.7, 'Noxious Weed Control' and Application Narrative Section 5.2.1, 'Article 3 - Zone Regulations' (addressing TCLUO 3.002(4)(n)(l)(c)). How will re-seeding and noxious weed control be coordinated with adjacent agricultural operations? Has applicant developed any criteria for determining what constitutes successful reclamation?

Response: The construction contractor will be responsible for reclamation efforts following construction. Where agricultural operations exist, the Tillamook PUD and the construction contractor will work with underlying landowners to ensure that the disturbed landscape is reestablished to the preexisting conditions. Reclamation efforts will be made to limit the spread and establishment of a noxious weed community within the disturbed areas. Reseeding will be done as soon as possible during the optimal period after construction. Where applicable, certified “noxious weed-free” seed will be used on areas to be seeded. On agricultural lands that are cultivated or pasture lands, this effort will be coordinated with the landowner, so that the appropriate reclamation occurs.

As described in Section 3.7 and in Tillamook PUD’s response to TCLUO 3.002(4)(n)(1)(c) in Section 5.2.1 of the application narrative, low-lying vegetation will be allowed to grow throughout the corridor following construction. Farming can continue in areas of the proposed corridor that were previously in farm use, which will be ensured through establishment of easements. In addition, the easement will provide that the areas disturbed during construction will be restored by the construction contractor for continued use of the land for agricultural production. Tillamook PUD will similarly restore all areas disturbed during required maintenance or repair of the proposed Project.

As described in Section 3.3.5 of the application narrative, disturbed areas will be recontoured and seeded and restored to as near original condition as possible. Surface scarification for seeding will be done where necessary for germination. Except for the actual location of the power poles, all sites will be restored as closely as possible to the original contours.

Application Narrative Section 5.2.3, 'Article 6 - Conditional Use Procedures and Criteria'. Regarding Applicant's response to TCLUO 6.004(4), additional information describing existing infrastructure and uses that are occurring on properties adjacent to the proposed project will be important in characterizing the area and ascertaining if those uses will be impacted.

Response: Per the request of County staff, and in accordance with TCLUO 6.040(4), Tillamook PUD provides additional information describing existing infrastructure and uses that are occurring on properties adjacent to the proposed Project in the following zones subject to the County’s conditional use criteria.

Forest (F) Zone: Tillamook PUD’s response to TCLUO 6.040(3) and (4) describe the portions of the Project located within the County’s F zone. Project length, permanent and temporary disturbances, and the corridor area within the F zone are provided in Table 2 (see above).

The proposed transmission line route will be developed within a 100-foot-wide easement across nine tax lots within the County’s F zone (see revised Figure 2 in Attachment 1). The site boundary of the proposed Oceanside Substation will be located within an approximately 2-acre easement on a single tax lot within the F zone (see Map 8 to revised Figure 2 in Attachment 1).

Section 7 of the Farm and Forest Impacts Assessment in Appendix C to the application narrative describes lands adjacent to and surrounding the proposed transmission line corridor in the County’s F zone. Private timber companies, Green Crow Corporation and Stimson Lumber Company, manage corporate forest lands along the proposed transmission line corridor. Specifically, Green Crow Corporation manages over 550 acres along the corridor and Stimson Lumber manages over 2,000 acres

along the corridor. The Farm and Forest Impacts Assessment demonstrates that no significant forest impacts to surrounding lands are anticipated as a result of the Project.

In addition, the Mt. Meares Quarry and the Netarts Oceanside Sanitary District Plant are existing permitted uses in the F zone along the proposed 115-kV transmission line route. As described in the completeness response above, the Project will not adversely impact operations of the Mt. Meares Quarry and the Netarts Oceanside Sanitary District Plant in the County's F zone.

Where possible, the proposed transmission line route through the County's F zone is located directly adjacent to a network of existing private forest roads to minimize impacts on surrounding lands. Parallel construction along existing forest roads also increases the ease of access to the transmission line for future maintenance activities. Furthermore, the proposed Project will not substantially limit, impair, or prevent the allowed uses of surrounding properties or the permitted uses in the F zone listed in Table 1 of TCLUO 3.004(13).

