

BEFORE THE BOARD OF COUNTY COMMISSIONERS
FOR COLUMBIA COUNTY, OREGON

In the Matter of the Application by NEXT)
Renewable Fuels Oregon, LLC for a Use)
Permitted Under Prescribed Conditions, Site) FINAL ORDER NO. 12-2022
Design Review and Variance for a Renewable)
Diesel Production Facility at Port Westward (DR)
21-03; V 21-05)

WHEREAS, on January 19, 2021, NEXT Renewable Fuels Oregon, LLC (hereinafter, the "Applicant" or "applicant"), submitted an application for a Use Permitted Under Prescribed Conditions in the Resource Industrial - Planned Development (RIPD) Zone and a Site Design Review for a proposed renewable diesel production facility and a Variance to buffering and screening requirements for the development; and

WHEREAS, the proposed site, which is approximately 150 acres, is located in the RIPD Zone in the Port Westward Industrial Park, near Clatskanie, Oregon, and identified as Tax Map ID Numbers 8422-00-00100, 8422-00-00200, 8422-00-01100, 8421-00-00700, 8416-00-00200, 8416-00-00300 and 8422-00-00300; and

WHEREAS, County planning staff deemed the application incomplete on February 17, 2021, and on July 13, 2021, the Applicant submitted revised application materials to address some of the outstanding items identified in the County's incompleteness letter. The Applicant also requested that the County deem the application complete in accordance with ORS 215.427; and

WHEREAS, staff consequently deemed the application complete on July 15, 2021, and proceeded with processing the application; and

WHEREAS, staff transitions and multiple revisions of application materials resulted in a lengthier review of the application, and in order to comply with statutory review timeframes, the Board of County Commissioners (hereinafter, the "Board") took original jurisdiction over the application on October 20, 2021, in accordance with Sections 1603 and 1612 of the Columbia County Zoning Ordinance and Section 11 of the Columbia County Planning Commission Ordinance (Ordinance No. 91-2, as amended); and

WHEREAS, the Applicant submitted revised application materials on December 14, 2021, to address critical issues raised by staff; and

WHEREAS, following proper notice by publication in the *Clatskanie Chief* and the *Chronicle* on December 29, 2021, and the *Spotlight* on December 31, 2021, and notice by mailing to those entitled on December 23, 2021, the Board held a hearing on the application on January 19, 2022, at which time the Board admitted all written evidence submitted prior to the hearing; and

WHEREAS, at the conclusion of the hearing, the Board left the record open for seven days (until January 26, 2022) for new written testimony and evidence, followed by seven days (until February 2, 2022) for written testimony and evidence in rebuttal, and then seven days (until February 9, 2022) for the Applicant's final argument; and

WHEREAS, the Board continued its deliberations to February 9, 2022, at which time the Board admitted all written evidence and testimony received during the open record period, except for comments by Jan Bays, Barbara Green, Helen Shaw, Mark Uhart, and Sandra Moilanen, which were submitted during the rebuttal period but did not contain rebuttal evidence or testimony. The Board also admitted the Applicant's final argument, which was submitted on February 7, 2022; and

WHEREAS, staff then presented a revised recommendation addressing issues raised at the hearing and during the open record period; and

WHEREAS, following its deliberations, the Board voted to tentatively approve Application DR 21-03 and V 21-05, subject to conditions, as presented in staff's revised recommendation;

NOW, THEREFORE, IT IS HEREBY ORDERED as follows:

- A. The Board of County Commissioners adopts the following as findings in support of its decision:
 - 1. The Supplemental Findings of Fact and Conclusions of Law, attached hereto as Exhibit A and incorporated herein by this reference; and
 - 2. The findings and conclusions in the Applicant's pre-hearing testimony, dated January 17, 2022, attached hereto as Exhibit B and incorporated herein by this reference, to the extent those findings are consistent with this Final Order and the Supplemental Findings of Fact and Conclusions of Law; and
 - 3. The Applicant's final argument, attached hereto as Exhibit C and incorporated herein by this reference, to the extent those findings are consistent with this Final Order and the Supplemental Findings of Fact and Conclusions of Law. The County specifically rejects statements in Exhibit C to the effect that CCZO Section 681 is not an approval criterion; and
 - 4. The findings and conclusions in the Staff Report to the Board of County Commissioners dated January 12, 2022, which is attached hereto as Exhibit D and incorporated herein by this reference, to the extent those findings are consistent with this Final Order and the Supplemental Findings of Fact and Conclusions of Law; and
 - 5. The above recitals.
- B. Based on the foregoing and the whole record on this matter, the Board of County Commissioners **APPROVES DR 21-03 and V 21-05** for the development of the proposed renewable diesel facility and associated development on property identified as Tax Lot numbers 8422-00-00100,

8422-00-00200, 8422-00-01100, 8421-00-00700, 8416-00-00200, 8416-00-00300 and 8422-00-00300, **subject to the following conditions:**

1. This Design Review approval, Use Permitted under Prescribed Conditions in the RIPD Zone, and Variance shall remain valid for two (2) years from the date of the final decision. This permit shall become void, unless the proposal has commenced in conformance with all conditions and restrictions established herein within the two-year validity period. Extensions of time may be granted by the Planning Director if requested in writing with the appropriate fee before the expiration date, given the applicant is not responsible for failure to develop.
2. All applicable permits from state and federal agencies, such as the Oregon Division of State Lands (DSL) and Oregon Department of Fish and Wildlife (ODFW) must be obtained by the land owner prior to commencing site clearing or development activities.
3. The applicant shall obtain necessary approvals for required onsite wastewater and sewage systems in accordance with Oregon DEQ regulations. Required approvals and plans shall be provided to the County prior to the issuance of any facility building permits.
4. Any proposal to discharge stormwater and/or industrial wastewater under an NPDES permits shall be authorized by the appropriate permitting authority. Engineered storm water plans or ground water protection plans shall be reviewed by the authority having jurisdiction. Required approvals and plans shall be provided to the County prior to the issuance of any facility building permits.
5. Operation of the facility shall comply with all state and federal requirements. Permit approvals shall be obtained prior to receiving occupancy permits. Documentation of the permits and ongoing compliance shall be maintained and provided to the County within seven (7) days of written request from the County.
6. Transport of feedstock and/or fuel products to and from the facility shall be by water, or as a contingency, by rail. Transport of feedstock and/or fuel products to and from the facility by more than twenty (20) truck trips per day shall require an amendment to the Site Design Review and the approval of a revised Traffic Impact Study.
7. Rail transport to and from the site shall be limited to no more than 318 rail cars per week, excluding return cars. Trains serving the site shall be no more than 100 attached cars in length. A manifest documenting rail transport to and from the site shall be maintained, and shall be provided to the County within seven (7) days of written request from the County.
8. All applicable permits for any proposed future signage shall be obtained. These proposals shall meet all requirements in Section 1300 as well as any other applicable sections of the Columbia County Zoning Ordinance.

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9. The proposed development area shall be sited as presented in the applicant's submitted site plans and specifications reviewed and approved by the Board. This shall include all improvements including the proposed stormwater retention areas.
 10. The applicant shall obtain approval from Clatskanie Rural Fire Protection District prior to Final Site Plan authorization.
 11. The applicant shall prepare a Final Stormwater Plan including specific swale design plan and profile details in compliance with County regulations; a building permit will not be issued until the plan is approved by the County.
 12. The applicant shall prepare a Final Erosion Control Plan in compliance with County regulations; a building permit will not be issued until the plan is approved by the County.
 13. Any changes to approved plan(s) and/or elevations shall be reviewed and approved by the County prior to implementation in compliance with the applicable provisions of the Oregon Structural Specialty and Fire Codes. All work shall accurately reflect County approved plans.

Prior to the Issuance of Occupancy:

14. The applicant shall complete the following road improvements: The complete reconstruction of approximately 1.65 miles of Hermo Road between Quincy-Mayger Road and the entrance to the Port Westward Industrial site. These improvements shall include two 12-foot travel lanes, rock shoulders, safety slopes, and roadside ditches. The improvement shall also consist of paving the entire length of Hermo Road to final grade between Quincy-Mayger Road to Kallunki Road and bringing the entire road up to current County road standards. This work includes final design, permitting, and construction.
15. A minimum of three street lights are required:
 - a. Along Hermo Road at the sharp turn approximately half-way between Quincy-Mayger Road and the approved entrance to the facility;
 - b. The intersection of Collins Road and Hermo Road; and
 - c. At the Main Gate entrance on Hermo Road into the Port property.

The final design and location of the street lights shall be subject to County approval.

16. A Facility Response Plan, a DEQ approved Oil Spill Contingency Plan (OSCP), an EPA-approved Spill Prevention Control and Countermeasure Plan and any other required spill response plan shall be provided prior to occupancy. Documentation of any updates to the plans and ongoing compliance with the plans shall be maintained and provided to the County within seven (7) days of written request from the County.

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17. Prior to occupancy, Planning Staff shall conduct a site visit and shall verify that all required parking and landscaping improvements have been constructed as approved.

DATED this 23rd day of March, 2022.

BOARD OF COUNTY COMMISSIONERS FOR COLUMBIA COUNTY, OREGON

By: 
Henry Heimuller, Chair

By: 
Casey Garrett, Commissioner

By: 
Margaret Magruder, Commissioner

Approved as to form


By: 
Office of County Counsel

EXHIBIT A

SUPPLEMENTAL FINDINGS OF FACT AND CONCLUSIONS OF LAW FOR

FINAL ORDER NO. 12-2022

I. INTRODUCTION

NEXT Renewable Fuels, LLC (the “Applicant”) proposes to develop a renewable diesel production facility at Port Westward, with related Columbia River dock access and rail connections (collectively, the “Project”). The Project consists of two land use applications that are separate and related. The Site Design Review Application seeks approval for Use Permitted under Prescribed Conditions in Resource Industrial-Planned Development (“RIPD”) Zone, Site Design Review, and Variance, for a renewable diesel production facility (the “Facility”). The branchline application seeks a Conditional Use Permit for a rail branchline. Applicant submitted the branchline application separately because a portion of it is to be located on Primary Agricultural Use Zone (PA-80) land.

The vast majority of the Project is located entirely within the RIPD zone, which is intended to accommodate both rural and natural resource related industries. The Facility will be located entirely within the RIPD zone. A small portion of the proposed rail branchline will touch land zoned differently, zoned PA-80. These supplemental Findings of Fact and Conclusions of Law address the applications for the Use under Prescribed Conditions, Site Design Review, and Variance (together, the “Application”).

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW

A. The Facility Meets the Development Standards of the RIPD Zone with the Proposed Conditions of Approval

The Facility is entirely within the RIPD zone, and the Project is consistent with the uses intended for the zone. The use category proposed in the Application is “production, processing, assembling, packaging, or treatment of materials; research and development laboratories; and storage and distribution of services and facilities,” which are allowable uses under Columbia County Zoning Ordinance (“CCZO”) 683.1. Because Port Westward has one of only five Oregon deep water ports, the Port Westward Exception Area (as adopted in the County’s Comprehensive Plan) was specifically intended to facilitate heavy industry that relies on marine transportation. *See Comp. Plan, Pt. XII § VII.1.b* (pg. 124) (describing Port Westward as a unique economic asset to encourage Columbia County industrial development).

The Board finds that the Project is consistent with the uses and development standards that the County provided for industrial development within Port Westward by adopting the Port Westward exception area and the RIPD zone. This is because the Facility will take advantage of marine transportation available on the Columbia River, specifically the deep water port; will use existing dock facilities; will utilize existing rail connections; will allow renewable diesel production to be located far from population centers, thus avoiding hazardous or incompatible impacts on densely populated areas; and because the proposed facility is similar to the existing tank farm, PGE electrical generating facilities, and the Columbia Pacific Bio-Refinery.

Importantly, few project opponents have argued that the Renewable Diesel Facility itself should be denied or fails to meet the approval criteria. The sole argument that appears to have

been raised is a general statement that the Project does not “complement the character of the surrounding rural area,” as provided in the purpose statement of the RIPD zone (CCZO 681.4). CCZO 681 provides that the purpose of the RIPD zone is “to implement the policies of the Comprehensive Plan for Rural Industrial Areas... to accommodate rural and natural resource related industries which: ... (3) Require a rural location in order to take advantage of adequate rail and/or vehicle and/or deep water port and/or airstrip access; (4) Complement the character and development of the surrounding rural area; (5) Are consistent with rural facilities and services existing and/or planned for the area. . .”

The Board finds that the Project complements the character of the surrounding rural area for the following reasons:

First, the Board finds the County’s policy to accommodate rural and natural resource related industries on land zoned RIPD to uses that “complement the character and development on the surrounding rural area” must be read in context with the County’s decision to allow the following use categories in the RIPD zone: “production, processing, assembling, packaging, or treatment of materials; research and development laboratories; and storage and distribution of services and facilities” subject to the additional criteria designed to mitigate adverse impacts and ensure adequacy of services. Regarding compatibility with surrounding uses, the Port Westward Exception Statement explains that:

1. The 900-acre site is large enough to allow [an] adequate buffer area to protect adjacent agricultural users.
2. These types of large-scale industrial users do not create pressure for housing or other uses on adjacent farmland.

3. The requirements of the Department of Environmental Quality will assure that new industry does not pollute the adjacent air, water, or land.

The Port Westward Exception Area, which encompasses the land on which the Facility is proposed, is intended to provide an industrial activity or an energy facility with a comparative advantage due to its location with access to the Columbia River, the existing dock facilities, railroad and urban services, and PGE's Beaver Power Plant. The County's Comprehensive Plan has already determined that the Port Westward Exception Area is suitable for uses such as "a 200-acre oil refinery, a 150-to-200-acre coal port, an 80-acre petrochemical tank farm, and a 230-acre coal gasification plant."

Second, there are also already substantial existing industrial developments in the area. The PGE Port Westward Generating Plant, the PGE Beaver Generating Plant Tank Farm, the Columbia Pacific Bio-Refinery, and the Clatskanie People's Utility District substation are currently existing industrial developments operating on land in the vicinity of the proposed Facility. The existing industrial activities at Port Westward demonstrate how industrial uses "complement the character and development of the surrounding rural area" and demonstrate how industrial and rural uses can coexist. The Board finds the Facility is consistent with these types of industrial developments that are already existing, will complement these existing facilities that are already in the area, and that the Facility will be compatible with nearby agricultural uses in ways similar to these existing industrial uses. This because, like these existing industrial uses, the Facility is anticipated to be serviced nearly entirely by river and rail transportation, not via truck and trailer, and because there is no substantial evidence in the record that the renewable diesel processing activity will itself adversely impact surrounding agricultural operations or residences.

The Board also finds that the existing agricultural uses to the east and south are not likely to be negatively impacted by the proposed industrial use due to the applicable County land use regulations and standards, the fire code provisions implemented by the Clatskanie Rural Fire Protection District, and the multiple state and Federal permits which Applicant must obtain prior to beginning operation of the Facility. In total, these permit programs and applicable development standards ensure that hazardous chemical spills can be contained entirely onsite, that contaminated runoff will not flow onto surrounding farmlands, that uncontaminated water discharge will not flood surrounding farmlands, and that a fire at the Facility can be contained onsite. These permit requirements and development standards are assured through the following conditions of approval:

“2) All applicable permits from state and federal agencies, such as the Oregon Division of State Lands (DSL) and Oregon Department of Fish and Wildlife (ODFW) must be obtained by the landowner prior to commencing site clearing or development activities.

3) The applicant shall obtain necessary approvals for required onsite wastewater and sewage systems in accordance with Oregon DEQ regulations. Required approvals and plans shall be provided to the County prior to the issuance of any facility building permits.

4) Any proposal to discharge stormwater and/or industrial wastewater under an NPDES permits shall be authorized by the appropriate permitting authority. Engineered storm water plans or ground water protection plans shall be reviewed by the authority having jurisdiction. Required approvals and plans shall be provided to the County prior to the issuance of any facility building permits.

5) Operation of the facility shall comply with all state and federal requirements. Permit approvals shall be obtained prior to receiving occupancy permits. Documentation of the permits and ongoing compliance shall be maintained and provided to the County within seven (7) days of written request from the County.

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10) The Applicant shall obtain approval from Clatskanie Rural Fire Protection District prior to Final Site Plan authorization.

11) The Applicant shall prepare a Final Stormwater Plan including specific swale design plan and profile details in compliance with County regulations; a building permit will not be issued until the plan is approved by the County.

12) The Applicant shall prepare a Final Erosion Control Plan in compliance with County regulations; a building permit will not be issued until the plan is approved by the County.

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16) A Facility Response Plan, a DEQ approved Oil Spill Contingency Plan (OSCP), an EPA-approved Spill Prevention Control and Countermeasure Plan and any other required spill response plan shall be provided prior to occupancy. Documentation of any updates to the plans and ongoing compliance with the plans shall be maintained and provided to the County within seven (7) days of written request from the County.”

The Board finds that these permitting program and development standards can feasibly be met. First, there is no evidence in the record that the Facility will be unable to meet the any of the above permitting programs and/or development standards. Second, there is substantial evidence

in the record demonstrating the Facility is likely to meet such programs and standards. This evidence includes, but is not limited to the following:

- A Post-Construction Stormwater Management Plan which demonstrates how the Project will satisfy the SLOPES V regulations administered by the U.S. Army Corps of Engineers (“USACE”) and the National Marine Fisheries Service, Oregon’s 1200-Z industrial stormwater discharge permit, and the Columbia County Stormwater and Erosion Control Ordinance (2001). The most stringent of these standards, SLOPES V, requires the stormwater system to fully treat 50% of the cumulative rainfall from the 2-year 24-hour storm, or 1.40 inches of rainfall depth in a 24-hour period. Oily water will be treated via a sewer basin that connects to the existing wastewater system at Port Westward and will be wholly directed away from surrounding farmlands.
- A memorandum from GSI Water Solutions dated Jan. 25, 2022 explains, in detail, the groundwater protection measures proposed for the Facility and how those will satisfy the Oregon Department of Environmental Quality’s Groundwater Protection Rules.
- An annotated site plan demonstrating the proposed spill prevention facilities that will be installed below each equipment pad. There are also facts in the record which demonstrate that the Facility will be served both by a rural fire protection district and an existing private fire suppression system.

The Project will also complement existing agriculture in the area by improving access for farm vehicles with the proposed construction of the Hermo Road extension that will be completed at Applicant’s expense. The Board does not agree with the arguments that the infrastructure required to construct and operate the Facility will harm the rural character. The Board finds that is not accurate because the necessary public infrastructure for the Facility (including power, water,

fire suppression, and roads) is largely in place. The only significant additional public and private infrastructure that must be constructed to serve the Facility is an improvement of Hermo Road. As this is an existing road, there is no evidence that this will destroy the rural character. On the contrary, the improvement of Hermo Road is likely to improve the ability of farm vehicles to operate in the area and mitigate dust impacts on the nearby mint farm caused by vehicles traveling on the gravel road. This is a critical improvement because the mint contains essential oils and cannot be washed.

The Board thoroughly evaluated the nearby uses, both industrial and agricultural. The Board finds the Facility meets the applicable goals and policies of the Resource Industrial plan element, as contextualized by the Port Westward Exception Statement. The County concludes the Facility meets the purpose statements of CCZO 681 for the same reasons.

B. The Facility is Permitted within the County’s Environmental Overlay Zones

The Facility satisfies the conditions of the County’s environmental overlay zones in CCZO 1100 to 1190 as described below. The Board finds that as discussed in the Staff Report, the Facility is not in the Flood Hazard Area Overlay (CCZO 1100) because the Facility site is protected from flooding by dikes and stormwater conveyance and pumps.

The Board finds the Facility is not in the County Sensitive Bird Habitat Overlay (CCZO 1120) because the proposed Facility is not within identified habitat areas. The Columbia County Comprehensive Plan, Part XVI, Article VIII(F), Non-Game Wildlife Habitat, lists areas identified as significant nesting sites by the Oregon Department of Fish and Wildlife (“ODFW”). Part XVI, Article VIII(G) of the Comprehensive Plan, Upland Game Habitat, lists habitat for band-tailed pigeons. The proposed Facility is not located in the County’s Non-Game Wildlife Habitat or

Upland Game Habitat areas. Therefore, the Site is not subject to the Sensitive Bird Habitat Overlay Zone.

The Board also finds the Facility is not subject to the County's Historic Overlay (CCZO 1130) because none of the historic and culturally significant sites and structures identified in Article XI of the Comprehensive Plan are on or adjacent to the Facility site.

1. The Application is consistent with the Riparian Corridors, Wetlands, Water Quality, and Fish and Wildlife Habitat Protection Overlay under CCZO 1170 and 1175.

The County Riparian Corridor Overlay Zone (CCZO 1170) ("Riparian Corridor") states that riparian corridor boundaries will be established based upon streams and lakes as identified in the maps referenced in the CCZO 1172.A and for wetlands if they are significant as identified in the State Wetlands Inventory and the Local Wetlands Inventories. The Board finds that the Facility is not with the Riparian Corridor boundary because there are no County-designated streams or lakes on the Facility site and because the wetlands on the Facility site are not significant, as explained in more detail below.

The Facility will not enter or abut any lake, river, or stream areas mapped in the Columbia County Stream Classification Maps and in the map "Lakes of Columbia County", which are attached to the Comprehensive Plan, Technical Appendix Part XVI, Article X(B). The Board recognizes that under CCZO 1172, the Riparian Corridor boundary may apply to also include all or portions of a "significant wetland." (CCZO 1172.A.5). Applicant submitted a wetland delineation report for the Facility with its Application. (Exhibit 11 to Application, Anderson Perry Wetland Delineation Report). The report indicates there are wetlands in the Facility site. The

Oregon Department of State Lands (“DSL”) reviewed the wetland delineation report for the Facility site and agreed with its delineation. DSL provided a memorandum dated December 15, 2021, which recommended that the County find the wetlands are not significant. The County agrees with DSL’s recommendation and finds that Applicant has provided substantial evidence that the wetlands on the Facility site are not significant and therefore, are not regulated by the County’s Riparian Corridor overlay. (CCZO 1172).

If the Facility were within the Riparian Corridor boundary, the Board may approve development within the Riparian Corridor boundary where a use is “water-related” or “water-dependent.” (See CCZO 1175.B.5). However, because the Facility is not proposed to be located within a Riparian Corridor and therefore is not subject to CCZO Chapter 1170, the Board finds that it need not decide for purposes of the Application whether the Facility is “water-related” or “water-dependent.”

2. The Wetland Area Overlay, CCZO 1180, does not prohibit modification of wetlands on the Facility site because the onsite wetlands are not significant.

The Board finds the County’s Wetland Area Overlay set forth in CCZO 1180 does not prohibit development of the Facility because the wetlands that will be impacted by Applicant’s Facility are not “significant wetlands.” As discussed above, Applicant’s wetlands consultant delineated the wetlands on the Facility site and DSL approved the delineation. The County’s Wetland Area Overlay states that use and development activities in the overlay zone are permitted outright or conditionally if they will not destroy or degrade a “significant wetland” as defined in CCZO 1182. (CCZO 1183).

CCZO 1183 provides that “Uses and development activities permitted outright or conditionally in the underlying zone shall be permitted in the Wetland Area Overlay Zone if they will not result in filling, drainage, removal of vegetation, or other alteration which would destroy or degrade a significant wetland as defined in Section 1182. Minor drainage improvements necessary to ensure effective drainage on surrounding agricultural lands under Oregon Department of Agriculture wetland rules shall be allowed where such an action has been fully coordinated with the Oregon Department of Fish and Wildlife, the Columbia County Soil and Water Conservation District, and the Division of State Lands. Existing drainage ditches may be cleared to original specifications without County review.” Given that the Wetland Overlay Zone can apply to “significant wetlands” or “wetlands,” the Board interprets CCZO 1183 to allow uses permitted outright or conditionally in the underlying zone within non-significant wetlands, and finds that same section allows filling of non-significant wetlands for such uses. The Facility is a “use permitted under prescribed conditions,” and the Board finds that the Facility is thus a use permitted conditionally for purposes of CCZO 1183.

Significant wetlands are also defined in both the Comprehensive Plan (Article X(A)(1)) and CCZO 1182 as:

A significant wetland is an area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. **In case of dispute over whether an area is of biological value and should be considered a significant wetland, the County shall obtain the recommendation of the Oregon Department of Fish and**

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**Wildlife, the Columbia County Soil and Water Conservation District, and the
Division of State Lands.**

(Emphasis added). The definition of “significant wetland” in CCZO 1182 allows the County to determine significance in two ways. First, it can find that the wetland at issue is not “inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Second, in the case of disputes over whether an area should be considered a significant wetland—even if the wetland is depicted on the State Wetland Inventory (“SWI”) or Local Wetland Inventory (“LWI”) map—the Board can determine the significance of a wetland based on the recommendations of ODFW, the Columbia Soil and Water Conservation District (the “Columbia SWCD”), and DSL.

Columbia County does not have an LWI for the Facility site. The National Wetlands Inventory (“NWI”) map does identify wetlands on the Facility site, but it is not an official determination of the presence or absence of wetlands. The NWI is incorporated to the SWI, but the SWI does not identify any “significant” wetlands near the Facility site. (*See* Exhibit 14 to the Staff Report, Anderson Perry Wetland Memo (Dec. 8, 2021)).

Applicant disputed the significance of the wetland and submitted evidence from its wetland biologist dated December 8, 2021, which suggests that the wetlands proposed to be impacted by the Facility do not contain “a prevalence of vegetation typically adapted for life in saturated soil conditions.” According to this biologist, “vegetation solely adapted to wetland conditions is not prevalent in the delineated wetlands, which are dominated by pasture grasses and invasive species that are able to grow in both wetland and non-wetland conditions.” The biologist also concluded

that “the wetlands did not show consistently high scores for functions and values and have minimal riparian buffer habitat along the ditches.” Based on this evidence, the County found that Applicant’s dispute over the significance of the wetland was reasonable.

Applicant then submitted a more detailed analysis of the wetlands’ biological value for input from DSL, ODFW, and Columbia SWCD. Consistent with Section 1182, the County requested and received recommendations from DSL, ODFW, and the Columbia SWCD to determine whether the wetlands delineated on the Facility site are significant wetlands. As explained below, the County finds that Applicant demonstrated that the wetlands impacted by the Facility are not “significant” for purposes of the CCZO based on the second sentence of CCZO 1182.

DSL is the state agency the 2006 Oregon legislature¹ directed to establish criteria that rate the functions and values of wetlands. DSL provided the County with a definitive statement that the wetlands impacted by the Facility are not significant:

“Based on the finding of the [Oregon Freshwater Wetland Assessment Methodology] OFWAM Assessment tool, the wetlands located behind the levee (inside the levee within the Beaver Drainage District and associated with the propose[d] Applicant Project) in the Resource Industrial Planned Development area at Port Westward are NOT significant, nor are the wetlands that continue off the project site that were converted for farming and are zoned Primary Agriculture.”

¹ House Bill 2899 (2003) addressed wetland mitigation and from it, DSL and a work group convened a Technical Advisory Committee to address the need for wetland assessment methods statewide.

(See Exhibit 11(a) to County Staff Report, DSL Dec. 15, 2021 OFWAM letter). DSL evaluated the Project under CCZO 1182 and using the OFWAM. In determining that the wetlands behind the levee on the Applicant Facility site are not significant DSL concluded:

“None of the four ecological functions, wildlife habitat, fish habitat, water quality, or hydrologic control scored high enough to be considered significant. There are no rare wetland plant communities, there are no critical habitats present, and the wetland is isolated by the levee and heavily impacted by the drainage district.

The wetlands located behind the levee (within the drainage district) in the Resource Industrial Planned Development area at Port Westward and the wetlands that were converted for farming and are zoned Primary Agriculture are NOT significant under OFWAM.”

ODFW similarly concluded that while the area supports some habitat and wildlife functions, the existing wetlands are subject to cattle grazing, dominated by nonnative species, and “are degraded by current practices and infestations of non-native plants.” In a January 18, 2022 email to Columbia County staff, ODFW provided further clarification that: (1) “[t]he developer is proposing habitat mitigation that, once completed, the department expects should provide a net benefit to the affected fish and wildlife species that currently utilize the impacted habitat”; and (2) “[t]he department believes this proposed renewable energy project is sited appropriately, and it is consistent with the department’s climate goals.” (See Exhibit 3 to Applicant’s Final Written Argument).

The Columbia SWCD stated that it had no comment on the significance of the wetlands, but would defer to DSL’s determination of the significance of any wetlands “as DSL is one of the

main regulating authorities as it relates to wetlands in the State.” (See Exhibit 11(c) to County Staff Report, SWCD Jan. 5, 2022 letter).

Accordingly, the Board finds the wetlands on the Facility site lack the biological value to be considered significant for purposes of CCZO Chapter 1180. Therefore, the Board finds that development of the Facility within delineated non-significant wetlands is permitted pursuant to CCZO 1183.

C. Responses to Specific Public Comments

1. The Board followed permissible procedures to approve the Application and provided adequate public comment.

Some opponents suggest that the County’s process to consider Applicant’s Application was improper. That is inaccurate. The Board finds the County’s procedures to hear and approve Applicants Application were in accordance with Columbia County’s Zoning Ordinance and Planning Commission Ordinance, ORS 197.763, ORS 197.797, and that no person demonstrated that holding the initial evidentiary hearing before the Board prejudiced their substantial rights.

There are two independent and sufficient bases in the CCZO that allow the Board to hold an initial evidentiary hearing on a quasi-judicial land use application without holding an initial planning commission hearing.

First, the Board of Commissioners has authority to approve Applicant’s Application pursuant to the procedures in CCZO 1603 (quasi-judicial public hearings). The County Zoning Ordinance provides that “[a]pproval of any action by the Planning Commission at the public hearing shall be by procedure outlined in Ordinance 91-2.” (CCZO 1603.4). Section 11 of Ordinance No. 91-2 is the Planning Commission ordinance, and it states in pertinent part that “[t]he

Board may also assert original jurisdiction over any land use application and bypass prior Planning Commission review.”

Second, the Board has the absolute authority to hold an initial evidentiary hearing on any quasi-judicial matter. Under CCZO 1612 “Special Hearings”: “The Board of County Commissioners, in its discretion, may order any quasi-judicial land use application or type of quasi-judicial land use application to be heard at a Special Hearing in lieu of a hearing before the Planning Commission or the Board of County Commissioners.” This gives the Board the absolute right to hold a hearing on any quasi-judicial land use application without first holding a planning commission hearing.

In this instance, the Board’s authority to hold an initial evidentiary hearing derived from CCZO 1603 and County Ord. 91-2. The Board finds that its holding the initial evidentiary hearing does not violate CCZO 1503 and 1558 and does not trigger a remand via Oregon Administrative Rule 661-0010-0071(2)(c). CCZO 1558 states that “[t]he Planning Commission shall hold a public hearing for all Type 2 Design Review applications according to Sections 1603, 1604, and 1608 of this ordinance.” Yet as stated above, CCZO 1603 provides that the Planning Commission *or* the Board of Commissioners may approve actions that are in conformance with the provisions of the CCZO. CCZO 1503 is not applicable to this Application because it only pertains to conditional use applications, which this Application is not.

Although the Board understands that opponents may have wished for a two-stage hearing process, the Board has seen no evidence that holding the initial evidentiary hearing before the Board has prejudiced any party’s substantial rights. This is particularly so for the following reasons: First, the Application did not substantially change between the date when public notice issued and when the record in this matter was closed. Second, the Board hearing lasted over five

hours and included oral testimony from more than 35 individuals opposed to the Application; there is no evidence that this was not an adequate allowance for public testimony. The Board then held the record open for one week after the hearing for anyone to present additional public testimony, and the Board received more than 100 written comments on the Application prior to the end of the first open record period. Third, the Board held the record open for one additional week after that to allow any person to submit evidence or argument to respond to evidence and argument submitted during the first open record period. Moreover, the Board finds that opponents' assertion that by skipping planning commission, the County deprived them of the opportunity for a local appeal, does not demonstrate prejudice to their substantial rights. That is because any appeal would have been through a hearing before the Board. The Board held a hearing on the Application. Opponents therefore have not shown how the outcome would have been different or how their substantial rights were prejudiced. Finally, no person has claimed that the Board's consideration of the Application violated any applicable requirement of ORS 197.797 or its predecessor, ORS 197.763.

The Board received a request for a 30-day extension of public review and comment. The Board considered and then rejected the request, as it is allowed to do under ORS 197.797. Pursuant to ORS 197.797, the Board is obligated to give at least one additional week for new evidence and testimony, which it granted. The Board also gave all parties an additional week to submit responsive testimony and evidence. There is no evidence or argument in the record that the Planning Commission would have been required to grant the request for a continuance or provide more opportunities for comment than the Board did.

In summary, the Board has the authority under the CCZO to hold an initial evidentiary hearing and the Board held that hearing according to the applicable procedures in the CCZO and

ORS 197.797 (formerly ORS 197.763). Aside from speculation that more testimony could have occurred through a two-part hearing process, there is no substantial evidence that a single evidentiary hearing prejudiced any persons' substantial rights to participate in the review process were prejudiced.

2. The proposed uses within the RIPD zone are consistent with existing land uses and available facilities and services, CCZO 683.1.B.2.

Opponents have raised numerous concerns about various impacts to drainage and adjacent agricultural operations. One such comment suggests that Applicant's Facility (and the rail branchline that is not subject to this Application) will impact road access and remove and relocate a Beaver Drainage Improvement Company ("BDIC") ditch in a manner that violates CCZO 300, 681(B)(2), and 1170 because it will impact drainage and irrigation of adjacent agricultural operations. The Board finds CCZO 300 is inapplicable to this Application because it is criteria solely applicable to development in the primary agriculture use zone-80 (PA-80). Applicant's Facility for purposes of this Application is solely in the RIPD zone and is not located in the PA-80 zone. As discussed above in Section IV.B.1, the Board finds the Facility site is not within a Riparian Corridor boundary. The impacts of the Facility on drainage and irrigation of nearby agricultural operations are thoroughly discussed below.

The Board also notes that CCZO 681(B)(2) does not exist. To the extent that BDIC meant to refer to CCZO 683.1.B.2, the Board finds that it is met for the following reasons.

CCZO 683 "Uses Permitted Under Prescribed Conditions" include a mix of criteria (such as 683.1.A and C) and factors which the Board must consider in crafting any necessary conditions of approval. (CCZO 683.1.B). Thus, CCZO 683.1.B obligates the Board to consider certain potential impacts of a given use, but is not a list of approval criteria which can be answered with a "yes or

no” answer. In this vein, the Board finds that CCZO 683.1.B.2 is a factor—not a criterion—which requires a consideration of potential impacts from the proposed use on “existing land uses and both private and public facilities and services in the area,” whether those impacts must be mitigated in some way, and if so, how they must be mitigated.

The Board reiterates the Staff Report’s conclusion regarding this criterion, as set forth below:

“The nearby industrial uses are not sensitive to expansion of industrial activity at Port Westward. The existing dock serves these industrial uses and is particularly well suited for serving the proposed use for shipment of feedstock and finished products. The existing agricultural uses to the east and south are not likely to be negatively impacted by the proposed industrial use due to the applicable County land use regulations and permit standards, fire code provisions implemented by the Clatskanie Rural Fire Protection District, and multiple state and Federal permits which the Applicant will need to obtain prior to beginning operation of the facility. The proposed site development is consistent with existing land uses and available facilities and services.”

Based on the public testimony received during the Application review process, the Board finds that the following issues warrant conditions of approval to ensure the protection of surrounding agricultural and industrial land uses based on the potential impacts of the Facility.

- Truck traffic;
- Spill containment;
- Drainage and erosion control;
- The frequency of potential rail trips to the Facility; and

- Fire protection.

The Board finds that these concerns are addressed by the same facts, findings, permitting requirements, development standards, and conditions of approval adopted in Section II.A., above, relating to existing industrial and agricultural uses within the surrounding rural area; and which are adopted herein by reference.

The Board finds that these permitting programs, development standards and conditions of approval can feasibly be met.

First, there is no evidence in the record that the Facility will be unable to meet any of the identified permitting programs and/or development standards. Second, there is substantial evidence in the record demonstrating that the Facility is likely to meet such programs and standards. This evidence includes, but is not limited to the Post-Construction Stormwater Management Plan, memorandum from GSI Water Solutions regarding proposed groundwater protection measures, and annotated site plan showing the proposed spill prevention facilities that are identified in Section II.A., above.

The Application also included a complete transportation impact analysis provided by a traffic engineer which concluded that:

“All study area intersections are projected to operate within ODOT [Oregon Department of Transportation] and Columbia County operations standards during the AM and PM peak hours with the addition of project trips. Therefore, no mitigation strategies are proposed. With the planned improvements, Hermo Road will have adequate capacity to safely accommodate the volumes and truck traffic generated by the site, as well as traffic currently traveling to Port Westward.”

There is no other evidence of equal weight or authority in the record that disputes this conclusion. The Project will also complement existing agriculture in the area by improving access for farm vehicles with the proposed construction of the Hermo Road extension that will be completed at Applicant's expense. Finally, the Board finds that the Facility will not impede farm field access and, while not part of this Decision, the Board also finds based on a map provided with Applicant's second open record submittal that farm field access will remain viable after the proposed railroad branchline is constructed.

The Board finds that public infrastructure for the Facility (including power, water, fire suppression, and roads) is largely in place. The only significant additional public and private infrastructure that must be constructed to serve the Facility is an improvement of Hermo Road. As this is an existing road, there is no evidence that this will adversely impact existing land uses and both private and public facilities and services in the area, particularly because it will provide better access in the area generally and because a railroad crossing of Hermo Road is not proposed.

The Board addresses the arguments raised by BDIC and any derivative arguments raised by Mike Seeley, Warren Seeley, 1000 Friends of Oregon, and Columbia River Keepers as follows:

First, the Board finds that relocation of the existing drainage ditch running along the south of the Facility property will not adversely impact existing uses in the area and does not warrant additional mitigation. This is because the Facility will include an adequate onsite drainage system that will drain directly through Port Westward's existing outfall to the Columbia River, as explained on page 11 of Applicant's Post Construction Stormwater Management Plan. There is no evidence in the record that use of Port Westward's existing onsite drainage system by the Facility will adversely impact BDIC's operations. Even if it did, the County is not required by any

applicable standard or criteria to evaluate the potential hydrological impacts of the Facility on BDIC's flood management system.

Second, the Board finds that the ditch proposed to be relocated to accommodate the site access can be relocated without disrupting stream flow and will maintain connections to other existing ditches, as explained in the Applicant's second open record submittal. To the extent that Applicant may require BDIC to relocate the ditch, that consideration is not relevant to the approval criteria or CCZO 683.1.B.2.