Estuary Natural (EN) Zone: Tillamook PUD's response to TCLUO 6.040(3) and (4) describe the portions of the Project located within the delineated EN zone. Project length, permanent and temporary disturbances, and the corridor area within the delineated EN zone are provided in Table 2.

The proposed transmission line route will be developed within a 120-foot-wide easement across one tax lot within the County's EN zone (see Map 4 to revised Figure 2 in Attachment 1). Tillamook PUD has designed the Project to span above the EN zone to minimize impacts within estuarine areas. The EN zone where crossed by the Project is situated over the Tillamook River and one existing parcel. No power poles or other Project components are proposed within the EN zone except for the aerial conductor (see revised Figure 4 in Attachment 1).

Property directly adjacent to the north and south of the transmission line corridor includes the Tillamook River and undeveloped County land. The delineated EN zone is bound to the east and west by existing levees. Properties opposite the levees to the east and west include farm land in the County's F-1 zone. Power poles 48 and 49 are intentionally located landward of the levees to minimize disturbances to the EN zone and are located along the edges of farmed fields in the F-1 zone in order to minimize disturbances to farm operations.

The Tillamook River, where crossed by the Project, is a navigable waterway. Therefore, to ensure the river remains navigable, the proposed crossing requires a permit from the USACE under Section 10 of the Rivers and Harbors Act of 1899. The Project was specifically routed to avoid existing and planned public access areas and will not preclude the public from using estuarine areas within the EN zone. The presence of the Project will not interfere with public use and access to the Tillamook Bay estuary. The general public will maintain access to and use of the estuarine resources crossed by the Project in the County during construction and operation. Thus, the Project will not unreasonably interfere with the public use and enjoyment of the Tillamook Bay estuary and will not impact the use of surrounding lands.

Rural Residential 2-acre (RR-2) Zone: Tillamook PUD's response to TCLUO 6.040(3) and (4) describe the portions of the Project located within the County's RR-2 zone. Project length, permanent and temporary disturbances, and the corridor area within the RR-2 zone are provided in Table 2. The majority of the proposed 50-foot-wide transmission line corridor within the RR-2 zone will be collocated with the public right-of-way for Wilson River Loop Road (see Map 2 on revised Figure 2 in Attachment 1). No poles will be placed on private RR-2 zoned property. Only one power pole will be placed within the County's RR-2 zone, and it will be located within the right-of-way for Wilson River Loop Road; therefore, it will not limit or prevent permitted uses on surrounding properties.

Power pole 16 is located within the existing County road right-of-way for Wilson River Loop Road and within the F-1 zone. At power pole 16, the northern corner of the transmission line corridor was reduced to the extent of the road right-of-way rather than the full 25 feet each side of the transmission line. Because of this adjustment, an easement will not be needed for the southern boundary of three tax lots in the RR-2 zone where the current uses consist of residential homes and a commercial bait shop. The property south of the transmission line corridor at power pole 16 in the Wilson River Loop Road right-of-way includes a residence and farmland in the F-1 zone. An existing Tillamook PUD distribution line is collocated directly south of and within the existing Wilson River Loop Road right-of-way. Again, an easement is not needed for this RR-2 property as the transmission line corridor will be located within the County's existing right-of-way for Wilson River Loop Road.

Power pole 20 is located within the County's existing right-of-way for Wilson River Loop Road, and a portion of the 50-foot-wide corridor north of power pole 21 is also located in the County right-of-way. Power pole 20 is over 50 feet from the nearest lot zoned RR-2 located north of Wilson River Loop Road. The portion of the lot directly north of and adjacent to the Project is predominantly undeveloped; the nearest residence in the RR 2 zone is approximately 290 feet northeast of the proposed transmission line corridor. Adjacent property to the south of the transmission line corridor at power pole 20 in the Wilson River Loop Road right-of-way includes a residence and farmland in the F-1 zone.