Third, the Board finds that there is no risk of fire spreading from the proposed access drive or rail branchline because the access road will be paved and because the rail branchline will be isolated on one side by a water quality swale and another access road and drainage ditch on the opposite side. This is reflected in a cross section provided with Applicant's second open record period submittal. The Board finds that this design will provide adequate separation between any sparks generated by the rail branchline and surrounding farmland.

Fourth, the Board finds BDIC's comments about "future livestock grazing" do not offer evidence of existing livestock uses that would be adversely impacted by the Facility and do not demonstrate a need for livestock fencing.

Fifth, the Board does not agree with BDIC's comments regarding "waivers to adjacent agricultural operators" because there is no evidence that surrounding agricultural activities could disrupt operations of the Facility to the extent that liability waivers need be required. Even if they were, such waivers are an inappropriate requirement for the Facility because it is located in the RIPD zone, not in an exclusive farm use zone. BDIC has identified no legal requirement that such

waivers “must be in place prior to any consideration of the project by BDIC,” but that is an issue between Applicant’s and BDIC and is not relevant to the County’s approval criteria.

Sixth, to the extent that access easements may be required to cross BDIC-owned facilities, such a requirement is a real estate issue between BDIC and Applicant’s and is not relevant to the County’s decision. Similarly, the lease obligations between Applicant and the Port are relevant to the Application only insofar as the Port authorizes Applicant to make a land use application for its property. And even if such lease obligations could be considered by the Board, BDIC has not offered any evidence that it is a party to the lease or could otherwise cause enforcements of the lease obligations.

Seventh, Applicant has provided substantial evidence in the form of a preliminary spill containment plan (submitted with Applicant’s first open record materials) that all liquid storage on the Facility site will be protected by a spill containment basin. Applicant has explained that it will be required to prepare and obtain approval for a Facility Response Plan, a DEQ approved Oil Spill Contingency Plan (OSCP), and an EPA-approved Spill Prevention Control and Countermeasure Plan prior to construction. The Board finds that imposition of condition of approval 16, which requires Applicant provide such plans to the County prior to occupancy, is sufficient to address BDIC’s concerns regarding spill containment.

Eighth, the Board does not agree with BDIC’s argument that the proposed wetland mitigation plan (which has yet to be approved by DSL or USACE) is an “impact” relevant to the criteria or factors applicable to the Facility. The Board notes that the particular mitigation is not before the Board as part of the Application and that mitigation is not required by the approval criteria, rather it is a requirement for a Wetland Fill/Removal permit issued by DSL and USACE.

The Board also notes that wetland creation and enhancement is permitted outright in all Exclusive Farm Use zones in Oregon, including the PA-80 zone. The Board finds that there is no evidence that wetland restoration on lands owned or controlled by Applicant will adversely affect “existing land uses and both private and public facilities and services in the area”. Even if it did, the Board finds that, because wetland mitigation is a permit requirement from separate state and federal agencies, the Board is without the legal authority to prohibit or otherwise condition such mitigation in this instance.

Finally, the Board finds that it is not required to enforce, as a third party regulatory entity, any of the authority BDIC may assert under Oregon law, and BDIC has not provided an explanation otherwise. The provisions of ORS Chapter 547 cited in BDIC’s comments address a drainage district’s authority to enter upon land and to construct works and improvements. ORS chapter 190 addresses the authority of local governments to mke intergovernmental agreements. ORS Chatper 195 pertains to regional coordination of planning ctivities. Nothing in ORS chapters 547, 190 or 195 require that the Board or the Applicant obtain any written approval from BDIC before the County may approve the Application.

While it would have been desirable for Applicant and BDIC to have reached an accommodation prior to approval of the Application, the lack of such cooperation is not relevant to the approval criteria or factors, nor is it, in and of itself, an adverse impact on “existing land uses and both private and public facilities.”

3. Concerns about impacts of the proposed wetland mitigation are not relevant because the wetland mitigation Applicant will complete is not part of the Application.

Opponents have contended that the County must consider effects from the wetland mitigation Applicant will complete at a different location that is not the Facility site and is not subject to this Application. Applicant has applied for state and federal permits from DSL and the USACE to develop the Facility and a condition of approval from those agencies will require Applicant to conduct off-site wetlands mitigation. The Board notes that the particular mitigation is not before the Board as part of the Application and that mitigation is not required by the approval criteria, rather it is a requirement for a Wetland Fill/Removal Permit issued by DSL and USACE. The Board also notes that wetland creation and enhancement is permitted outright in all exclusive farm use zones in Oregon, including the PA-80 zone. Off-site wetlands mitigation is not a Columbia County requirement. Applicant did include a copy of its wetlands delineation with its Application, as is required by CCZO 1554. However, neither CCZO 1554 nor any other provision of the criteria applicable to this Application requires the County substantively review the off-site wetland mitigation plan. Even if it did, the Board finds that, because wetland mitigation is a permit requirement from separate state and federal agencies, the Board is without the legal authority to prohibit or otherwise condition such mitigation in this instance.

4. Concerns about impacts to the water table, hydrology, and impacts to drainage do not relate to the County's approval criteria.

The Port received comments from Columbia Riverkeeper, BDIC, and the Oregon Department of Land Conservation and Development regarding the potential impacts on hydrology and impacts to drainage, but these do not relate to approval criteria for Applicant's Application. Nonetheless, Applicant's Application and information submitted in the record adequately address these concerns. To the extent the comments relate to Applicant's wetlands mitigation, the wetland mitigation is not part of the Application or subject to review by the County. The comments

concerning impacts to water levels raise speculative and undefined concerns regarding potential impacts of the local water table and to BDIC.

As shown in the site plans submitted with Applicant's Application, the ditch and culverts that will be affected by Applicant's branchline conditional use application will be relocated and tied into the existing ditches. Evidence in the record demonstrates that the ditch proposed to be replaced will be sized to convey at least as much water as the existing ditch. (See Applicant's Waterway Exhibits attached to Applicant's Second Open Record Submittal). Applicant's conditional use permit application discusses that culverts are proposed where existing ditches will be crossed by Applicant's rail branchline and existing ditches will be relocated around the branchline as needed to accommodate flows. Existing ditches within the footprint of the proposed Facility do not convey water through the Facility site, but rather collect runoff from the site. Accordingly, these ditches are proposed to be filled since site runoff will be managed by the proposed stormwater collection system.

None of the County's approval criteria require the County to consider impacts to hydrology. As discussed above, the County is not reviewing the adequacy of Applicant's off-site mitigation plan. The USACE and DSL will review the sufficiency of Applicant's mitigation plan. Nonetheless, Applicant submitted an attachment during the first open record period that extensively and thoroughly explains the changes in ditches that will occur on the off-site mitigation property and how those changes are intended to enhance the hydrologic function of the mitigation site. (See Attachment E to Applicant First Open Record Period Submittal, Dec. 3, 2021 Letter from Stewardship Solutions to Dan Cary, DSL).

The Oregon Department of Land Conservation and Development also submitted questions regarding groundwater quality. The Facility will obtain applicable DEQ permits to protect surface water and groundwater quality during construction and operation. The Board finds as a condition of approval:

“3) The Applicant shall obtain necessary approvals for required onsite wastewater and sewage systems in accordance with Oregon DEQ regulations. Required approvals and plans shall be provided to the County prior to the issuance of any facility building permits.”

Furthermore, the Facility will implement best management practices to protect groundwater quality in accordance with DEQ standards; these are described in the GSI Water Solutions memorandum regarding Groundwater Protectiveness Measures submitted during the first open record period, as well as Applicant’s updated drainage plan also submitted during the first open record period. Additionally, the County acknowledges that local governments are preempted from regulating ground water quantity concerns, which is the sole purview of the Oregon Water Resources Department.²

Concerns about drainage are also adequately addressed in Applicant’s stormwater report, which was submitted with its Application. The Board finds that Applicant’s Application demonstrates adequate drainage will be provided to dispose of runoff generated by the impervious surface area and drainage will not adversely affect adjoining property. (CCZO 1414). Applicant’s stormwater report depicts grading and drainage patterns for how stormwater will be captured and

² See *Ashland Drilling, Inc. v. Jackson County*, 168 Or App 624 (2000).

conveyed to the wastewater treatment facility at the Facility site. As discussed above, the Board considered evidence of Applicant's Post-Construction Stormwater Management Plan, which demonstrates how the Project will satisfy the SLOPES V regulations administered by the USACE and the National Marine Fisheries Service, Oregon's 1200-Z industrial stormwater discharge permit, and the Columbia County Stormwater and Erosion Control Ordinance (2001). The Board also adopts the following conditions of approval:

"4) Any proposal to discharge stormwater and/or industrial wastewater under an NPDES permits shall be authorized by the appropriate permitting authority. Engineered storm water plans or ground water protection plans shall be reviewed by the authority having jurisdiction. Required approvals and plans shall be provided to the County prior to the issuance of any facility building permits.

* * *

11) The Applicant shall prepare a Final Stormwater Plan including specific swale design plan and profile details in compliance with County regulations; a building permit will not be issued until the plan is approved by the County."

Accordingly, the Board concludes that concerns about impacts to the water table and hydrology are not a part of the Board's approval criteria. The Board finds that the Application adequately addresses the County's requirements for drainage and with the Board's condition of approval.

5. The Project will not damage existing dikes, levees, dike roads, and surrounding infrastructure.

Some commenters were concerned that the Project could damage dikes, levees, and dike roads. There is no evidence or discussion in those comments explaining which dikes, levees, or dike roads will be impacted or how the operation of the Facility will impact them. These concerns are not relevant to the approval criteria and can be rejected. The dikes, levees, and dike roads will not be affected by the Application because they are not located on the Facility site. As discussed further below in Section V.C.9, the Transportation Impact Analysis (“TIA”) analyzed transportation impacts to the roads that will be utilized in construction and operation of the Facility and only identified necessary upgrades to Hermo Road. Accordingly, the Board finds that as a condition of approval, Applicant’s must satisfy the County Public Works Department’s requirements for necessary improvements to Hermo Road and complete the road improvements in condition of approval 14.

To the extent these comments relate to flood mitigation, the Board adopts the findings and conditions of approval regarding onsite drainage, as explained in detail above. There is no evidence that any “dike roads” will be required for access to the Facility. On the contrary, the primary proposed access is Hermo Road.

6. The Project is designed to minimize risks to water quality and the Board finds it meets all water quality related approval criteria.

Opponents argue that the Project could harm local water quality. The Board disagrees and finds that water quality will be protected due to the extensive local, state, and federal regulations protecting water quality and with which Applicant’s will comply. The County’s Riparian Corridor Overlay Zone and Wetland Overlay Zone (CCZO 1170 and 1180) protect water quality by carefully assessing proposed development based upon its proximity to rivers, streams, lake, and

significant wetlands, as outlined in CCZO 1170 and 1180. As discussed in Sections IV.B.1 and 2, the Facility is not within the Riparian Corridor Overlay and the wetlands are not significant so the Facility is also not within the Wetland Overlay. By determining that the Facility is not within either of these overlays, the Board acted to protect water quality by analyzing and applying, where applicable, its regulations.

The County also regulates water quality under its Stormwater and Erosion Control Ordinance. The Board finds Applicant's must comply with the County Stormwater and Erosion Control Ordinance, which requires submitting and obtaining approval of an erosion control plan. As discussed above, there is substantial evidence in the record demonstrating that the Facility will meet the County's requirements. Applicant's submitted a Post-Construction Stormwater Management Plan that demonstrates how the Project will satisfy the SLOPES V regulations administered by the USACE and the National Marine Fisheries Service, Oregon's 1200-Z industrial stormwater discharge permit, and the Columbia County Stormwater and Erosion Control Ordinance (2001). Applicant will also treat oily water via a sewer basin that connects to the existing wastewater system at Port Westward and will be wholly directed away from surrounding farmlands.

In sum, Applicant will implement robust water quality practices in compliance with the County's Stormwater and Erosion Control Ordinance with a firm intention to minimize any risk to water quality. Applicant is also required to comply with all state and federal laws that protect water quality. As discussed in the groundwater protection memo prepared by GSI Water Solutions ("GSI") for DEQ, Applicant will operate in compliance with DEQ's groundwater protection rules. (See Attachment C to Applicant's January 26, 2022 First Open Record Submittal). GSI's memo summarizes potential groundwater quality and flow impacts from construction of the Facility,

particularly in light of the construction method Applicant will use to mitigate against liquefaction. The Board finds the memo persuasive in addressing water quality concerns because it concludes that the Facility “will be regulated under multiple DEQ permits and rule sets . . . [that] meet DEQ’s groundwater protection rules.” The Board finds that the following conditions will ensure that the Project will meet any and all state permit requirements, including water quality requirements:

“2) All applicable permits from state and federal agencies, such as the Oregon Division of State Lands (DSL) and Oregon Department of Fish and Wildlife (ODFW) must be obtained by the landowner prior to commencing site clearing or development activities.”

“3. The Applicant shall obtain necessary approvals for required onsite wastewater and sewage systems in accordance with DEQ regulations. Required approvals and plans shall be provided to the County prior to the issuance of any facility building permits.”

“4. Any proposal to discharge stormwater and/or industrial wastewater under an NPDES permits shall be authorized by the appropriate permitting authority Engineered storm water plans or ground water protection plans shall be reviewed by the authority having jurisdiction. Required approvals and plans shall be provided to the County prior to the issuance of any facility building permits.

“5. Operation of the facility shall comply with all state and federal requirements. Permit approvals shall be obtained prior to receiving occupancy permits. Documentation of the permits

and ongoing compliance shall be maintained and provided to the County within seven (7) days of written request from the County.”

“11. The Applicant shall prepare a Final Stormwater plan including specific swale design plan and profile details in compliance with County regulations; a building permit will not be issued until the plan is approved by the County.”

“12. The Applicant shall prepare a Final Erosion Control Plan in compliance with County regulations; a building permit will not be issued until the plan is approved by the County. “

“16. A Facility Response Plan, a DEQ approved Oil Spill Contingency Plan (OSCP), an EPA-approved Spill Prevention Control and Countermeasure Plan and any other required spill response plan shall be provided prior to occupancy. Documentation of any updates to the plans and ongoing compliance with the plans shall be maintained and provided to the County within seven (7) days of written request from the County.”

7. There is no evidence in the record to support the concern that the Facility could harm fish habitat, nor is this an approval criterion.

Some comments suggested that fish habitat might be threatened by pollution from the Facility. It is unclear from comments about threats to fish habitat to what County approval criteria the comments were directed. There are no County approval criteria that directly consider impacts on fish habitat. Further, there is no evidence in the record that there is fish habitat on the Facility site. Nonetheless, as discussed above, the Board determined the Facility is not within the Riparian Corridor Overlay Zone, which is intended to protect fish and wildlife habitat, because the wetlands on the Facility site are not significant. As discussed above, the County also finds that Applicant’s Application adequately addresses potential sources of pollution, including water pollution.

The Board received evidence from ODFW that the Facility site is well-suited for Applicant’s renewable diesel facility. ODFW commented that on the Facility site, “the current habitat is impacted and degraded by past and current management practices.” (See Exhibit 3 to Applicant’s Final Written Argument). ODFW similarly concluded that while the area supports some habitat and wildlife functions, the existing wetlands are subject to cattle grazing, dominated by nonnative species, and “are degraded by current practices and infestations of non-native plants.” (See ODFW January 18, 2022 email to Columbia County). Further demonstrating its determination that fish will not be threatened by the Facility, including any pollution from the Facility, ODFW’s January 18, 2022 email to Columbia County staff states “[t]he department believes this proposed renewable energy project is sited appropriately, and it is consistent with the department’s climate goals.”

Additionally, the Board is conditioning approval of Applicant’s Application upon a requirement in Condition 2 that Applicant’s obtain all applicable permits from state and federal agencies prior to site clearing and development activities. Therefore, the Board finds, in concurrence with ODFW, that Applicant’s Application will comply with all state and federal laws and regulations to prevent harm to fish habitat.

8. The Board adequately addressed the impacts of the Facility on wildlife and wildlife habitat pursuant to the County’s approval criteria.

The Board finds that the Application adequately addressed impacts to wildlife and wildlife habitat as required by CCZO Section 1170. Columbia County Comprehensive Plan, Part XVI, Article VIII(F), Non-Game Wildlife Habitat, lists areas identified as significant nesting sites by

the Oregon Department of Fish and Wildlife. Port Westward is not a listed area for Bald Eagle nests, Blue Heron rookeries, or Northern Spotted Owl nests. As illustrated in Application attachments 5 and 6, the Facility site is not within any areas identified as Natural Areas, Non-Game Areas, or Sensitive Areas on the County's Threatened, Endangered and Sensitive Wildlife and Plant and Natural Areas map. Columbia County Comprehensive Plan, Part XVI, Article VIII(G), Upland Game Habitat, lists three mineral spring areas identified as habitat for band-tailed pigeons, none of which include Port Westward. As illustrated in Application attachments 5 and 6, the Facility site is not within an identified Upland Game Habitat area in the County's Wildlife Game Habitat map. Since the Facility site is not within the identified habitat areas, development at the Facility site is not subject to the Sensitive Bird Habitat Overlay Zone. (CCZO 1120).

Columbia County Comprehensive Plan, Part XVI, Article VIII(A), Big Game Wildlife Habitat, identifies three types of big game habitat. As depicted in attachment 6 of the Application, the Facility site is not within a Big Game Habitat area, Peripheral Big Game Habitat area, or Columbia white-tailed deer range in the County's Wildlife Game Habitat map. Therefore, the Board Finds the Application is not subject to the County's Big Game Habitat Overlay Zone. (CCZO 1190).

Further, as recognized in the Staff Report, Applicant's is pursuing DSL and USACE permits and approvals, which include requirements to mitigate the loss of fish and wildlife habitat. Therefore, the Board finds the County adequately addressed the impacts of the Facility on wildlife habitat as required by the County's approval criteria.

9. Applicant's Traffic Impacts Analysis demonstrates adequate transportation facilities exist and Applicant will satisfy the Public Works

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requirements for necessary improvements through a condition of approval.

The Board received comments related to considering impacts from Applicant's Facility on local infrastructure and traffic. Commenters expressed concern about an increase in heavy truck traffic on Highway 30, and traffic on: the Lewis and Clark Bridge, Alston Mayger Road, and Beaverfalls Road.

Part XIII of the Resource Industrial Development goals seeks for "new development to contribute a fair and proportionate share toward appropriate off-site improvements to county roads whenever a development results in a major increase in traffic on an existing county road." The County may also require new development to contribute a share toward off-site improvements to county roads when a development results in a major increase in traffic on an existing county road. (See Part XIII of the Resource Industrial Development goals).

The Board also evaluated potential impacts to local roadways pursuant to CCZO 1450, which requires the TIA that Applicant submitted with its Application. CCZO 1450.3 requires that the TIA demonstrate that adequate transportation facilities exist to serve the proposed development or identifies mitigation measures to resolve any issues and for non-highway facilities, that mobility standards adopted by the County have been met.

Applicant completed a TIA to evaluate the potential impacts to local roadways. According to the TIA, the Facility is anticipated to generate 667 weekday trips. The County coordinated with affected agencies and partners and Applicant coordinated with the Port, Columbia County, and Oregon Department of Transportation ("ODOT") staff with respect to site design and transportation analysis. The TIA determined that all study intersections meet applicable Columbia County, ODOT, and City of Clatskanie mobility standards. Hermo Road is a local road and the

closest public roadway to the Facility. The TIA also concluded that the existing transportation system is adequate to accommodate the projected trips, such that no additional mitigation is warranted. Based on the analysis in the TIA, Hermo Road is the County Road that will be most utilized to access the Facility and will see the largest share of the increase in traffic. Therefore, the Board finds that as a condition of approval, Applicant must satisfy the County Public Works requirements for necessary improvements to Hermo Road, as outlined in condition of approval 14. The County's assessment of the TIA does not find that improvements are necessary for other county roads.

Part XIII of the Resource Industrial Development goals states that the County will manage access to roadways to reduce congestion and will work with ODOT to limit the number of access points onto principle arterials, including limiting direct access to Highway 30 if practicable. The Board finds Applicant's Facility does not have direct access to Highway 30 and it is not within the County's land use approval criteria to manage increases in traffic on Highway 30 and the Lewis and Clark Bridge. However, if those were concerns, ODOT could have raised them when working with Columbia County staff on scoping the TIA.

Additionally, a comment suggested Applicant must obtain access easements to access its Facility. This is inaccurate. As demonstrated throughout Applicant's Application, and as further analyzed as part of the TIA, access to Applicant's Facility will be via Hermo Road. The Board finds that Applicant will use solely public roads to access the Facility.

The Board concludes that Applicant adequately considered transportation effects and effects on local transportation infrastructure as supported by the TIA. Accordingly, the Board

finds that Applicant must complete the road improvements as specified in condition of approval 14, which will involve reconstruction of a stretch of Hermo Road.

10. Risks from liquefaction are not related to the approval criteria.

Commenters raised concerns about liquefaction, earthquake risks, and risk from a high soil subsidence rate at the proposed Facility site. These risks are not related to approval criteria and should not affect the Board's decision. Additionally, there is already existing industrial development similar to Applicant's proposed industrial development at Port Westward. Regardless, Applicant has stated that all infrastructure will meet seismic requirements outlined in the 2019 Oregon Structural Specialty Code and prior to final design of the facility Applicant will complete a geotechnical survey to further refine the design. (See Attachment E to Applicant's January 26, 2022 First Open Record Submittal). The Board finds that the Facility is subject to and will comply with all related local, state, and federal requirements that are applicable to construction and operation of the Facility, some of which are inherently designed to minimize risks associated with liquefaction and earthquakes.

11. The Project incorporates waste and spill prevention measures that meet or exceed state and federal standards, but these concerns do not relate to any County approval criteria.

The Board fielded comments raising concerns about waste, "toxicity components", and spill prevention measures at the Facility. There were also speculative questions about contaminated soils on the property that could be encountered during development. Management of hazardous waste and spill prevention measures are not a component of the County's approval

criteria. State and federal laws and regulations govern management of hazardous waste and spill prevention measures.

Regarding concerns about hazardous chemicals and spill containment, evidence submitted during the first open record period establishes that Applicant will incorporate and adopt waste and spill prevention measures that meet or exceed state and federal standards. (See Attachment E to Applicant's January 26, 2022 First Open Record Submittal). Applicant will properly handle all soil during excavation and construction of the Facility in accordance and state and federal laws and regulations.

Evidence submitted during the first open record period also establishes that Applicant will develop a Facility Response Plan, a DEQ approved Oil Spill Contingency Plan (OSCP), and an EPA-approved Spill Prevention Control and Countermeasure Plan. To graphically illustrate spill containment measures at the proposed facility, the facility drainage plan Exhibit 5, Sheet C1.30 of Applicant's Final Written Argument, February 2, 2022 is annotated to depict the proposed spill containment berms around tanks, the equipment pads with spill containment areas, and the proposed stormwater swales. All runoff from the facility will be conveyed to a centralized treatment facility designed to remove potential contamination from the stormwater before it is discharged from the site. Railroad operators are further required by federal and state law to prepare oil spill response plans and to utilize rail cars meeting the latest safety standards to minimize the potential for impacts on nearby lands.

The County's approval criteria do not specifically require waste and spill prevention measures because those are subject to extensive state and federal regulation. However, the Board is requiring as condition of approval 2 that Applicant obtain all applicable permits from state and

federal agencies. Relatedly, the Board is also requiring Condition 16 which requires “ A Facility Response Plan, a DEQ approved Oil Spill Contingency Plan (OSCP), an EPA-approved Spill Prevention Control and Countermeasure Plan and any other required spill response plan shall be provided prior to occupancy. Documentation of any updates to the plans and ongoing compliance with the plans shall be maintained and provided to the County within seven (7) days of written request from the County.”

12. The Board undertook all environmental review required by the County’s approval criteria.

The Board received comments that it should complete an Environmental Impact Statement (“EIS”) prior to approving Applicant’s Application. An EIS is not a requirement of the County’s approval criteria. An EIS is solely a federal agency process that is required to evaluate the effects of an agency action under the federal National Environmental Policy Act (“NEPA”). Because Applicant’s Facility requires a federal Clean Water Act Section 404 permit from the USACE, the USACE will complete a NEPA analysis to analyze the environmental effects if the USACE approves Applicant’s Section 404 permit. The County has no authority or requirement to conduct an EIS under NEPA or any other law. The Board finds it conducted all environmental review required by the County’s approval criteria for Applicant’s Application.

13. Noise pollution is not a consideration in the County’s approval criteria, but Applicant must comply with the County’s noise ordinance.

The Board received comments about concerns of potential noise pollution from the Project. Noise pollution is not a consideration of the Board’s approval criteria and thus is not an appropriate reason to deny the Application. However, Columbia County Ordinance No. 91-8 prohibits

excessive noise as outlined in the ordinance. The Board finds that **Applicant** must comply with the County's noise ordinance, and that there is no evidence in the record that the Facility cannot do so.

14. Air and odor pollution are not considerations in the County's approval criteria, but are adequately addressed nonetheless.

Commenters raised concerns about potential air and odor pollution from the Project. Air emissions, including emissions from Applicant's gas flare, are regulated by DEQ through its Air Contaminant Discharge Permitting program. Applicant has applied to DEQ for an air contaminant discharge permit for its operations. Condition 2 of the County's approval of the Facility is that Applicant obtain all applicable state and federal permits, which includes obtaining the air permit necessary for Applicant's operations. The County's approval criteria for Applicant's application do not pertain to air pollution.

The County's approval criteria for Applicant's application also do not pertain to odor pollution because it falls within the purview of state regulation. State laws authorize DEQ to regulate odors that cause a nuisance. (Oregon Administrative Rules chapter 340, division 208). The County's approval criteria do not evaluate odor concerns, yet the Board finds that Applicant must comply with state laws, including controlling odors from the Facility so that they do not create a nuisance.

Therefore, the Board finds operation and construction of Applicant's Facility requires that Applicant comply with all state and federal laws and obtain all approvals, including those regulating air and odor pollution, prior to beginning development. Accordingly, the Board adopts

condition of approval 2 requiring that Applicant must obtain all applicable permits from state and federal agencies prior to commencing site clearing and development activities.

15. Federal regulations require an evaluation of the effects of the Facility on Native American Tribes, but the County's approval criteria do not have such requirement.

A commenter raised a concern that the Facility is proposed in a location that is critical to Tribes. The County's approval criteria do not require an evaluation of the effects of the Facility on Tribes and tribal interests. However, federal actions, like the USACE' evaluation of Applicant's Clean Water Act Section 404 Permit application, require that the federal agency conduct tribal consultation. The USACE must comply with Section 106 of the National Historic Preservation Act, which requires federal agencies to ensure that authorizations or permits issued do not impact historical or cultural resources. Applicant conducted a cultural resources investigation of the Facility site in November 2020. (See Attachment E to Applicant's January 26, 2022 First Open Record Submittal). As part of initiating the Section 106 process, Applicant's cultural resources consultant invited cultural resources staff of the Confederated Tribes of Grand Ronde, the Confederated Tribes of Siletz Indians, the Cowlitz Indian Tribe, the Shoalwater Bay Tribe, the Chinook Indian Tribe, and the Confederated Tribes of the Warm Springs for initial discussions about the Project area. Accordingly, the Board finds there is no County approval criteria related to evaluating the effects of the proposed Facility on Tribes. The Board also finds that a condition of approval of Applicant's Facility requires that Applicant comply with all state and federal laws, a component of which will require the USACE to conduct tribal consultation.

16. Comments regarding Chris Efird's other business activities are not applicable to the County's approval criteria.

The County's land use approval criteria do not require consideration of subjective character evaluations that some comments seeks to elicit about Applicant CEO Chris Efird's other business activities. These comments do not address the approval criteria and are not relevant to Applicant's Application.

17. Concerns about the size of Applicant's Facility are not relevant to the County's approval criteria.

The County's approval criteria do not evaluate a project based on its size, despite what some commenters suggest should be a requirement. There is nothing in the County's approval criteria that would prohibit Applicant's Facility based on its size. As explained above, the County's approval criteria do consider whether the Facility will complement the character of the area, and the Board finds that Applicant's Facility will.

18. The Board finds the proposed rail service to the Facility meets all relevant approval criteria.

A commenter suggested that bringing in feedstock by rail is unacceptable. The Board's approval criteria for the Application does not prohibit the Facility from relying in part on rail service; however, construction of a rail branchline is subject to a separate land use approval. In fact, CCZO 681.3 states the purpose of the RIPD zone is for an industry that "require[s] a rural location *to take advantage of rail . . . and/or deep water port access.*" As explained during Mr. Gene Cotten's testimony at the January 19 hearing, the Facility is designed and intended to receive 100 percent of its feedstocks via marine transportation and to export 100 percent of its products

the same way. The only material that is required to be imported by rail is clay, which is necessary for renewable diesel processing and amounts to a single 20-car train per week.

The import/export capacity for the rail branchline serves a contingency role for times when river transportation is disrupted or otherwise unavailable. This allows the Facility to keep operating and keep its employees working. Applicant explained that the trains are anticipated to have a maximum length of 6,630 feet. The maximum single length of track within the proposed branchline is roughly 7,500 feet, more than enough storage to accommodate the largest train without requiring backing movements or crossing delays. The maximum delay time at the only nearby road crossing—Kallunki Road—is estimated to be approximately 7.5 minutes for a maximum length train at 10 miles per hour. Accordingly, the Board finds the rail branchline to serve the Applicant Facility will only have one road crossing, and the maximum time it could delay traffic is 7.5 minutes. All told, including the clay import and running at full rail capacity (as contingency for any lack of available marine transportation), the Project would be expected to generate three (3) trains per week. (*See Applicant Second Open Record Submittal, February 2, 2022, Memo from Gene Cotten*).

The Board finds that the use of rail to serve the Facility is consistent with the goals in CCZO section 680 and the Comprehensive Plan, as discussed extensively in Section IV.A., because the Facility takes advantage of existing rail and is similar in nature and will complement existing industrial development at Port Westward that is serviced by rail.

Relatedly, the Board heard concerns regarding that trains might block traffic or EMS services. The Board finds there is already rail service serving Port Westward. Applicant's Facility proposes to be served by a new rail branchline. Although most of the branchline is not a

component of this Application since it is being considered by the Board under Applicant's conditional use permit application given its location in the PA-80 zone , the Board evaluated any effects that may be caused by trains arriving to and departing from Applicant's Facility. The Board will impose two conditions of approval to address rail transport and ensure the addition of the rail branchline to the Facility does not impede access:

“6) Transport of feedstock and/or fuel products to and from the facility shall be by water, or as a contingency, by rail. Transport of feedstock and/or fuel products to and from the facility by more than twenty (20) truck trips per day shall require an amendment to the Site Design Review and the approval of a revised Traffic Impact Study.

7) Rail transport to and from the site shall be limited to no more than 318 rail cars per week, excluding return cars. Trains serving the site shall be no more than 100 attached cars in length. A manifest documenting rail transport to and from the site shall be maintained, and shall be provided to the County within seven (7) days of written request from the County.”

Additionally, the Facility site is within the Clatskanie Rural Fire Protection District. The Board finds pursuant to CCZO 683.B.4 that the proposed on-site fire protection facilities are capable of serving the proposed use. Approval from the District is required under Condition 10. Applicant

19. The County approval criteria do not require an evaluation of international impacts from sourcing feedstock.

A commenter suggested that the Board must consider and Applicant must address the worldwide impacts of sourcing feedstock. The Board's approval criteria do not evaluate a project based on the source of the inputs that the private business will use in its industrial process. Accordingly, there is nothing in the Board's approval criteria that would prohibit Applicant's Facility based on its use of feedstock or the location of origin of the feedstock. As explained above, the County's approval criteria do consider whether the Facility will complement the character of the area, and the Board finds it will.

20. The Board adequately considered whether the rural fire protection service will serve the Facility.

Commenters asked the County about the fire control provisions related to Applicant's Application. The Board finds that the Facility location is served by the Clatskanie Rural Fire Protection District. (See Comprehensive Plan, Part XIV(2)(D)). As outlined in the County staff report, the Facility's location within the Fire Protection District capitalizes on the District's experience and partnership with existing Port Westward industrial operations to ensure appropriate levels of fire protection. Condition 10 requires the Applicant to participate in the District.

III. CONCLUSION

Based upon the evidence in the whole record and the documents incorporated herein, the Commissioners finds that Applicant's Application meets all applicable criteria and should be APPROVED on that basis subject to the conditions in the Final Order.



January 17, 2022

Garrett H. Stephenson
Admitted in Oregon
T: 503-796-2893
C: 503-320-3715
gstephenson@schwabe.com

VIA E-MAIL

Columbia County Board of Commissioners
230 Strand St.
County Courthouse Room 338
St. Helens, OR 97051

RE: Applicant's Response to Public Comments; Columbia County Board of Commissioners, App DR 21-03; V 21-05 and CU 21-04 (NEXT Renewables Fuels Oregon, LLC)

Dear Chair Heimuller, Commissioner Magruder, and Commissioner Garrett:

This office represents NEXT Renewable Fuels Oregon, LLC ("NEXT"). This letter constitutes its pre-hearing testimony and responds to the public comments submitted in the above-referenced matter.

1. INTRODUCTION AND OVERVIEW

NEXT is proposing to develop a renewable diesel production facility at Port Westward with related Columbia River dock and rail connections (together, the "Project"). Renewable diesel does not rely on petroleum and instead utilizes plant and animal-based byproducts. According to the Oregon DEQ, using renewable diesel can cut lifecycle greenhouse gas emissions up to 85% depending on what materials it is made from. Renewable diesel also runs cleaner, blends with petroleum diesel at any fraction, and provides identical efficiency to petroleum diesel. **Exhibit 1.**

The Project is anticipated to create more than 3500 construction jobs and 240 permanent jobs, and is planned to operate for 80 years or more. The Project represents a roughly \$2 billion investment by NEXT will result in a substantial expansion of the County's tax base (estimated at \$16 million/year) and a new income stream to the Port of Columbia County, which can be used for future Port expansion and improvement.

NEXT's facility is centered on a renewable diesel production facility consisting of multiple buildings (office, laboratory, warehouse, maintenance, process, controls, etc.), parking, private roads, storage tanks, processing equipment, a gas flare, wastewater treatment facilities, outdoor laydown yards, electrical equipment, landscaping, and security fencing. Primary access to the site is proposed from a driveway to Hermo Road (which NEXT proposes to improve) and secondary emergency access from Kallunki Road.

A substantial portion of product and feed stocks (raw materials) will be transported by vessels utilizing the Port of Columbia County-owned dock on the Columbia River. NEXT also proposes

a rail branchline to connect to Portland & Western's rail line that is on the east side of the proposed facility site. The branchline will facilitate shipment of raw materials and finished product to and from the proposed renewable diesel production facility. A portion of the rail branchline is outside the RIPD zone and within the Primary Agriculture (PA-80) zone. The branchline includes side tracks located both in RIPD and PA-80 zoning to allow for the circular movement of train cars without causing train traffic to back up onto the Portland and Western Railroad line already serving Port Westward.

In order to construct its facility and the rail branchline, NEXT submitted applications for: (1) a Site Design Review (which includes findings for a "Use Permitted Under Prescribed Conditions in the RIPD Zone") and Variance for the renewable diesel production facility (DR 21-03); and (2) a Conditional Use application for portions of the rail branchline located the PPA-80 Zone (CU 21-04) (collectively, "Applications").

a. The Project is consistent with applicable zoning.

The Applications are quasi-judicial, not legislative, and subject to the current zoning of the subject parcels—RIPD and PA-80. NEXT understands that the Board and has recently considered an expansion of Port Westward through a complex legislative Statewide Planning Goal Exception. Please note that the Applications are not subject to the same goal exception criteria, which require a far more detailed analysis of need, comparative sites, and compatibility.

With the exception of a section of proposed rail branchline, the Project is located entirely within the RIPD zone. The particular use category proposed in the Site Design Review application is the "production, processing, assembling, packaging, or treatment of materials; research and development laboratories; and storage and distribution of services and facilities," which is allowed under CCZO 683.1.

The RIPD zone was adopted with the County's 1984 Comprehensive Plan as an "exception area," which specifically allows development that would not otherwise be permitted on resource lands. The Port Westward exception area grew around a U.S. Army ammunition depot that was constructed during World War II and later developed with the PGE diesel tank farm and the Beaver generating plant, and further developed with PGE's natural gas Port Westward Generating Plan and Global Partners' Columbia Pacific Bio-Refinery ethanol plant.

Port Westward is one of only five deep water ports in Oregon¹ and presents a unique industrial and transportation resource for Columbia County. For this reason, the Port Westward Exception Area was specifically intended to facilitate development of heavy industry that relies on marine transportation:

"Because of its location on the Columbia River, Port Westward is a unique site specific resource that is important to the economy of Columbia County. This fact was recognized by the Port of St. Helens in 1966 when it entered into a long-term

¹ The only others are the Ports of Coos Bay, Astoria, Newport, and Portland.

lease for the property, on the condition that it be put to industrial uses to provide jobs.

Port Westward is unique for several other reasons as well. Most importantly, it offers prospective users a large existing dock facility. Existence of the dock facility reduces the lead-time for commencement of operation, allowing prospective users to achieve a head start on the competition. It also eliminates uncertainty and delay which might otherwise exist, due to the process requirements to obtain permits for building docks on navigable waters. Another important characteristic of Port Westward is that the basic infrastructure of urban services already exists on the property, although upgrading such services would likely be required when significant development occurs. Neither government nor the developer would be called upon to bear the large cost necessary to create a completely new infrastructure.

The Port Westward site is also large enough to accommodate loop rail systems that could handle 100-car unit trains. In this case, the site size for the exception is recommended based on the ownership pattern and the legal lease requirements to develop the land for industrial development. Past history and commitment support the 900-acre site size.”

Comp. Plan, Pt. XII § VII.1.b (pg. 124) (1984). The Comprehensive Plan also speculated that uses appropriate for Port Westward would include “a 200-acre oil refinery, a 150-to-200-acre coal port, an 80-acre petrochemical tank farm, and a 230-acre coal gasification plant.” Comp. Plan. Pt. XII § V (pg. 122-23) (1984).

As the implementing mechanism for the Port Westward Exception Area, the RIPD zone is intended for uses which:

- “.1 Are not generally labor intensive;
- .2 Are land extensive;
- .3 Require a rural location in order to take advantage of adequate rail and/or vehicle and/or deep water port and/or airstrip access;
- .4 Complement the character and development of the surrounding rural area;
- .5 Are consistent with the rural facilities and services existing and/or planned for the area; and,
- .6 Will not require facility and/or service improvements at significant public expense.

The uses contemplated for this district are not appropriate for location within Urban Growth Boundaries due to their relationship with the site specific resources noted in the Plan and/or due to their hazardous nature.”

CCZO 681. As demonstrated in the Application and Staff Report, the Project specifically relies on the Port Westward dock for access to marine transportation and the river itself for process water. Thus, the Project is entirely consistent with the legislative purposes underpinning Port Westward.