As part of the Project, Tillamook PUD will remove the existing distribution line power poles along Wilson River Loop Road and relocate the distribution line to the proposed transmission line power poles to minimize impacts on adjacent properties in the RR-2 zone. Tillamook PUD maintains a utility placement agreement with the Tillamook County Public Works Department for use of County right-of-way. Tillamook PUD received the County permit for Utility Facilities within a Public Right-of-way for the proposed transmission line and structures located within the County right-of-way along Wilson River Loop Road, permit number UP#5251.

Therefore, with the exception of one power pole, the proposed transmission line corridor is sited south of and adjacent to Wilson River Loop Road to minimize impacts to residential property within the RR-2 zone on the north side of the road.

Rural Commercial (RC) Zone: Tillamook PUD's response to TCLUO 6.040(3) and (4) describe the portions of the Project located within the County's RC zone. Project length, permanent and temporary disturbances, and the corridor area within the RC zone are provided in Table 2. The proposed transmission line corridor begins in the RC zone to connect the existing BPA Tillamook Substation (also located in the RC zone) to the proposed Oceanside Substation. The proposed transmission line corridor must cross the RC zone to exit the existing substation.

The property located directly north of the portion of the transmission line located in the RC zone is a cultivated field in the County's F-1 zone (see Map 1 on revised Figure 2 in Attachment 1). A farm access road is located approximately 50 feet north of and parallel to the transmission line between power poles 2 and 3. Project staging and access during construction and operations will occur from Tillamook PUD's and BPA's property within the RC zone and will not impact access or use of the existing farm access road. Furthermore, the transmission line is intentionally sited toward the western boundary of the RC zone to follow along Port of Tillamook Bay's railroad right-of-way and avoid bifurcating cultivated fields and existing farm operations to the north in the F-1 zone.

The property located directly east of BPA's Tillamook Substation is also in the County's RC zone. No portion of the Project is located on this property (see Map 1 on revised Figure 2 in Attachment 1). North Evergreen Drive is located east of, adjacent to, and parallel to the BPA Tillamook Substation and provides access to the BPA Tillamook Substation and Tillamook PUD's property within the RC zone.

Oregon Route (OR) 6 is located on adjacent property directly south of and parallel to the portion of the transmission line in the RC zone. A mixture of residential uses and commercial fuel and storage facilities is located south of OR 6 and over 650 feet from the proposed transmission line in the RC zone.

Traffic associated with Project construction and operations is described in Section 3.2.10 and Section 3.4 of the application narrative. These sections demonstrate that temporary construction traffic and periodic operations and maintenance trips associated with power poles 1 and 3 will not adversely impact traffic or access along OR 6 and North Evergreen Drive.

The Port of Tillamook Bay's railroad right-of-way is located directly west of and adjacent to Tillamook PUD's property. Power pole 3 is located approximately 270 feet from the railroad right-of-way. Again, the Project is intentionally collocated along the railroad right-of-way to avoid bifurcating cultivated fields and existing farm operations to the north in the F-1 zone. Misty Meadow Dairy is located directly west of and adjacent to the railroad right-of-way in the F-1 zone. The Project will not limit or prevent the use of existing dairy operations.

Overall, within the RC zone the transmission line corridor is in a previously developed commercial area, is similar in character to existing electrical transmission and substation facilities, and will not limit or prevent existing uses on surrounding properties or within this discrete area within the RC zone.

Application Appendix C, 'Farm and Forest Impacts Assessment', Section 3.3.1, 'Externalities Identified with Logical Potential for Impacts', indicates that lost farm production within the easement area is offset by the financial compensation associated with the easement payments. Elsewhere in the application submittal, Applicant states that disturbed areas will be restored and that agricultural activities may continue to be conducted within the easement area following construction. Please clarify what area may be associated with lost farm production within the easement area.

Response: The Project includes the development of 45 power poles within the proposed transmission line corridor (easement area) in the County's F-1 zone. Applying a conservative 5-foot-diameter permanent disturbance area per power pole, the 45 power poles will result in approximately 0.02 acre (approximately 882 square feet) of permanent disturbance within the F-1 zone. Associated guy wires, and anchors also result in approximately 0.04 acre (approximately 1,550 square feet) of combined permanent disturbance for the 45 power poles. Thus, the Project will result in approximately 0.06 acre of lost farm production within the proposed transmission line corridor in the County's F-1 zone.