The rail branchline can be best viewed in three segments. The first is a segment of bi-directional track that connects the Project through a small portion of PA-80 zoned land to the Portland and Western Railroad already serving Port Westward. The second is a series of side tracks located in the RIPD-zoned portion of the site, which are allowed as part of the Site Design Review/Use Permitted under Prescribed Conditions Application. The third is a second series of side tracks located on PA-80 zoned land owned by the Port of Columbia County, which land is proposed for eventual inclusion within the RIPD expansion area. Rail improvements on PA-80 zoned land are specifically permitted under OAR 660-12-0065 (“Transportation Improvements on Rural Lands”) as “(j) Railroad mainlines and branchlines.” Together, these rail facilities provide a “looped” branchline that allows safe and efficient flow into and out of the renewable diesel facility.

b. NEXT supports staff’s recommendation for approval and accepts staff’s proposed conditions of approval.

Since submitting its applications in early 2021, NEXT has met with the County planning, engineering, and legal staff on a number of occasions and, based on staff’s feedback, refined its applications several times to ensure that they comprehensively address all applicable criteria and development issues. County planning staff has extensively reviewed the applications and issued its Staff Report on January 12, 2022, recommending that the County Board of Commissioners approve the Applications with conditions.

The Applicant wishes to make a few clarifications on some of the facts/analysis presented in the Staff Report:

- First, findings 37 and 75 (pages 18 and 29) incorrectly assert that the fuel production facility impacts riparian areas associated with McLean Slough. In fact, the facility itself is not proposed within the riparian buffer; rather, the only proposed impact to the riparian buffer is from a portion of the proposed rail branchline.
- Second, finding 65 (page 26) discusses a proposed construction laydown area, but this laydown area is no longer proposed and tree plantings are proposed in its place.
- Finally, it should be noted that the question of whether the facility is “water related” or “water dependent” is relevant only to the proposed rail branchline crossing of McLean Slough. The Board can find that the Project is water dependent for the reasons stated in

the Application; namely, because the Project depends on marine transportation and a direct water intake from the Columbia River for its industrial processes.

Otherwise, NEXT supports the Staff Report and accepts the Staff Report's recommended conditions. NEXT urges the County Board of Commissioners to accept staff's recommendation and approve the Applications.

2. RESPONSE TO COMMENTS REGARDING NEXT'S APPLICATIONS

NEXT recognizes that while many people support NEXT's renewable diesel production facility, others have questions and concerns about the facility. The following addresses opponent comments made available by staff by January 14, 2022.

The Applications are quasi-judicial, which means that relevant issues are constrained to the applicable approval criteria, as identified in the Application and Staff Report. ORS 215.427(3). Therefore, the Board can and should reject comments that do not address the approval criteria.

The vast majority of written materials submitted by project opponents thus far were included in a large package of documents submitted by Save Port Westward. The majority of these address NEXT's Joint Permit Application to the Oregon Department of State Lands ("DSL") and U.S. Army Corps of Engineers ("USACE") for a removal/fill permit (the "Joint Permit"). As part of this process, NEXT is working with the Army Corps and DSL on plans for a roughly 480-acre wetland mitigation site. The mitigation area is located on PA-80 zoned land, in which "creation, restoration or enhancement of wetlands" is an outright permitted use and requires no County approval. ORS 215.283(1)(m). The Joint Permit is not before the Board; therefore the vast majority of these comments do not address the approval criteria.

Rather, the County must find that wetlands and riparian areas shall be in compliance with State and Federal laws. CCZO Section 1563.B. As explained above, the adequacy of that proposed mitigation site is evaluated by DSL and the USACE under their respective laws to determine whether the mitigation is sufficient, based on the condition and extent of wetlands the Project will impact. The County can find that the Applications can satisfy State and Federal laws concerning wetland impacts through the ongoing Joint Permit process. The Staff Report's proposed Condition 2 – which NEXT accepts – requires that all state and federal permits will be obtained prior to commencing site clearing or development activities.

Opposition comments can typically be categorized in two manners: (1) comments that are inapplicable or irrelevant to the County's approval criteria; and (2) comments pertaining to issues addressed by NEXT's Applications and/or evaluated in the County Staff Report. Based on our review, few if any opposition comments submitted thus far clearly address an approval criterion. As explained below, the Board can reject the opposition comments submitted thus far and approve the Applications.

a. Response to Beaver Drainage Improvement Company, Inc. Comments

The Beaver Drainage Improvement Company, Inc.'s ("Drainage Company") comments address NEXT's wetland mitigation plan, which is not before the Board. As explained above, NEXT's wetland mitigation proposal is part of its DSL/USACE Joint Permit application. The Drainage Company did not appear to submit any written comments regarding the Applications; rather, they were included in Save Port Westward's large packet of comments addressing the Joint Permit. Accordingly, the Drainage Company's comments do not address the applicable criteria.

b. Response to Columbia Riverkeeper's Comments

Like the Drainage District's comments, Columbia Riverkeeper's ("Riverkeeper") comments are directed at the Joint Permit, not the Applications. Riverkeeper did not appear to submit any written comments on its own; rather, they were included in Save Port Westward's large packet of comments addressing the Joint Permit. As with Drainage District Comments, the County can reject Riverkeeper's comments because they address the Joint Permit, not the Applications.

c. Response to Comments submitted by "Community opposed to the NEXT proposal"

The Save Port Westward document package includes a list of people and entities opposed to the Project, but the comments that appear to have been written by Save Port Westward; it is not clear whether these comments were actually written on behalf of the named individuals and entities. Many of these comments are duplicative of comments raised by the Drainage Company or Riverkeeper.

- i. "NEXT and PCC have yet to acknowledge potentially highly contaminated soils such as the historical tree farm dumpsite containing pesticides and other toxic chemicals, the PGE sand pile, and other soils on the recently purchased Teevin Bros. land which have been removed and filled without proper permitting."**

RESPONSE: Management of hazardous waste and contaminated property falls within the purview of the Oregon Department of Environmental Quality ("DEQ"). The applicable criteria do not evaluate the presence or management of hazardous waste. NEXT will comply with all state and federal laws related to the management and disposal of hazardous waste.

For the above reasons, the Board can reject the above-quoted comment.

- ii. NEXT's has not disclosed its "full waste treatment protocol and the specific toxicity and ingredients that would travel via the highway 30 railway."**

RESPONSE: As stated in the response above, NEXT will comply with all state and federal laws related to the management and disposal of solid and hazardous waste. The Board can reject the above-quoted comment.

- iii. **“NEXT continues to change their proposal for water and land traffic, leaving the impact on local infrastructure and impacts to local school traffic throughout the county unclear.”**

RESPONSE: The Applications include a complete Transportation Impact Analysis (“TIA”), with which County staff concurs. River and rail transportation capacity varies substantially over time, and the Project is sized to account for the maximum extent of NEXT’s potential transportation needs. As such, there is no approval criterion or submittal requirement for a specific mix of “water and land traffic.” NEXT will be required by Condition 3 to “prepare a management plan for the rail crossings providing clear timeframes for unobstructed use of the rail crossing consistent with farm activity requirements and means to resolve conflicts.” The Applicant also will be required to fully improve Hermo Road between Quincy-Mayger Road and the Port Westward entrance (Condition 11). NEXT accepts these conditions.

For the above reasons, the Board can reject the above-quoted comment.

- iv. **“NEXT and the Port of Columbia County have yet to produce a clear docking schedule between Global’s transloading operations and NEXT’s fully water dependent operations.”**

RESPONSE: Neither the applicable criteria nor the application submittal requirements require a docking schedule. Further, the County Board of Commissioners’ decision regarding NEXT’s Applications does not evaluate the business logistics decisions of private companies using the Port of Columbia County dock.

For the above reasons, the Board can reject the above-quoted comment.

d. Response to Save Port Westward Comments

Save Port Westward raised many of comments noted above, the responses to which are not duplicated below. Other than those, Save Port Westward made the following comments:

- i. **Comments regarding Christopher Efir’s other business activities.**

RESPONSE: The land use approval criteria in the CCZO and Comprehensive Plan do not involve the type of highly subjective character evaluations these comments seeks to elicit. These comments are inappropriately ad hominem, do not address the approval criteria, and are not relevant to NEXT’s Applications. The Board should reject such comments accordingly.

- ii. **NEXT’s process requires virgin oil crops and animal fat derived from the same crops that has agricultural practices that destroy soil and promote greenhouse gas emissions.**

RESPONSE: The above comment is simply incorrect. As the Oregon DEQ opines in **Exhibit 1**, renewable diesel has the potential to substantially reduce greenhouse gas impacts when compared with petroleum based diesel.

Regardless, the above comment does not address the approval criteria and should be rejected on that basis alone.

e. Response to Protect Farms' Comments

iii. The NEXT project will “shut down one of Oregon’s last remaining mint farmers, two of Oregon’s beloved local blueberry farmers, and one woman-owned grass-fed cattle ranch.”

RESPONSE: As an initial matter, the renewable diesel facility itself only impacts land owned by NEXT, the Port, and a small portion of the De La Cruz parcel. None of this land is used for mint or blueberry farming, nor are they part of a woman-owned grass-fed cattle ranch.

The vast majority of the Project site is zoned RIPD, not exclusively for farm use. However, the proposed rail branchline does impact some PA-80 zoned land. The branchline will cross a portion of the De La Cruz parcel, which has been farmed recently with hay/grassland and row crops, such as mint. De La Cruz is a willing participant in the Project. Other than the portion of the property that the train will cross, hay and row crops are resilient and not sensitive to the vibration associated with rail traffic. And while the construction and operation of the branchline could cause minor changes in access routes to fields and patterns of cultivation, the changes will be minor. The Port of Columbia County-owned land is used for similar activities and is similarly insensitive to the presence of rail traffic.

County staff evaluated this proposal under its Comprehensive Plan Goals and Policies found that the rail branchline complies with the County’s policy to protect agricultural lands and permit non-farm uses when not in conflict with agricultural activities. County staff also evaluated the PA-80 zone impacts under ORS 215.296, and found the rail branchline will not cause a change in accepted farm practice or significantly increase the cost to farm on nearby lands. The Staff Report concluded that there is no evidence the proposed rail branchline – the portion of the proposed facility that is on agricultural zoned lands – will cause significant impacts to farm activities.

To the extent that Protect Farms’ comments relate to the wetland mitigation area, this is not before the Board. As explained above, creation, restoration or enhancement of wetlands” is an outright permitted use and requires no County approval. ORS 215.283(1)(m).

f. Response to Elaine Sharp's Comments

RESPONSE: There are state and federal permits/authorizations that protect against each of the concerns raised by this comment and NEXT will comply with the laws applicable to each of those concerns. As stated above, NEXT is agreeable to staff's proposed Condition 2, which requires NEXT to obtain all applicable permits from state and federal agencies prior to commencing site clearing or development activities.

g. Response to Other Comments

The Board of Commissioners should reject the other arguments raised in Save Port Westward's document package. These comments relate to: the manner in which NEXT has conducted voluntary public outreach and voluntarily responded to public questions; the source of NEXT's financial backing; recommending putting infrastructure development promises into contracts; arguments that NEXT must disclose its "feedstock agreements" and "that their feedstock sourcing will promote the worldwide destruction of soils, communities, and habitats," and concerns about soil liquefaction. These comments do not address any specifics of the Applications, nor do they address any applicable approval criterion.

With respect to soil liquefaction, the Facility will be required to meet all applicable structural codes, which require an adequate foundation system suitable to onsite conditions. The Applicant will be conducting a complete geotechnical analysis as part of its design engineering to ensure that the appropriate design and construction techniques are used to prevent any potential hazards from unstable soils.

For the above reasons, the Board can reject the comments identified above.

3. CONCLUSION

For the above reasons, the Board should reject the opposition comments and approve the Application with the conditions of approval proposed in the Staff Report.

Best regards,



Garrett H. Stephenson

GST:lm
Enclosure



State of Oregon Department of Environmental Quality **Renewable Diesel 101**

Contact: OregonCleanFuels@deq.state.or.us
700 NE Multnomah Street Suite 600 Portland, OR 97232

What is renewable diesel?

Renewable diesel is produced by running fats and oils from plants and animals instead of crude through a refinery, resulting in a biofuel that meets the ASTM D975 standard for diesel. Renewable diesel can be made from many waste or renewable materials including: rendered tallow, fish waste, used cooking oil, inedible corn oil, soybean oil, canola oil, and others. A typical facility can switch between or run multiple different materials.

Renewable diesel is a drop-in fuel which means it can be used as a one-for-one replacement for diesel or can be mixed with diesel at any rate to produce a blended product requiring no changes to the vehicles or fueling infrastructure.

Is renewable diesel the same as biodiesel?

While they can be made from the same materials, biodiesel and renewable diesel have different manufacturing processes that result in products with different molecular structures - biodiesel is a methyl-ester and renewable diesel is a hydrocarbon. The difference in the chemical properties of biodiesel is what limits the amount that can be blended with petroleum diesel, which is also a hydrocarbon. There is no limit for the amount of renewable diesel that can be blended with petroleum diesel because they are chemically identical. Biodiesel, renewable diesel, and petroleum diesel can all be blended together for use in diesel vehicles.

What are the emissions benefits from using renewable diesel?

Using renewable diesel can cut lifecycle greenhouse gas emissions up to 85% depending on what materials it is made from. Waste products such as tallow and used cooking oil have the greatest reductions while vegetable oils are slightly less. Renewable diesel lowers tailpipe emissions such as particulate matter, carbon monoxide, total hydrocarbons, and nitrogen oxide.

What are the other benefits from using renewable diesel?

Renewable diesel has gained in popularity largely because its lower carbon footprint, but also because it:

- has a higher cetane value than biodiesel
- has the same fuel economy or power as petroleum diesel
- produces a much cleaner exhaust and dramatically reduces the need for regeneration in vehicles with particulate filters, which in turn reduces maintenance costs for fleet owners
- does not contain oxygen, which avoids problems that biodiesel has with freezing, storage, and algae growth
- is made from products that would otherwise be sent to a landfill

Is renewable diesel available in Oregon?

The production of renewable diesel has grown significantly over the last several years and this trend will continue as billions of gallons of additional capacity have been recently announced. Tens of millions of gallons have already been delivered to Oregon because of the Clean Fuels Program, and that demand will remain strong as DEQ expands its targets beyond 2025. Contact your fuel supplier to find out current prices and availability of renewable diesel.

How is renewable diesel treated under the Oregon Renewable Fuel Standard?

The Oregon Renewable Fuel Standard recognizes renewable diesel as a way to achieve the 5% biofuel blend requirement for diesel.

How is renewable diesel treated under the Portland Renewable Fuel Standard?

The Portland Renewable Fuel Standard does not recognize renewable diesel as a way to achieve their renewable fuel standard.

Alternative formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.

February 2, 2022

Garrett H. Stephenson

Admitted in Oregon

T: 503-796-2893

C: 503-320-3715

gstephenson@schwabe.com

VIA EMAIL

Columbia County Board of Commissioners
230 Strand St.
County Courthouse Room 338
St. Helens, OR 97501

RE: Application's Final Written Argument; Columbia County Board of Commissioners, App DR 21-03; V 21-05 and CU 21-04 (NEXT Renewables Fuels Oregon, LLC)

Dear Chair Heimuller, Commissioner Magruder, and Commissioner Garrett:

This office represents NEXT Renewable Fuels Oregon, LLC ("NEXT"). The following is NEXT's final written argument in this matter. The letter is respectfully submitted prior to the end of the final written argument period at 5:00 p.m. on Wednesday, February 9, 2022. Please note that it addresses public comments made available to the applicant by February 4, 2022.

I. EXECUTIVE SUMMARY

NEXT proposes to develop a renewable diesel production facility at Port Westward, with related Columbia River dock and rail connections (collectively, the "Project"). The Project consists of two land use applications (the "Applications") that are separate and related. The Site Design Review Application seeks approval for Use Permitted under Prescribed Conditions in RIPD Zone, Site Design Review, and Variance, for a renewable diesel production facility (the "Production Facility"). The Branchline Application seeks a Conditional Use Permit for a Rail Branchline. NEXT submitted the Branchline Application separately because a portion of it is to be located on PA-80 land.

As will be discussed in more detail below, the Project will contribute to local, state, and global efforts to reduce the impacts of climate change. Renewable diesel can cut the lifecycle of greenhouse gas emissions up to 85% and lower tailpipe emissions. The Oregon Department of Environmental Quality recognizes renewable diesel as a way to achieve the 5% biofuel blend requirement under the Oregon Renewable Fuel Standard. The Oregon Department of Fish and Wildlife believes this proposed renewable energy project is "sited appropriately," and that facilities like this are "essential" to solve the climate crisis.

Moreover, the Project will confer substantial economic benefit to Columbia County. It will bring an estimated 3,500 construction jobs and 240 permanent jobs to the area. An economic

multiplier effect from NEXT's investment and other supportive industries will create a rising economic tide that sustains local businesses, stabilizes school funding and programs, and fuels economic growth for years to come.

Importantly, the Project is entirely consistent with the intended uses of the Port of Columbia County. The Project is dependent on its Columbia River location to take advantage of efficiencies made possible by the Port Westward deep-water dock, an asset Columbia County invested in specifically to attract development like the Project. The vast majority of the Project is located entirely within the Resource Industrial-Planned Development ("RIPD") zone, which is intended to accommodate both rural and natural resource related industries like NEXT's proposed Production Facility that will be located entirely within that zone. Only a small portion of the proposed rail branchline will touch land zoned differently, but in a manner well within established approval criteria, as will be described in more detail below.

In fact, the Project satisfies all applicable approval criteria. NEXT has heard and responded to written and oral comments from members of the local community and other concerned parties, and will expand its responses below. Further, thousands of local residents—workers, families, educators, businesses, elected officials, service providers, County staff—support the Project and recommend the Board approve it. For the reasons that follow, NEXT respectfully asks the Board to approve the Applications.

II. THE PROJECT WILL BENEFIT THE CLIMATE, THE COUNTY, AND THE PORT OF COLUMBIA COUNTY.

Before turning to the legal aspects of the Applications, NEXT reiterates the benefits that the Project would create, both locally and globally, if the Board approves it.

A. The Project reduces greenhouse gas and will help the nation transition to a low-carbon economy.

As explained by the Oregon Department of Environmental Quality ("DEQ"), DEQ recognizes renewable diesel as a way to achieve the 5% biofuel blend requirement under the Oregon Renewable Fuel Standard. **Exhibit 1.** According to DEQ, renewable diesel can cut the lifecycle of greenhouse gas emissions up to 85%, and lowers tailpipe emissions such as particulate matter, carbon monoxide, total hydrocarbons, and nitrogen oxide. *Id.* It has the same fuel economy and power as petroleum diesel, but produces a much cleaner exhaust and is made from products that otherwise end up in landfills.

It is estimated that the Project will result in an annual net reduction of 5,409,379 metric tons of greenhouse gas ("GHG") emissions. **Exhibit 2.** This is equivalent to removing approximately 1.2 million passenger vehicles from the roadways. *Id.* The Oregon Department of Fish and Wildlife commented that the Project is a renewable energy development project and that it "considers development of renewable energy infrastructure to be essential to solve the climate crisis." **Exhibit 3.** Simply put, the Project "will be a net positive impact to public health and safety by constructing and operating the proposed facility." **Exhibit 2.**

B. Local organizations recognize the project's dramatic contribution to a thriving Columbia County economy.

The Project will also provide a major economic benefit to Columbia County. As explained in NEXT's pre-hearing testimony, the Project is anticipated to create 3,500 construction jobs and 240 permanent jobs, and is planned to operate for 80 years or more. The Clatskanie City Council commented that the Project "will bring significant economic benefits to the City, let alone the County and State," including around 240 proposed jobs and \$16 million in estimated property tax revenue. The Council comments that the Project "will have a consequential positive impact on the local districts that rely on property tax revenue." The Columbia Economic Team offered similar comments and also encouraged the Board to approve the Applications.

The Columbia Pacific Building Trades Council, writing on behalf of 15,000 members, commented that the Project will help thousands of Columbia County-resident tradespeople stay in the region to build the facility. The Trades Council also described how the new, permanent jobs the Project creates "will inevitably lead to more money spent in our retail and grocery stores, on tourism and local recreation, and with local non-profits and organizations."

The January 11, 2022 Staff Report also found this multiplier effect important:

"In addition to the on-site employees, the project will also result in supportive jobs such as those for the terminaling company operating at the dock. Employees are also likely to patronize area businesses in and around Clatskanie, creating new indirect employment opportunities in surrounding areas. Products to support this facility will be imported via the river and rail from beyond the County, further contributing to economic growth in the immediate area and beyond."

Staff Report at 12.

Approval of the Project will have a profoundly positive effect on the Clatskanie School District. The superintendent of the Clatskanie School District testified that the additional tax revenue generated by the Project would be a sea-change for the District: "rather than a rural declining district, we're going to have a very robust instructional program." *Columbia County Board Hearing*, Jan. 19, 2022 at 2:09:33. The Clatskanie School Board also unanimously supported a letter emphasizing its support:

"Bringing NEXT Renewable Fuels to our area will provide our community with 200+ high paying jobs as well as providing sustainable funding to our local taxing districts, and most importantly to us, our school district. We will not have to wait every biennium to see what the Oregon economic forecast is to know what our budget will allow—if teachers can be maintained or laid off, and if exciting new programs can be added or our offerings reduced even further."

As was made clear in the written and oral hearing testimony, the Project can greatly enhance the local economy while also reducing GHG emissions globally.

C. The Project is consistent with the uses intended for Port Westward.

As described in our letter to the Board dated January 17, 2022, the Project is also consistent with the uses intended for its location. The particular use category proposed in the Site Design Review Application is “production, processing, assembling, packaging, or treatment of materials; research and development laboratories; and storage and distribution of services and facilities,” which are allowed under CCZO 683.1. Because Port Westward has one of only five Oregon deep-water ports, the Port Westward Exception Area (as adopted in the County’s Comprehensive Plan) was specifically intended to facilitate heavy industry that relies on marine transportation. *See Comp. Plan, Pt. XII § VII.1.b (pg. 124) (describing Port Westward as a unique economic asset to encourage Columbia County industrial development).*

The Port of Columbia County supports the Project specifically because it “will be situated on land intended to be used for industrial activities that can take advantage of the port’s unique deep-water marine terminal.” The Port’s Executive Director, Sean Clark, testified at the public hearing that the County invested in the Port and the Project would make specific use of its existing infrastructure. The City of Clatskanie’s written comments include that the Project “is consistent with heavy industrial and energy uses already established at Port Westward. ...[T]he project’s impact on farm-zoned land is very minimal and amounts to a small corridor of land necessary to extend rail service to the project, the vast majority of which is owned by the Port of Columbia County and is intended for industrial development and operation.” The Project exemplifies the kind of development specifically encouraged by the County’s 2007 Comprehensive Plan Exception Statement: a rural-industrial use that gains competitive advantage from its location, benefits the local economy, and has minimal impact on productive resource land. *See Staff Report at 12.*

Except for a portion of the proposed rail branchline, the Project is located entirely within the RIPD zone, and the Production Facility is located entirely within that zone. As demonstrated in the Applications and Staff Report, and described in more detail below, the Project specifically relies on the Port Westward dock for access to marine transportation and the river itself for industrial process water. Thus, the Project is entirely consistent with the legislative purposes underpinning Port Westward.

III. THE PROJECT SATISFIES ALL APPLICABLE CRITERIA

Most importantly, the Project satisfies all applicable criteria. For the following reasons, as well as those in the Staff Report and NEXT’s prior testimony, the Board should find that the Application satisfies all applicable criteria.

A. The Project is consistent with uses allowed in the RIPD zone and satisfies the criteria in CCZO 681.

The Staff Report found that the Project is consistent with the uses and development standards that the County provided for industrial development within Port Westward by adopting the Port Westward exception area and the RIPD zone. More specifically, Finding 1 of the Staff Report

concluded that “[t]he requested use conforms with the goals and policies of the Comprehensive Plan specifically those policies regarding rural industrial development and exceptions to the rural resource land goals and policies. Staff Report at 10. The Staff Report also found of the Project that:

- it will take advantage of marine transportation available on the Columbia River, specifically the deepwater port;
- it will use existing dock facilities;
- it will utilize existing rail connections;
- it will allow renewable diesel production to be located far from population centers, thus avoiding hazardous or incompatible impacts on densely populated areas; and
- the proposed facility is similar to the existing tank farm, PGE electrical generating facilities, and the Columbia Pacific Bio-Refinery.

Id. at 11. After quoting the 2007 Comprehensive Plan Exception Statement, Finding 4 determined that “[t]his application is consistent with this statement” because it: (1) will take advantage of existing infrastructure; (2) will be in proximity to existing industrial operations with similar impacts; and (3) it will bring temporary construction jobs and permanent ongoing operations jobs to Port Westward.” Staff Report at 12.

Some public comments raised concerns about the Project’s compatibility with surrounding agricultural uses. The Staff Report considered this issue and concluded that, in addition to satisfying all of the policies and goals applicable to the development:

“The existing agricultural uses to the east and south are not likely to be negatively impacted by the proposed industrial use due to the applicable County land use regulations and permit standards, fire code provisions implemented by the Clatskanie Rural Fire Protection District, and multiple state and Federal permits which the applicant will need to obtain prior to beginning operation of the facility. The proposed site development is consistent with existing land uses and available facilities and services.”

Staff Report at 18–19. Succinctly put, multiple layers of county, state, and federal requirements ensure the Project’s current and ongoing compatibility with nearby agricultural uses.

B. The rail branchline is permissible in the PA-80 zone and satisfies the criteria of ORS 215.296.

Rail branchline issues featured prominently in public comments and written submissions. As mentioned, a portion of the proposed branchline will impact some PA-80 zoned land. However,

as detailed in the Branchline Application and Staff Report—and as further described below—the proposed branchline satisfies all applicable criteria and requirements.

Columbia County’s PA-80 zoning generally protects agricultural uses to support food and fiber production while enhancing certain natural values. CCZO 301. The Code expressly allows a number of non-agricultural uses in this zone, and certain other non-agricultural uses may be allowed under Conditional Use Permits. Among the allowable conditional uses, the Board may approve roads, highways, and other transportation facilities and improvements as set forth in Oregon Administrative Rule 660-012-0065. That OAR “identifies transportation facilities, services and improvements which may be permitted on rural lands consistent with [statewide planning] Goals 3, 4, 11, and 14 without a goal exception.” Specifically, “[r]ailroad mainlines and branchlines” are consistent with the identified Goals and may be permitted on rural lands.

The relevant statutes provide no set definition of the term “branchline.” However, the Oregon Supreme Court has embraced a “commonly understood” meaning that a branchline is “nothing more nor less than an offshoot from the mainline or stem.” *Union P. R. Co. v. Anderson*, 167 Or 687, 712, 120 P2d 578, 588 (1941). County staff concluded that the Portland & Western Railroad Letter (Attachment 6h to the Staff Report) constituted sufficient evidence that the proposed rail development can be classified as a rail branchline. Staff Report at 46.

County staff evaluated the PA-80 zone impacts under ORS 215.296, which sets out the standards for approval of certain uses in exclusive farm zones. NEXT’s application addressed how the portions of the rail branchline subject to the farm impacts test—noted as Sections A and B of the branchline in the Branchline Application—will not force a significant change or significantly increase the costs of accepted farm or forest practices on surrounding lands devoted to farm or forest use. Much of this detailed analysis is reproduced on pages 44–55 of the Staff Report. Across multiple findings throughout this section, County staff: (1) found no evidence that the proposed branchline will alter the character of the surrounding area in a manner that will substantially limit, impair, or preclude the use of surrounding properties for farm or forest uses; and (2) found no evidence the branchline will significantly increase the cost of accepted farm or forest practices on agricultural lands.

C. The Project is consistent with the County’s environmental overlays.

Only one element of the Project—the crossing of McLean Slough with the branchline in the PA-80 zone—is subject to a County-designated natural resource zone. As explained below, the CUP application satisfies this requirement.

1. The Applications are consistent with the Riparian Corridors, Wetlands, Water Quality, and Fish and Wildlife Habitat Protection Overlay, CCZO 1170.

Finding 194 of the Staff Report concluded the Project does not enter or abut any mapped lake, river, or stream areas, although the proposed branchline intersects with McLean Slough. According to County staff, “Riparian impacts are limited to the crossing and not a wholesale

displacement of the riparian corridor.” Staff Report at 59. There are no other protected riparian areas impacted by the project.

As explained in the Staff Report, the Board may approve the minimal impact at the crossing because the Project is water dependent or water related. *See* CCZO 1175(A)(2) and (B)(5).¹ Neither the CCZO nor the Columbia County Comprehensive Plan define the terms “water-related” or “water-dependent,” except as relevant to the Willamette River Greenway, which is not applicable at this location. The County’s riparian area and wetland regulations are components of the County’s Statewide Planning Goal 5 program, which purports to adopt a “safe harbor” approach as discussed in Article X of the Comprehensive Plan. However, the Comprehensive Plan’s Goals and Policies do not categorically intend to prohibit uses conflicting with riparian areas or wetlands. Rather, the Plan’s stated intent is to protect such areas from “nonwater-dependent uses.” *See, e.g.*, Article X.E., Policy 9.

As explained in the Application, the Board can find that the Project is “water-dependent” because it requires access to the water body (namely, the Columbia River) for marine transportation. The applicant proposes to import and export renewable diesel product and renewable diesel feedstocks by water-borne vessels on the Columbia River, including ships and barges. This connection is reflected in Exhibit 15 to the CUP Application, which shows the piping directly connecting the facility to the Port Westward docks. Also, the Production Facility relies on Columbia River water as part of the renewable diesel production process—namely for steam production, cooling tower process water, and fire water reserve. This is also reflected on Exhibit 15 to the CUP Application.

Consequently, the Board can find that the proposed rail branchline located on PA-80 lands is also “water-dependent.” The purpose of the proposed rail branchline is to deliver renewable diesel feedstocks to the renewable diesel production plant for conversion into renewable diesel, to export such renewable diesel, and to remove waste products from the facility. As the branchline exists only to serve the renewable diesel production plant and is part of the overall project, it is just as river-dependent as the production plant itself. Put another way, the branchline is water-dependent because, like the renewable diesel production plant, it relies on river transportation as the other end of the renewable diesel supply/production chain. The export of waste products also makes the rail line a necessary component of the overall water-dependent use.

If the Board does not find that the branchline is “water-dependent,” the Board can nonetheless find that it is “water-related.” This is because the Project as a whole is intended to provide “goods [...] that are directly associated with water-dependent land or waterway use, and which, if not located adjacent to water, would result in a public loss of quality in the goods or services offered.” There is no dispute that the Project is intended to import and export “goods” (in this case, feedstocks and renewable diesel) to and from the Port Westward dock via pipeline, shown

¹ Note that there is no criterion that requires the Board to find that the Production Facility is “water related” or “water dependent.” Such a finding is necessary only for the crossing of McLean Slough by the westernmost portion of the branchline.

in Branchline Application Exhibit 15. As explained above, the renewable diesel facility must be located near the water because the use itself depends on river water and transportation, and would not be viable without a water-adjacent location. If the PA-80 portion of the proposed branchline is not located adjacent to the renewable diesel production plant, the efficiency of the renewable diesel use would suffer substantially because a large portion of the necessary feedstocks could not be economically imported to the Project, which would make the Project itself infeasible.

Some public comments argued that the Project cannot be water-dependent or water-related because it is technically possible to import and export all products overland. However, as just described, the Project depends on efficiencies made possible by Port Westward's deep-water port and river transportation in general. And, as explained by Mr. Gene Cotten's oral testimony at the Jan. 19 hearing, the rail is capable of serving only up to 40% of the Project's overall production capacity. Therefore, even maximizing use of overland infrastructure the Project would not be viable without its river connection. Thus, the Board may find the Project water-dependent or water-related even if some portion of its operations could be carried out overland.

2. **The Wetlands Area Overlay, CCZO 1180, does not prohibit modification of onsite wetlands because the Oregon Department of State Lands and Oregon Department of Fish and Wildlife have determined that the onsite wetlands are not significant for Statewide Planning Goal 5 purposes.**

The Wetland Area Overlay set forth in CCZO 1180 does not prohibit development of the Project because the impacted wetlands are not "significant wetlands." The Oregon Department of State Lands ("DSL") evaluated the Project under CCZO 1182 and using the Oregon Freshwater Wetland Assessment Method ("OFWAM"). It determined that the wetlands associated with the proposed Project are "NOT significant, nor are the wetlands that continue off the project site that were converted for farming and are zoned Primary Agriculture." DSL concluded that the relevant fish habitat, water quality, hydrologic control, education and recreation potential, and aesthetic quality are either degraded, lost, or not appropriate. Although the site includes some wildlife habitat and areas potentially sensitive because of water removal by drainage ditches, "[t]here is moderate to little enhancement potential because the four ecological functions are impacted or lost, and the wetland is isolated by the levee." DSL concluded:

"None of the four ecological functions, wildlife habitat, fish habitat, water quality, or hydrologic control scored high enough to be considered significant. There are no rare wetland plant communities, there are no critical habitats present, and the wetland is isolated by the levee and heavily impacted by the drainage district.

"The wetlands located behind the levee (within the drainage district) in the Resource Industrial Planned Development area at Port Westward and the wetlands that were converted for farming and are zoned Primary Agriculture are NOT significant under OFWAM."

The Oregon Department of Fish & Wildlife (“ODFW”) similarly concluded that while the area supports some habitat and wildlife functions, the existing wetlands are subject to cattle grazing, dominated by nonnative species, and “are degraded by current practices and infestations of non-native plants.” In a January 18, 2022 email to Columbia County staff, ODFW provided further clarification that: (1) “[t]he developer is proposing habitat mitigation that, once completed, the department expects should provide a net benefit to the affected fish and wildlife species that currently utilize the impacted habitat”; and (2) “[t]he department believes this proposed renewable energy project is sited appropriately, and it is consistent with the department’s climate goals.” **Exhibit 3.**

IV. NEXT’S RESPONSES TO SPECIFIC PUBLIC COMMENTS

A. Clarifications of the operational scope of the proposed rail branchline.

The vast majority of public opposition testimony pertained to the proposed rail branchline. Before providing specific responses to these comments, NEXT wishes to summarize the intent and design basis of the rail branchline. This was addressed by the testimony and evidence submitted during the second open record period in response to concerns about potential impacts to farm access.

As explained during Mr. Gene Cotten’s testimony at the January 19 hearing, the facility is designed and intended to receive 100 percent of its feedstocks via marine transportation and to export 100 percent of its products the same way. The only material that is required to be imported by rail is clay, which is necessary for renewable diesel processing and amounts to a single 20-car train per week.

The import/export capacity for the rail branchline serves a contingency role for times when river transportation is disrupted or otherwise unavailable. This allows the facility to keep operating and keep its employees working. Therefore, the branchline is designed to handle at most 40% of the feedstock import. As explained in the evidence submitted during the second open record period, the maximum capacity of the branchline for feedstock import and renewable diesel export is approximately 100 train cars per week. All told, including the clay import and running at full rail capacity (as contingency for any lack of available marine transportation), the Project would be expected to generate three (3) trains per week.

These trains are anticipated to have a maximum of 100 cars and a maximum length of 6,630 feet with two locomotives. The maximum single length of track within the proposed branchline is roughly 7,500 feet, more than enough storage to accommodate the largest train without requiring backing movements or crossing delays. The maximum delay time at the only nearby road crossing—Kallunki Road—is estimated to be approximately 7.5 minutes for a maximum length train at 10 miles per hour.

As Mr. Cotten’s February 2 memorandum explains, the design basis for the car storage component of the rail branchline was largely driven by requests of Burlington Northern-Santa Fe and Portland & Western railroad lines for more car capacity than NEXT originally proposed.

The railroads have requested 40,000 feet of siding track on the branchline, but NEXT is proposing 25,000 feet total, substantially smaller than the railroads would prefer.

In summary, the railroad branchline is not anticipated to operate anywhere near its capacity except in cases where marine transportation is disrupted. Staff proposes condition of approval no. 3, which provides as follows:

“Applicant shall prepare a management plan for the rail crossing providing clear timeframes for unobstructed use of the rail crossing consistent with farm activity requirements and a means to resolve conflicts.”

NEXT has no objection to this condition. Should the Board wish to limit the rail activities to only those proposed, the Board could impose the following additional condition, which we understand will also be recommended by staff:

“Rail transport to and from the site shall be limited to no more than 350 rail cars per week, excluding return cars. Trains serving the site shall be no more than 100 attached cars in length. A manifest documenting rail transport to and from the site shall be maintained, and shall be provided to the County within seven (7) days of written request from the County.”

NEXT supports this condition as well.

B. Response to comments submitted by DLCD, 1,000 Friends of Oregon, and Columbia Riverkeeper.

Despite having timely notice, the Oregon Department of Land Conservation and Development (“DLCD”) did not submit any official comments until 9:30 p.m. the evening before the Board Hearing. This obviously made it extremely difficult for NEXT to provide a detailed response to the comments during the hearing, thus NEXT does so now.

DLCD raised two primary issues regarding the Applications. First, DLCD essentially argued that the proposed rail branchline was actually a “rail yard” or something other than a “rail branchline,” and therefore not allowable on PA-80 zoned-land. Second, DLCD raised a number of issues concerning NEXT’s farm impacts analysis required under ORS 197 as described above. As explained below, the Board can and should reject DLCD’s comments.

1. The proposed rail branchline is not a “railyard.”

DLCD is incorrect as a matter of law that the proposed rail branchline is a “railyard” or “switchyard.” This is because there are no applicable definitions of any of the above terms in DLCD’s rules, applicable statutes, or other governing law. As explained above, Oregon courts have accepted the common industry definition of the term “branchline,” and a letter from Portland & Western Railroad explains that the proposed rail improvements are indeed a “branchline.” **Exhibit 4.**

As a practical matter, the branchline provides a connection to the available rail line in the area and is configured to allow cars to be loaded and unloaded. As Mr. Cotten explained during the hearing, the rail layout is intended to allow cars to be brought in, unloaded, and turned around. The branchline does not serve as a railyard that would, for example, move many types of freight from truck to rail, nor does it serve as a “switch yard,” because it does not direct multiple trains into different travel directions.

2. The Application satisfies the farm impacts test.

NEXT has provided substantial evidence responding to DLCD’s and 1000 Friends/Columbia Riverkeeper concerns regarding the farm impacts test.

DLCD and 1000 Friends of Oregon submitted written testimony on the day of the hearing. 1000 Friends submitted additional testimony in cooperation with Columbia Riverkeeper on January 26. Much of this testimony parroted the concerns identified by DLCD, namely that the County Staff Report and the Applications had failed to sufficiently identify and analyze accepted farm practices under the farm impacts test.