Tillamook PUD demonstrated in response to TCLUO 3.002(4)(n)(1)(d) in the application narrative that apart from the 0.06 acre of lost farm production resulting from 45 power poles and related guy wires and anchors, landowners will be able to continue farming areas within the easement area in the F-1 zone. Continued farm use will be ensured through establishment of easements allowing that use.

Furthermore, Section 3.3.1 in the Farm and Forest Use Impacts Assessment (Appendix C) to the application demonstrates that lost farm production within the easement area is offset by the financial compensation associated with the easement payments. The impacts assessment concludes that the Project will not result in a significant change to, or a significant increase in the cost of, farm and forest practices on surrounding lands.

Conclusion

TPUD respectfully requests that with this additional information, the County deems the application complete and initiates formal review of the Project.

Please call with any questions or comments. I can be reached at 503-736-4012 or Paul.Seilo@ch2m.com.

Sincerely,



Paul Seilo, AICP

CH2M HILL Engineers, Inc.

c: KC Fagen/Tillamook People's Utility District
Tommy Brooks/Cable Houston

Attachments

1. Revised Figures 2, 3, and 4 to the Application
2. Biological Resources Report for the Tillamook-Oceanside 115-kV Transmission Line Project (2nd Revision, October 2017)
3. Oregon Department of Fish and Wildlife Letter from Robert W. Bradley (October 20, 2017)
4. Revised Appendix D (Floodway Analysis) to the Application Narrative (Revised October 31, 2017)

Attachment 1
Revised Figures 2, 3, and 4
to the Application

Attachment 2
Biological Resources Report for the
Tillamook-Oceanside 115-kV
Transmission Line Project
(2nd Revision, October 2017)

Attachment 3
Oregon Department of Fish and
Wildlife Letter from Robert W. Bradley
(October 20, 2017)

Attachment 4
Revised Appendix D (Floodway
Analysis) to the Application Narrative
(Revised October 31, 2017)

CASE: PCN 2
WITNESS: NADINE HANHAN

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 204

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

STAFF DR TO TPUD NO. 13

Please see Tillamook PUD/200, Fagen/7, lines 4-12. Please explain:

- a. Why the avoidance of commercial areas was prioritized over the avoidance of farm/agricultural areas.
- b. Whether there was agreement among participants of the Citizens' Advisory Group (CAG) that this (prioritizing avoidance of commercial areas) should be the case.
- c. How the prioritizing of avoiding commercial areas over farm/agricultural areas is consistent with statewide land use planning goal three, to preserve and maintain agricultural lands for farm use.

TPUD RESPONSE

a) The Citizen Advisory Group developed a set of criteria for prioritizing the potential line routes, where item 14 below lists the need to be distant from existing structures, residences, etc. The following was considered in the early stages of the CAG proceedings (from meeting notes 1-27-15):

The following criteria should be minimized as often and occur to the least extent that can be reasonably obtained:

- 1) Visual impacts
- 2) Conflicts with existing land uses, structures and congestion
- 3) Environmental
- 4) Number of landowners and properties affected

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

- 5) Effects on existing vegetation
- 6) Need for special structures
- 7) Space requirements
- 8) Angle poles
- 9) Co-location of circuits serving same geographic area
- 10) Need for access roads

Additionally, the following criteria should be maximized as frequently as possible and occur to the greatest extent that can be reasonably obtained:

- 11) Co-location within existing linear corridors
- 12) Use existing right-of-ways (ROWs) and pole locations
- 13) Constructible and accessible for maintenance during poor weather conditions
- 14) Be distant from existing structures, residences, etc.
- 15) Have the ability to obtain desired ROW width
- 16) TOTL CAG / TOTL CAG Meeting Summary - 01-27-15 - final Page 10 of 11
- 17) Length of straight sections (straighter is better)

Avoiding impact to people was given higher priority than avoiding land and was listed in the following order of importance:

Minimize the number of landowners and properties affected in order of importance

- Residential
- Commercial
- Farm/Agriculture

TILLAMOOK PEOPLE’S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

The route selection criteria were formalized in the 2-24-15 document “TOTL CAG / Route Evaluation Proposed Criteria”, see TPUD/205, Fagen/6 for the synopsis of the document. As well, the full document is attached as Exhibit TPUD-Staff-DR13a.

b) TPUD staff belief there was a general sense of agreement among the CAG members based on the fact the CAG members applied these criteria in the route selection process.

c) As with other Statewide Planning Goals, Goal 3 relating to farm lands seeks to strike a balance between preserving agricultural land and accommodating non-farm uses that must utilize that same land. The Goal 3 statutes and rules expressly contemplate that lands zoned for farm use will have to accommodate utility facilities like transmission lines. Indeed, utility facilities necessary for public use are authorized pursuant to ORS 215.283(1) as a permitted use, in contrast to other non-farm uses authorized only as conditional uses in ORS 215.283(2).

Given that the project must pass through some farm land – because there is no route between the City of Tillamook and the Oceanside Substation that does not include farm land – and in light of the City’s earlier denial of a route that made more use of residential, commercial, and industrial areas, TPUD identified a route that would have very little impact on farm land. The placement of the transmission structures at the edge of farm properties and use of existing public right-of-way preserves and maintains nearly all of the agricultural lands for farm use, thereby promoting the policy objectives in Goal 3.

CASE: PCN 2
WITNESS: NADINE HANHAN

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 205

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

6 ENVIRONMENTAL IMPACTS

There are many Substation Service areas listed in TPUD's CWP but only five (5) of those Substation Service areas require service upgrades within the four-year CWP range. Those five (5) Substation Service Areas are known as Beaver, Garibaldi, Hebo, Nestucca and Wilson River and all are located within Tillamook County, OR.

Within those five (5) Substation Service Areas there are thirteen (13) separate projects. Nine (9) of those projects consist of rebuilding existing overhead distribution and transmission lines, two (2) projects are building new substations and two (2) projects is building new feeders from existing facilities.

Build – Construct new facilities where none existed before

Rebuild / Reinsulate – Removal and/or reconstruction and upgrade of existing facilities

6.1 Prime Farmland

Build Projects –There are four (4) projects in TPUD's CWP that are "Build" projects. Two of those are the building of new substations and two are building new feeders. These substations would typically be approximately 5 acres or less in total disturbance and would be located generally adjacent to a populated area that results in an electric load concentration. The two (2) new substations will be built on NPF lands. The new feeder lines are proposed to be constructed adjacent to existing roadways to provide on-going maintenance access. This would minimize any new impacts to prime farmland. Mitigation measures for this area are discussed in Section 7 of this BER.

Rebuild Projects – In all cases, these projects consist of upgrading and replacing existing overhead distribution lines within the existing right-of-way. Because these projects are rebuilds of existing infrastructure, no new disturbance to PFL or NPF is anticipated. There would be minimal environmental impact to any PFL in these substation service areas. Mitigation measures for this area are discussed in Section 7 of this BER.

6.2 Soils/Vegetation

The environmental impact to soils would be minimal during and after construction of the facilities in TPUD's CWP. Impacts to vegetation would include loss or damage of the ground cover. Areas of construction will be predominantly in areas of existing ground disturbances along existing utility

corridors, or along existing access roads. In most cases the ground cover will return once construction is completed. Mitigation measures for this area are discussed in Section 7 of this ER.

6.3 Floodplains & Wetlands

There are several ephemeral creeks and drainages within each of the project substation service areas. Wetlands identified by the National Wetlands Inventory within the project areas are interspersed and few.

Build Projects - These projects would have minimal environmental impact to floodplains and wetlands. The build projects would span smaller creeks and drainages overhead. Placement of structures within drainage bottoms or creek beds would be avoided to the greatest extent feasible. In areas where the installation of a structure is required, approximately 2 square feet per pole will be ultimately disturbed. Additional disturbance would result from overland access during construction and maintenance activities. Some grading through dry creek beds may be necessary to provide construction access where terrain proves impassable. The placement of these structures would not have any measurable impact on expected flood elevations or add any substantial risk or hazard as a result of the projects. Mitigation measures, if any, for these resources are discussed in Section 7 of this BER.