To varying degrees, DLCD and 1000 Friends mischaracterize the significant change/significant cost analysis. In *Stop the Dump Coalition v. Yamhill County*, 364 Or 432, 459 (2019), the Oregon Supreme Court explained the significant change/significant cost test in ORS 215.296(1–2) as follows:

“To summarize, when the parties dispute whether a nonfarm use will force a significant change to a particular accepted farm practice or significantly increase the cost of that practice, the farm impacts test in *ORS 215.296(1)* requires an applicant to prove that the proposed nonfarm use (1) will not force a significant change in the accepted farm practice *and* (2) will not significantly increase the cost of that practice. A “significant” change or increase in cost is one that will have an important influence or effect on the farm. For each relevant accepted farm practice, if the applicant cannot prove both of those elements without conditions of approval, the local government must consider whether, with conditions of approval, the applicant will meet the farm impacts test.”

As explained above, NEXT’s application addressed how the portions of the rail branchline subject to the test—noted as Sections A and B in the Applications—will not force a significant change or significantly increase the costs of accepted farm or forest practices on surrounding lands devoted to farm or forest use. NEXT did so by identifying the potential farm lands impacted by the rail branchline (namely, those parcels that are adjacent to the branchline) and the accepted farm practices on those lands (namely, hay and other crop production). The Application explains that such crops are relatively immune to the presence of rail and railcars, but also identified the project’s potential impacts on farm vehicle access.

The original application was bolstered by additional evidence and argument submitted by NEXT on December 14, which analyzed both sections of the rail branchline (the De La Cruz parcel and

the siding track located between the proposed production facility and Hermo Road) separately. Staff concluded that there is no evidence that the proposed branchline could force a significant change in, or significantly increase the costs of accepted farm practices on lands surrounding the branchline. Mr. Mike Seely provided additional information regarding his particular mint harvesting practices and the potential impacts of the rail branchline on his ability to impact some of his fields. NEXT addressed that information in its second open record submittal and again in this letter, below.

To ensure that rail crossings could be managed consistently with the access needs of surrounding landowners, County staff proposes Condition 3, which requires NEXT to “prepare a management plan for the rail crossings providing clear timeframes for unobstructed use of the rail crossing consistent with farm activity requirements and a means to resolve conflicts. The plan shall be subject to County review and approval.” The Applicant accepts this condition.

In identifying accepted farm practices, an applicant is not required to be omniscient in its understanding of the peculiarities of each farm practice, and when analyzing the potential impacts of a non-farm use on surrounding farmlands a local government “is not required to perform the impossible task of proving a negative.” *Gutoski v. Lane County*, 34 Or LUBA 219 (1998). Neither 1000 Friends, DLCD, nor Columbia Riverkeeper has identified accepted farm practices beyond those identified by NEXT and Mr. Mike Seely; therefore, the Board can conclude that NEXT has carried its initial burden under the significant change/significant cost test.

DLCD argues that the *Stop the Dump* case, cited above, requires a “cumulative impacts” test which was not done in the CUP application. The Board should reject this comment because it mischaracterizes *Stop the Dump* and ignores the facts in the record.

As an initial matter, the CUP application examined potential cumulative impacts (see CUP application at 17–18) and concluded that there were no non-significant impacts which in aggregate could create a significant change or significantly increase the costs of an existing farm activity.

The Court’s formulation of the farm impacts test at least recognizes that not all applications require the same level of searching inquiry: it qualifies the inquiry to situations “when the parties dispute whether a nonfarm use will force a significant change to a particular accepted farm practice or significantly increase the cost of that practice.” *Id.* NEXT identified the farm practices it believed to be potentially impacted by the rail branchline and the most likely potential impacts (farm access disruptions). Farm access for mint harvesting was also raised by Mr. Seely and 1000 Friends of Oregon/Columbia Riverkeeper, and their arguments are addressed below. Other than these, no parties have identified another existing “particular accepted farm practice” that could be affected by the rail branchline and which could be combined with other impacts of the branchline to create a cumulative impact. Accordingly, there is no evidence in the record of “cumulative impacts” that the County has failed to consider.

3. DLCD's speculations regarding impacts to the Beaver Drainage Improvement Company, water table impacts, and spill containment were addressed in the second open record period.

DLCD raised a number of speculative and undefined concerns regarding potential impacts of the local water table, Beaver Drainage Improvement Company ("BDIC"), and hazardous chemicals on surrounding farm activities. As an initial matter, the Board should reject these comments for the following reasons. First, they are mere speculation about impacts and not supported by evidence. Second, DLCD's comments about hazardous chemicals and spill response for the Production Facility are not relevant to the significant change/significant cost test because the Production Facility is located in an industrial zone and is not subject to that test. Finally, concerns regarding the potential impacts on water levels and the BDIC due to potential wetland mitigation are not relevant because NEXT's wetlands mitigation is not part of the Applications. Even if they did, wetland mitigation is an outright permitted use in the PA-80 zone and therefore is not subject to County approval.

Nonetheless, the Applicant provided evidence during the first open record period that addresses each of these arguments.

With regard to DLCD's questions about potential impacts to ground water associated with crossing and relocating existing drainage infrastructure ditches and filling wetlands, evidence in the record (as explained in more detail in response to BDIC's comments) demonstrates that the ditch proposed to be replaced will be sized to convey at least as much water as the existing one does, and the proposed renewable diesel production facility will obtain applicable DEQ permits to protect groundwater quality during construction and operation. Furthermore, the facility will implement best management practices to protect groundwater quality in accordance with DEQ standards; these are described in the GSI Water Solutions memorandum regarding Groundwater Protectiveness Measures submitted during the first open record period, as well as NEXT's updated drainage plan also submitted during the first open record period.

DLCD's apparent speculation regarding impacts to groundwater quantity are misplaced. At least as far as the Production Facility is concerned, evidence submitted by NEXT demonstrates that the only component of the Project subject to the significant change/significant cost test—the rail branchline—will be drained via a swale that meets the DEQ's SLOPES V standard. Thus, the Board can conclude that the branchline will re-infiltrate much of the surface storm water. However, as local governments are preempted from regulating ground water quantity, which is the sole purview of the Oregon Water Resources Department,² the Board should reject DLCD's comments regarding ground water quantity.

With regard to concerns about hazardous chemicals and spill containment, evidence submitted during the first open record period establishes that NEXT will develop a Facility Response Plan, a DEQ approved Oil Spill Contingency Plan (OSCP), and an EPA-approved Spill Prevention

² See *Ashland Drilling, Inc. v. Jackson County*, 168 Or App 624 (2000).

Control and Countermeasure Plan. To graphically illustrate spill containment measures at the proposed facility, Mackenzie engineers have annotated the facility drainage plan (Sheet C1.30, **Exhibit 5**) to depict the proposed spill containment berms around tanks, the equipment pads with spill containment areas, and the proposed stormwater swales. All runoff from the facility will be conveyed to a centralized treatment facility designed to remove potential contamination from the stormwater before it is discharged from the site. Railroad operators are further required by federal and state law to prepare oil spill response plans and to utilize rail cars meeting the latest safety standards to minimize the potential for impacts on nearby lands.

With regard to NEXT's involvement with the BDIC, all landowners in the Beaver Drainage District are assessed an annual fee, and NEXT Renewable Fuels will pay the assessment as required. The applicant will maintain its own private stormwater maintenance facilities and will provide access to the Beaver Drainage Improvement Company to maintain their facilities in accordance with their access rights conveyed under existing easements.

4. The Project will not force a significant change in, or significantly increase the costs of, Mr. Seely's mint farming activities.

During the first open record period, 1000 Friends and Columbia Riverkeeper submitted comments arguing that the proposed rail branchline could cut off Mr. Seely from his mint fields due to train movements.³ During the second open record period, NEXT provided responsive testimony and evidence that demonstrates the following:

- Mr. Seely will have unbroken access to his east fields via Kallunki Road and west fields via Hermo Road.
- The proposed rail branchline does not cut off Mr. Seely from any of his other fields because he does not have a leasehold interest in Port of Columbia County property south of the branchline.
- The proposed branchline provides a train storage length of roughly 7,500 feet, substantially longer than the longest (6,630 feet) train that the facility is designed to accept. This means that the largest possible train to ever service the facility can be stored on NEXT's branchline without it having to be broken up or without any backing movements on existing crossings.
- The maximum potential length of time required to cross the Kallunki Road is approximately 7.6 minutes with the largest possible train.

³ This testimony appears to assume that a new rail crossing of Hermo Road is proposed; this is not the case. Therefore, there is no way for a train to block Hermo Road for any length of time under the proposed design.

The record demonstrates that with the maximum train size, Mr. Seely would experience a delay of approximately 7.5 minutes crossing Kallunki Road, and no delay crossing Hermo Road. This potential delay would only pertain to Mr. Seely's smaller parcels east of Kallunki Road. However, the Board can find that this impact is not significant because there is no evidence or argument that such a short delay⁴ could cause a significant change in or significantly increase the costs of Mr. Seely's mint farming. Even so, the chances of such a delay occurring with any frequency are minimal because they would occur only if a train of maximum length happened to be crossing Kallunki road at the same time Mr. Seely's equipment was waiting to cross the tracks.

C. Comments regarding the negotiations between NEXT and the Beaver Drainage Improvement Company are not relevant to the approval criteria.

Generally, most comments submitted by and about the Beaver Drainage Improvement Company pertain to NEXT's wetland mitigation plan, which is not before the Board.⁵ As stated in our January 17 letter, NEXT's wetland mitigation proposal is part of its DSL/USACE Joint Permit Application. Accordingly, the Board should reject the BDIC's comments addressing the wetland mitigation plan.

BDIC's comments regarding the proposed relocation of an existing drainage ditch were addressed by NEXT in its second open record submittal, dated February 2nd. This submittal included a plan showing how the proposed relocated ditch can and will provide equivalent or better flow as the existing ditch.

The BDIC also commented that the Project violates CCZO 300, 681(B)(2) and 1170 because it will impact drainage and irrigation. Note that in doing so, the BDIC does not identify any specific farms or farming practices that could be affected, and does not offer an evidence to support its claims, so its comments (like DLCD's) are entirely speculative. CCZO 300 sets out the standards applicable in the PA-80 zone, which, as already discussed, is germane only as to the proposed branchline. In that regard, Staff Report Finding 174 concluded that, "[d]ue to its relatively small area (approximately 12.3 acres), the proposed rail branchline can be conditioned to resolve potential conflicts with agricultural activities as detailed in the response to Section 300, and there are not nearby forest zones with forestry activities." Staff Report at 55. Further, "[w]ith the proposed condition of approval, existing agricultural uses will continue to function consistent with to the current status quo of farmland adjacent to existing rail and electrical transmission lines." On this basis, the Board can reject the BDIC's comments concerning compliance with CCZO 300.

⁴ Note that Mr. Seeley's window for mint harvest was days, not mere minutes.

⁵ As explained above, Wetland creation and enhancement is permitted outright in all EFU zones in Oregon, including PA-80, and therefore cannot be considered a non-farm impact for purposes of the farm impacts test. Regardless, the vast majority of wetlands required to be mitigated are impacted by the Production Facility, not the rail branchline; these impacts cannot be considered as part of the farm impacts test because the Production Facility is located in the RIPD zone.

There is no CCZO 681(B)(2). However, CCZO 683.1(B)(2) requires uses within the RIPD zone to address any impact on the development area and mitigate adverse impacts considering “[e]xisting land uses and both private and public facilities and services in the area.” The Staff Report found this condition satisfied, observing that:

“The nearby industrial uses are not sensitive to expansion of industrial activity at Port Westward. The existing dock serves these industrial uses and is particularly well suited for serving the proposed use for shipment of feedstock and finished products. The existing agricultural uses to the east and south are not likely to be negatively impacted by the proposed industrial use due to the applicable County land use regulations and permit standards, fire code provisions implemented by the Clatskanie Rural Fire Protection District, and multiple state and Federal permits which the applicant will need to obtain prior to beginning operation of the facility. The proposed site development is consistent with existing land uses and available facilities and services.”

Staff Report at 18–19.

CCZO 1170 sets out standards for the Riparian Corridors, Wetlands, Water Quality, and Fish and Wildlife Habitat Protection Overlay Zone. The Staff Report observes that the only related impact from the Project is the branchline’s intersection with McLean Slough. These concerns have been addressed above in Section III.C.1.

The BDIC also argued that future (not current) farm activities (such as livestock grazing) could be affected by the rail spur. The Board should reject this argument because speculates about future land uses, not current ones, and because neither NEXT nor the County is required to consider future or speculative farm practices under the farm impacts test. *See, e.g., Womelsdorf v. Jackson County*, 62 Or LUBA 34 (2010).

The Board should also reject BDIC’s argument that NEXT’s application lacks a required liability waivers for normal farm activities. These are not required as part of the County’s criteria or application requirements, rather they are required as a condition of approval. County staff proposes this condition and NEXT will provide the required waivers if the application is approved.

To the extent comments by or about the BDIC pertain to application approval criteria, the Applications have addressed these comments and the Staff Report has found the concerns sufficiently addressed by the Applications and conditions for approval that NEXT does not object to. Regarding the BDIC’s issues pertaining to NEXT’s wetland mitigation plan, that plan is not before the Board. In any event, the mitigation plan will not burden landowners. As noted in the Applications and Staff Report, sufficient infrastructure is in place or proposed to collect, treat, and discharge runoff. Branchline Application at 33; Staff Report at 69–70 (“Staff finds the proposal can be conditioned to be consistent with the County’s Stormwater and Erosion Control Ordinance.”).

Finally, no local, state, or federal law gives the BDIC veto power over the Board's approval as recommended by the Staff Report, and NEXT is not required to obtain an approvals from BDIC prior to obtaining approval from the County on its application. NEXT will provide access easements for any relocated BDIC ditch or other infrastructure, but like any arms-length real estate transaction necessary to implement a development plan, that is between NEXT and the BDIC, and not a matter for consideration by the Board. Similarly, the lease between the Port and NEXT is purely a matter of real estate law and has no regulatory relevant to the Applications.

For the above reasons, the Board should reject BDIC's comments.

V. THE BOARD SHOULD REJECT OTHER OPPOSITION COMMENTS.

A significant portion of the public comments describe issues that are unrelated to the criteria, which should not factor into the Board's decision. A fair number of those comments—which raised general concerns about fuels production, rail operations, and farm/habitat conflicts—are from people who live outside Columbia County, either Portland or other parts of Oregon and Washington; these comments generally discuss broad issues such as sustainability, a general opposition to any fuels production, and the regional habitat. NEXT nevertheless responds to the key issues that fall within this category.

A. The Project will complement the character and development of the surrounding area.

As described above, the Project includes two applications, one for the facility and one for the rail branchline. These are separate but related. Importantly, few project opponents have argued that the Renewable Diesel facility itself should be denied or fails to meet the approval criteria. The sole argument that appears to have been raised is a general statement that the Project does not “compliment the character of the surrounding rural area,” as provided in the purpose statement of the RIPD zone (CCZO 681).

As an initial matter, CCZO 681 is a purpose statement and not an approval criterion. *Ellison v. Clackamas County*, 28 Or LUBA 521, 525 (1995). The Rural Industrial goal and policies include a related provision to which the Application must conform as a general matter. However, that specific policy is that the Project “complement the character and development of the surrounding area,” not the surrounding “rural” area. Regardless, the Board can find that the Project compliments the character of the surrounding area and surrounding rural area for the following reasons.

First, the County's Comprehensive Plan has already determined that the Port Westward Exception Area is suitable for uses such as “a 200-acre oil refinery, a 150-to-200-acre coal port, an 80-acre petrochemical tank farm, and a 230-acre coal gasification plant.” With regard to compatibility, the Port Westward Exception Statement explains that:

1. The 900-acre site is large enough to allow [an] adequate buffer area to protect adjacent agricultural users.

Columbia County Board of Commissioners
February 2, 2022
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2. These types of large-scale industrial users do not create pressure for housing or other uses on adjacent farmland.
3. The requirements of the Department of Environmental Quality will assure that new industry does not pollute the adjacent air, water, or land.

Second, the Application explains that there are already substantial existing industrial developments in the vicinity, “including the Columbia Pacific Bio-Refinery, the PGE Tank Farm, the PGE Port Westward Generating Facility, the PGE Beaver Generating Facility, the Clatskanie People’s Utility District electrical substation, roadways, rail lines, utilities, drainage facilities, levees, pipelines, electrical transmission lines, the dock, and associated support facilities, such as electrical facilities, stacks, a water tower, wastewater treatment facilities, parking, and wetland conservation.” SDR Application at 10. The Application also explains, and the Staff Report concurs, that the existing industrial activities at Port Westward demonstrate how industrial and surrounding uses can coexist. It is also worth noting that the Board has voted on more than one occasion to expand the RIPD zone. If this decision is upheld, the Project will enjoy a substantial buffer of additional RIPD-zoned land between it and the vast majority of PA-80 zoned land in the vicinity.

Third, there is no substantial evidence that the production facility itself would adversely impact farmland. Just the opposite: the Project will actually improve access for farm vehicles with the proposed construction of the Hermo Road extension at the applicant’s expense. Also, the Project will be required to have a complete spill containment and hazard management plan approved by DEQ that will ensure that no hazardous materials could spill from the site onto surrounding farmland. As shown on **Exhibit 5**, this plan is integrated into the engineering of the Production Facility. Regarding availability of crossing access for farm activities at times consistent with farming activity needs, County staff recommended a “condition of approval for crossing access and management to address this issue.” Staff Report at 49. NEXT agrees to such condition, as described above. But, staff found “no evidence the proposed rail development—the subject of the CU application—will force a significant change in farm or forest practices.” *Id.*

Fourth, to the extent that considerations related to this policy overlap with the farm impacts test, the Project’s satisfaction of that requirement has been discussed in detail, above.

In summary, there is no substantial evidence in the record to suggest that the Renewable Diesel facility itself is not compatible with the surrounding areas.

B. The Project is designed to minimize risks to water quality.

Some public comments raised concerns about how the Project may impact general water quality. These concerns were largely addressed above in Section IV.B.3. In sum, the Project will involve DEQ permits to protect groundwater quality during construction and operation, and NEXT will

implement robust water quality practices with a firm intention to minimize any risk to water quality.

C. Any increase in vehicle and rail traffic will be within established limits and capacities.

Several comments raised concerns about increases in vehicle and rail traffic association with the Project. These concerns are not related to an approval criterion and the Board can approve the Applications despite these concerns. However, the Applications include a traffic impact analysis (“TIA”) that found, as summarized in the Staff Report, “all study intersections meet applicable Columbia County, Oregon Department of Transportation, and City of Clatskanie mobility standards in 2020, in 2024 without NEXT Renewable Fuels, and in 2024 with NEXT Renewable Fuels and improvements to Hermo Road as proposed by the Applicant. The TIA did not identify a need for mitigation strategies.” Staff Report at 29. There is thus no evidence that the Project will create any particular hardships regarding increased traffic.

D. The Project will not damage dike roads and surrounding infrastructure.

Relatedly, some commenters were concerned that the Project could damage dike roads and surrounding infrastructure. Again, these concerns are not relevant to the approval criteria and can be rejected. Moreover, the TIA did not identify any such concerns and the Project is thus not expected to involve any related higher risk than any other type of development.

E. The Project is designed to minimize risks from liquefaction.

Similarly, liquefaction and earthquake risks appeared in some public comments. These risks are not related to approval criteria and should not affect the Board’s decision. Regardless, the Project is subject to and will comply with all related local, state, and federal requirements to minimize risks associated with liquefaction and earthquakes.