6.4 Cultural Resources

All "Build" projects that include ground disturbance need to be reviewed by archaeology, on a project-to-project basis, prior to work commencing by submitting a Section 106 (SHPO Clearance Form). This form should be submitted approximately two months prior to the commencement of construction to allow for the 30-day review period. For the "Rebuild" projects, even if they were found to be eligible for listing in the NRHP they would likely be classified as "no adverse effect".

Mitigation measures, if any, are discussed in Section 7 of this BER. A copy of SHPO Clearance Form can be found in the agency correspondence Section 8 under the SHPO tab.

6.5 Threatened and Endangered Species

The environmental impact to any threatened and endangered species is anticipated to be minimal during and after the construction of the Project facilities. There will be no facilities installed in rivers, active creeks or lakes. Dredge or fill material will not be placed in waterways and a Stormwater Pollution Prevention Plan (SWPPP) will be in place in accordance with the National

Pollutant Discharge Elimination System (NPDES). These measures would ensure minimal effect to aquatic species.

There are several miles of the linear overhead distribution line that will require upgrade of existing facilities. These upgrade Projects (Rebuild) will result in no net loss to area habitat or new impacts on area resources. New linear Projects will be designed in accordance with Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2012. Distribution pole placed approximately 400 feet apart will result in a permanent disturbance of approximately 2 square feet per pole.

Two (2) new substations are part of the CWP. These substations would typically be approximately 5 acres or less in total disturbance and would be located generally adjacent to a populated area that results in an electric load concentration.

All areas that are listed as protected by the USFWS would be avoided or mitigated as directed. Additional mitigation measures identified through cooperation with the BLM, the USFS or other area agencies would be employed as required. Mitigation measures for this area are discussed in Section 7 of this ER.

6.6 Fish and Wildlife Resources

The environmental impact to fish and wildlife would be minimal during and after construction of the facilities in TPUD's CWP. Any impact to wildlife would result from ground disturbance from the installation of the facilities and associated access.

As a result of the "rebuild" Projects, no net loss of habitat is anticipated. Existing disturbed corridors, access roads and other facilities will be utilized for these activities. For the new "build" Projects which consists of the building of two (2) new substations. Typically, a new substation would utilized 5 acres or less in total land disturbance and would be located generally adjacent to a populated area that results in an electric load concentration. Raptors and other large aerial perching birds are highly susceptible to electrocution when they come in contact with power lines. Environmental impact to these raptors and other large aerial perching birds would be minimized on the two (2) new feeder "build" projects with design measures as outlined in Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2012.

ODFW is requesting site visits to each location in order to identify new pole locations, locations where new overhead distribution lines will cross a water body and any planned maintenance access

roads. Transparency on these specifics will allow ODFW to better access potential impacts to fish and wildlife resources within new construction areas. Mitigation measures for this area are discussed in Section 7 of this ER.

6.7 Coastal Areas

Coastal areas exist within the service areas of TPUD's CWP, however there are no new "build" or "rebuild" projects planned immediately adjacent to or within the coastal waters. The two new substations are planned in excess of 0.75 mile east of the coast line. New feeder lines will be constructed within developed areas immediately adjacent to existing roads. All other projects will involve reconstruction of existing lines within developed areas. With the implementation of stormwater measures identified in Section 7 of this ER, impacts to coastal areas are anticipated to be minimal.

6.8 Air Quality

Potential sources of air quality degradation would primarily be temporary dust and engine exhaust emission produced by construction and maintenance vehicles. Construction and maintenance activities would be intermittent and short-term. Environmental impacts to air quality are anticipated to be minimal. Mitigation measures for this area are discussed in Section 7 of this ER.

6.9 Water Quality

Any environmental impacts to the water quality would occur during construction as a result of erosion during storm events. Soil erosion is the most common pollutant occurring during construction as sediment discharges can easily travel to state surface waters through storm water runoff.

Standard Stormwater Best Management Practice (BMPs) will be employed to prevent runoff to the adjacent waterway that may result from the installation of new structures along the existing corridor or access during construction. Mitigation measures for this area are discussed in Section 7 of this BER.

6.10 Aesthetics

The projects are located in rural areas of Oregon. The majority of the construction route is generally along county roads or previously disturbed areas. All of the "Rebuild" Projects replace existing facilities thus causing no additional impact to the area aesthetics. The "Build" Project is located in

very rural area and is anticipated to result in minimal visual impact due to the low user frequency of the area.

A few areas that Project 331B in the Hebo Service Area parallels the US Highway 101 or better known as the Oregon Coast Highway, listed as a scenic highway. This project is a rebuild of an existing line. There is also existing project upgrades that are located near the Siuslaw National Forest but all construction required in these areas will not impact the areas aesthetics, in fact, in areas where the poles may be old and deteriorated, by replacing a new pole will enhance the aging line. No historical monuments are located near any of the project areas. Mitigation measures, if any, for these resources are discussed in Section 7 of this BER.

6.11 Transportation

All overhead crossing of transportation facilities will be designed in accordance with the National Electric Safety Code (NESC) to provide appropriate clearances as necessary.

The “Rebuild” projects consist of upgrading the existing overhead distribution lines the new structures are anticipated to be approximately the same height as the existing poles along the same corridor and therefore no net additional impact to existing transportation facilities are anticipated. The installation of new structures as a result of the new build Projects are not anticipated to affect air traffic to rural airports or private airstrips, however all new structures should be verified with the FAA criteria tool to determine their no hazard status.

Installations will be coordinated with local agencies as necessary. With this coordination, minimal impact would occur to these transportation facilities during the construction process of the projects listed in TPUD's CWP. Construction impacts would be temporary and intermittent. Periodically, traffic could be stopped or slowed on any arterial roadway for short periods of time while TPUD's construction and maintenance crews string or restring the overhead distribution line.

Mitigation measures for this area are discussed in Section 7 of this ER.

6.12 Noise, Radio and Television Interference

The projects listed in TPUD's CWP are mainly found in rural areas. No schools, businesses or residential developments are located within the vicinity of any planned construction of the projects listed in TPUD's CWP.

CASE: PCN 2
WITNESS: NADINE HANHAN

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 206

**Exhibits in Support
Of Opening Testimony**

February 7, 2018

TILLAMOOK PEOPLE'S UTILITY DISTRICT RESPONSE TO STAFF DATA REQUESTS

STAFF DR TO TPUD NO. 30

Has the Tillamook People's Utility District (TPUD) performed or obtained analysis on the N-1 difference between the existing radial distribution configuration and the proposed transmission line with open loop distribution design? If so, please provide any such analyses.

TPUD RESPONSE

Yes, a high level analysis was performed in July 2016 using Synergy power flow software. A formal document was not produced. An explanation of the analysis is provided below and supporting documents are provided as listed below, which are outputs from the power flow simulation software.

TPUD developed a computer simulation model for the entire TPUD electric system based on the 2016 grid configuration and load distribution at the peak load period in 2016. The 2016 system peak was 111MW and occurred on Wednesday, January 3, 2016 at 9 a.m. Loads from TPUD's TWACS metering and industrial metering systems were loaded into the model and totaled at the feeder and transformer levels. These loads were then scaled to the all-time system peak load of 131MW that occurred in December 2009. The substation transformer loads from the two peaks were used to scale the 2016 load to the 2009 loads, thus providing adjusted peak 2016 loads. For example, if a transformer had a load of 20MW in 2016 and 24MW in 2009, then 2016 loads at the feeder level that originate out of the transformer were increased by a factor of 1.2 ($24/20=1.2$). The adjusted 2016 loads at the feeder level were then compared to previous data and studies for feeder loading, and TPUD staff determined that the adjusted loads were within reason. For example, previous loads for Oceanside (W51) were set at 11.6 MW, whereas the

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model used for this analysis had the Oceanside loads at 10.3MW. This load was then compared to known loads for W51 from the SCADA data that goes back two years, where the feeder peak was 8.6MW (FeederW51 has since reached a peak of 9.2MW in January of 2017, when the temperature dropped below freezing for 3 consecutive days). These variations are considered to be within the normal range given the warmer than usual temperatures in 2014 and 2015. Once loads were adjusted for the 2009 peaks in the system model, the total system load in the computer model was 134MW, which was considered by TPUD to be consistent with the 131MW system peak recorded in December 2009.

The base case analysis was performed using the system model and the base case N-1 analysis included the loss of the largest system component, which is the Wilson T2 44MVA rated transformer. Load switching was performed to move loads serviced by Wilson T2 to neighboring substations, namely Wilson T1, Garibaldi, Trask, South Fork, and Mohler.

Additional analysis was performed for a second distribution feeder out of the Trask substation to Netarts and Oceanside where both feeders were rebuilt using 465AAAC conductor rated for 630 amps or 27MW. This second feeder was modeled and analysis was performed. The 10.3MW loads in Netarts and Oceanside were divided between the existing feeder W51 and the new feeder T41. Under normal system configuration, the two feeders would serve the Netarts and Oceanside customers within the required voltage range (126 to 118 at the primary voltage – this allows for a 4 volt drop from the primary line to the customers meter). For base case N-1 analysis (at the system level with Wilson T2 out of service) the system performance was the same as prior to adding the second feeder T41. This is because all of the feeder W51 load for the base case N-1 analysis had to be switched to the Trask substation. For the base case N-1 with

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two feeders serving, the entire Netarts and Oceanside load would also have to be switched to the Trask substation. Thus the transformer loading of Garibaldi, Wilson T2, and Trask are loaded at the same levels regardless if there are two feeders that would serve the Netarts and Oceanside customers.

Feeders W51 and T41 were further analyzed under the conditions if one of the two feeders would be out of service. The total voltage drop from the Trask substation to the end of the T41 under N-1 conditions was 12.6 volts at the primary voltage level, which exceeds the maximum allowed voltage drop of 8 volts ($126-118 = 8$). The results showed that voltage regulators would be required on both feeders (W51 and T51) to serve today's load conditions (10.3MW) for either feeder being out of service. This raised the issue of having brand new facilities installed that required support facilities in order to meet industry standard voltage levels for events that occur on a regular basis, at least one to two times a year. The second issue is, even with two feeders, the peak load on the feeder will be over 5MW and the power would travel over 10 miles from the power source. This creates a large voltage drop issue given that all of the 5MW is located at the end of the feeders and is not distributed along the feeder as would be typical.

The following Exhibits are included from the two feeder N-1 analysis:

1. Exhibit TPUD-Staff DR30-1 Report_Exception Summary, showing the line sections (as modeled, the line sections represent a section of wire between two poles or a piece of equipment such as a fuse). There are over 300 sections that have voltage violations or overloaded conductors.

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2. Exhibit TPUD-Staff DR30-2 Report_Feeder Min _ Max, showing maximum conditions and minimum conditions. The maximum conductor loading is 116 percent, which can be resolved with additional reconductoring. The minimum voltage is 116V out in Whiskey Creek. This issue can be resolved by moving the voltage regulators up line about ¼ of mile. However, voltage regulators would still be required due the excessive voltage drop during peak load under N-1 conditions (one of the two feeders out of service).
3. Exhibit TPUD-Staff DR30-3 Report_Feeder Summary, showing the results of the power flow analysis for W51 and T41.
4. Exhibit TPUD-Staff DR30-4 Feeder Config Plot, showing how feeders W51 and T41 were configured for the analysis. While some load could be transferred off of T41 to an adjacent feeder (as long as both transformers at the Wilson River substation were on-line), this load is relatively close to the Trask substation and does not have sufficient impact on the analysis to be able to remove the voltage regulators.
5. Exhibit TPUD-Staff DR30-5 Voltage Level Plot, showing the voltage levels for T41 with T51 out of service. The voltage at the Trask substation is at the maximum value of 126V and the voltage just prior to the voltage regulators is below the 118V limit. The voltage at the extremities of Oceanside is 119.1V, which is 1.1V above the minimum limit.