F. The Project incorporates waste and spill measures that meet or exceed state and federal standards.

Some commenters raised concerns about waste and spill measures. These are also addressed above in Section IV.B.3. Importantly, NEXT intends to incorporate and adopt waste and spill measures that meet or exceed state and federal standards.

G. Noise, air, and odor pollution are not included in approval criteria

In the same vein, some commenters are concerned about noise, air, and odor pollution. These are not approval criteria and are thus not appropriate reasons to deny the Applications.

Columbia County Board of Commissioners
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VI. CONCLUSION

The Applications satisfy all applicable criteria and enjoy support from Columbia County residents who recognize the Project's positive impact on the local economy and environment, as well as its pronounced importance in combatting global climate change. County staff recommends approving the Applications. NEXT respectfully asks that the Board approve the Application with the conditions proposed by County staff.

Best regards,



Garrett H. Stephenson

GST/jmhi
Enclosures

PDX\133639\242725\AMU\32899600.3



State of Oregon Department of Environmental Quality

Renewable Diesel 101

Contact: OregonCleanFuels@deq.state.or.us
700 NE Multnomah Street Suite 600 Portland, OR 97232

What is renewable diesel?

Renewable diesel is produced by running fats and oils from plants and animals instead of crude through a refinery, resulting in a biofuel that meets the ASTM D975 standard for diesel. Renewable diesel can be made from many waste or renewable materials including: rendered tallow, fish waste, used cooking oil, inedible corn oil, soybean oil, canola oil, and others. A typical facility can switch between or run multiple different materials.

Renewable diesel is a drop-in fuel which means it can be used as a one-for-one replacement for diesel or can be mixed with diesel at any rate to produce a blended product requiring no changes to the vehicles or fueling infrastructure.

Is renewable diesel the same as biodiesel?

While they can be made from the same materials, biodiesel and renewable diesel have different manufacturing processes that result in products with different molecular structures - biodiesel is a methyl-ester and renewable diesel is a hydrocarbon. The difference in the chemical properties of biodiesel is what limits the amount that can be blended with petroleum diesel, which is also a hydrocarbon. There is no limit for the amount of renewable diesel that can be blended with petroleum diesel because they are chemically identical. Biodiesel, renewable diesel, and petroleum diesel can all be blended together for use in diesel vehicles.

What are the emissions benefits from using renewable diesel?

Using renewable diesel can cut lifecycle greenhouse gas emissions up to 85% depending on what materials it is made from. Waste products such as tallow and used cooking oil have the greatest reductions while vegetable oils are slightly less. Renewable diesel lowers tailpipe emissions such as particulate matter, carbon monoxide, total hydrocarbons, and nitrogen oxide.

What are the other benefits from using renewable diesel?

Renewable diesel has gained in popularity largely because its lower carbon footprint, but also because it:

- has a higher cetane value than biodiesel
- has the same fuel economy or power as petroleum diesel
- produces a much cleaner exhaust and dramatically reduces the need for regeneration in vehicles with particulate filters, which in turn reduces maintenance costs for fleet owners
- does not contain oxygen, which avoids problems that biodiesel has with freezing, storage, and algae growth
- is made from products that would otherwise be sent to a landfill

Is renewable diesel available in Oregon?

The production of renewable diesel has grown significantly over the last several years and this trend will continue as billions of gallons of additional capacity have been recently announced. Tens of millions of gallons have already been delivered to Oregon because of the Clean Fuels Program, and that demand will remain strong as DEQ expands its targets beyond 2025. Contact your fuel supplier to find out current prices and availability of renewable diesel.

How is renewable diesel treated under the Oregon Renewable Fuel Standard?

The Oregon Renewable Fuel Standard recognizes renewable diesel as a way to achieve the 5% biofuel blend requirement for diesel.

How is renewable diesel treated under the Portland Renewable Fuel Standard?

The Portland Renewable Fuel Standard does not recognize renewable diesel as a way to achieve their renewable fuel standard.

Alternative formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.



MAUL FOSTER ALONGI

3140 NE Broadway Street | Portland, OR 97232 | 971 544-2139 | www.maulfoster.com

January 25, 2022
Project No. 1724.01.03

Garrett Stephenson
Schwabe Williamson & Wyatt
1211 SW Fifth Avenue Suite 1900
Portland, OR 97204

Re: NEXT Renewable Fuels Oregon, LLC—Greenhouse Gas Emissions Summary

Dear Garrett:

NEXT Renewable Fuels Oregon, LLC (NEXT) is proposing to construct a renewable diesel, naphtha, and jet fuel manufacturing facility in Clatskanie, Oregon (proposed facility). The proposed facility will receive and process raw oil feedstocks, including vegetable oils and animal fats, to produce renewable fuel products for sale in markets in western states with Low Carbon Fuel Standards (LCFS). Implementation of LCFS creates an inelastic marketplace requiring that lower carbon fuels replace conventional petroleum-based fuels in ever-increasing amounts. The renewable fuels produced by NEXT may represent a component of the lower carbon fuel portfolios necessary to achieve LCFS program goals.

LCFS programs establish carbon intensity targets for transportation fuels. Carbon intensity represents a measure of greenhouse gas (GHG) emissions over the entire lifecycle of a fuel, accounting for extraction, production, transportation, and end consumption. During construction and operation of the proposed facility, GHG emissions will be emitted by anthropogenic sources such as non-electrical construction equipment, non-renewable source of electricity generation, and the combustion of natural gas in process equipment, and biogenic sources such as the combustion of gases generated from renewable feedstocks in the Hydrogen Plant.

All GHGs remain in the atmosphere long enough to become well mixed, meaning the amount of GHGs measured in the atmosphere is roughly the same all over the world, regardless of the source of emissions (EPA 2021a). Climate change impacts result from the incremental addition of GHG emissions from millions of individual sources, which collectively have a large impact on a global scale (CEQ 2016). As a result, it is currently not possible to correlate how the proposed facility will directly contribute to a specific climate change effect on public health and safety. GHGs do not have direct human health effects like some other regulated pollutants. Instead, the overall significance of GHG emissions from the proposed facility should be evaluated by analyzing the carbon intensity of the renewable fuel products from NEXT in relation to that of conventional petroleum-based fuels.

Garrett Stephenson
 January 25, 2022
 Page 2

Project No. 1724.01.03

The proposed facility will produce approximately 17,700,000 barrels per year of renewable diesel and much smaller volumes of renewable naphtha and renewable jet fuel. This means the production of renewable diesel from NEXT will offset an equivalent amount of conventional petroleum-based fuels in the marketplace, leading to an overall net reduction in GHG emissions from existing conditions, as detailed below.

The carbon intensity for conventional diesel is 100.74 grams of carbon dioxide equivalents per megajoule of fuel (g-CO₂e/MJ). NEXT will produce renewable diesel with a weighted average carbon intensity of 48.4 g-CO₂e/MJ, accounting for each raw oil feedstock, as derived from the approved fuel pathways established under the Oregon Clean Fuels Program. In other words, NEXT will produce fuels that emit less than half (48.4%) as much GHG over their lifecycle as compared to conventional diesel. Because the renewable diesel produced by NEXT will displace conventional diesel, it will actually reduce the amount of GHG emissions by 51.6% from the existing condition. As demonstrated in the table below, NEXT's renewable diesel will result in a net reduction of approximately 5,409,379 metric tons of CO₂e per year (MTCO₂e/yr) in the LCFS transportation fuels market.

Table 1. Net Reduction in Lifecycle GHG Emissions from the Proposed Facility

Fuel Type	Default High Heat Value ⁽¹⁾ (MMBtu/gal)	Annual Production Rate ⁽²⁾ (bbl/yr)	Carbon Intensity (g-CO ₂ e/MJ)	Annual GHG Emissions Estimate (MTCO ₂ e/yr)
Renewable Diesel	0.123	17,709,902	48.4 ⁽³⁾	4,667,499 ^(a)
Conventional Diesel	0.127	17,709,902	100.74 ⁽⁴⁾	10,076,877 ^(a)
Total Net Reduction in Annual GHG Emissions Estimate =				-5,409,379 ^(b)
NOTES: ^(a) Annual emissions estimate (MTCO ₂ e/yr) = (carbon intensity [g-CO ₂ e/MJ]) x (1,055.06 MJ/MMBtu) x (42 gal/bbl) x (default high heat value [MMBtu/gal]) x (annual production rate [bbl/yr]) x (lb/453.592 g) x (ton/2,000 lb) x (MT/1.102 US tons) ^(b) Total net reduction in annual GHG emissions estimate (MTCO ₂ e/yr) = (renewable diesel annual emissions estimate [MTCO ₂ e/yr]) - (conventional diesel annual emissions estimate [MTCO ₂ e/yr]) REFERENCES: ⁽¹⁾ Value derived from Oregon Administrative Rule (OAR) 340-253-8010, Table 6 "Oregon Energy Densities of Fuels." ⁽²⁾ Represents proposed facility maximum renewable diesel operating mode. ⁽³⁾ Carbon intensity derived from Oregon Clean Fuels Program regulatory default carbon intensity per OAR 340-253-8010, Table 9. New legislation to establish a Clean Fuels Program in the state of Washington is currently in rulemaking that may establish carbon intensity standards for transportation fuels used in Washington. The carbon intensity value for renewable diesel specific to the Washington Clean Fuels Program is expected to be similar to the California and Oregon-specific carbon intensity values. ⁽⁴⁾ See OAR 340-253-8010, Table 4 "Oregon Carbon Intensity Lookup Table."				

To put this in perspective, the net reduction of 5,409,379 metric tons of GHG emissions is equivalent to removing approximately 1.2 million passenger vehicles from roadways, assuming the typical passenger vehicle emits about 4.6 metric tons of GHGs per year (EPA 2021b).

Garrett Stephenson
January 25, 2022
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Project No. 1724.01.03

Hence, there will be a net positive impact to public health and safety by constructing and operating the proposed facility.

Sincerely,

Maul Foster & Alongi, Inc.

A handwritten signature in blue ink, appearing to read 'BSZ', with a large, stylized flourish extending from the end of the signature.

Brian Snuffer Zukas, PE
Project Air Quality Consultant

Attachments: References

cc: Gene Cotten, NEXT Renewable Fuels Oregon, LLC
Brien Flanagan, Schwabe, Williamson & Wyatt
Chad Darby, Maul Foster & Alongi, Inc.

REFERENCES

(EPA 2021a) EPA. July 27, 2021. Overview of Greenhouse Gases. <https://www.epa.gov/ghgemissions/overview-greenhouse-gases> (accessed September 28, 2021).

(EPA 2021b) EPA. July 21, 2021. Greenhouse Gas Emissions from a Typical Passenger Vehicle. <https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle> (accessed January 25, 2022).

(CEQ 2016) Council on Environmental Quality. August 1, 2016. Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews. https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf (accessed September 29, 2021).



From: BARNES Susan P * ODFW <Susan.P.BARNES@odfw.oregon.gov>
Date: January 18, 2022 at 1:46:20 PM PST
To: Robin McIntyre <Robin.McIntyre@columbiacountyor.gov>
Cc: CARY Dan * DSL <Dan.CARY@dsl.oregon.gov>, Catie Kerns <ckerns@stewardshipsolutionsinc.com>
Subject: NEXT Renewables - ODFW clarification

Robin;

The Oregon Department of Fish and Wildlife (department) would like to provide additional clarity on its input to Columbia County (dated 12-21-21) regarding NEXT Renewables' proposed biofuels development project. The department considers development of renewable energy infrastructure to be essential to solve the climate crisis. The department supports well-sited, adequately mitigated, and responsibly operated renewable energy developments. Well-sited, adequately mitigated, and responsibly operated renewable energy developments are:

1. sited in locations that avoid or minimize impacts on fish, wildlife, and their habitats;
2. assessed to determine how unavoidable impacts may be adequately mitigated;
3. implemented with temporally and spatially adequate mitigation in place; and
4. operated in compliance with regulatory requirements or conditions established to protect fish, wildlife, and their habitats.

The proposed facility is a renewable energy development project. The proposed project site is zoned for industrial development. While the site does provide some habitat functions and values to fish and wildlife the current habitat is impacted and degraded by past and current management practices. The developer is proposing habitat mitigation that, once completed, the department expects should provide a net benefit to the affected fish and wildlife species that currently utilize the impacted habitat. The department remains available if the Department of State Lands requests technical assistance on elements of the mitigation plan specifically intended to compensate for effects on fish and wildlife habitats.

In summary, the department typically seeks to direct new terrestrial and freshwater developments to already degraded, low functioning habitats that are unlikely to become high functioning. The department believes this proposed renewable energy project is sited appropriately, and it is consistent with the department's climate goals.

Thank you for the opportunity to provide input.

susan

Susan Barnes
Regional Wildlife Conservation Biologist
West Region – Northwest

Oregon Department of Fish and Wildlife
17330 SE Evelyn Street

Clackamas, OR 97015
Email: susan.p.barnes@odfw.oregon.gov
Phone: 971-673-6010

BOOK PAGE



November 19, 2021

Mr. Gene Cotten
NEXT Renewable Fuels, Inc
11767 Katy Freeway, Suite 705
Houston, TX 77079

Gene,

I understand the Columbia County planning staff has raised questions regarding the classification of the tracks that will be built to support NEXT's Renewable Diesel facility at Port Westward. For PNWR contractual purposes, NEXT's rail tracks will be considered industry track, which is another term for branch line or spur. NEXT's track will connect to the existing branch line that services Port Westward. As a general matter, "branch line" is a broad term that encompasses any track that branches off from mainline track.

Portland & Western Railroad, Inc. also does not consider the tracks at NEXT's facility a "switch or rail yard." All cars entering and exiting NEXT's facility will be for NEXT's sole use at the site itself. A switch/rail yard's goal is to block cars for furtherance to other destination points. Let me know if you have additional questions.

Sincerely,

A handwritten signature in black ink that reads 'Matthew Artz'. The signature is written in a cursive, flowing style.

Matt Artz
Director, Sales and Marketing
Portland & Western Railroad, Inc.
1710 Midway Court
Centralia, WA 98531



Professional Engineer
No. 10110
State of Oregon

MACKENZIE

Next Renewable Fuels Oregon

11767 KATY FREWATER
SUITE 705
HOUSTON, TX 77079

Project:
Next Renewable Fuels, Inc.
Port Westward
Columbia County, OR



EXPIRES 12/31/22

REVISION SCHEDULE

No.	Rev.	Date	By

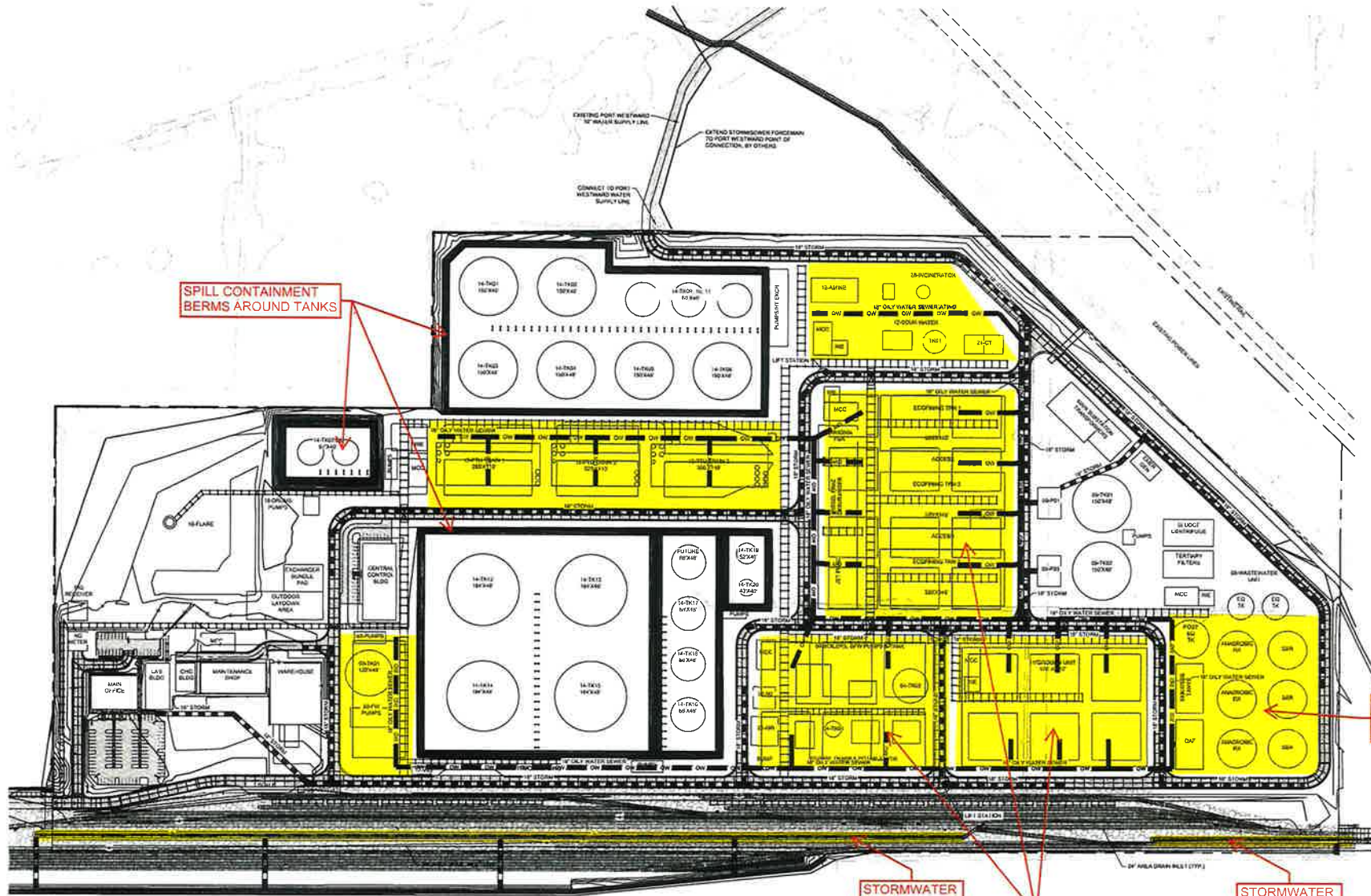
SHEET TITLE
DRAINAGE PLAN

DESIGNED BY: GSW
CHECKED BY: BSW
DATE:

C1.30

JOB NO. 2200315.01

20210808 10:00 AM 10/28/21 10:21 1/100



SPILL CONTAINMENT BERMS AROUND TANKS

WASTEWATER TREATMENT PLANT

STORMWATER SWALE

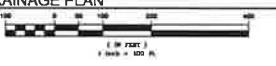
STORMWATER SWALE

EACH EQUIPMENT PAD WILL HAVE SPILL CONTAINMENT

LEGEND:

REFER TO SHEET C001 FOR GENERAL LEGEND

1 DRAINAGE PLAN
C1.30



BOOK PAGE

COLUMBIA COUNTY BOARD OF COMMISSIONERS STAFF REPORT

January 12, 2022

Site Design Review, Use Permitted Under Prescribed Conditions in the RIPD Zone, Variance -

Type II

Conditional Use Review – Type III

HEARING DATE: January 19, 2022

FILE NUMBER: DR 21-03, CU 21-04 & V 21-05

APPLICANT: NEXT Renewable Fuels, Inc., Attn: Christopher Efird
11767 Katy Freeway, Suite 705
Houston, TX 77079
chris@nextrenewables.com
(661) 201-2653

OWNERS: Port of Columbia County
PO Box 190
Columbia City, OR 97018
(503) 397-2888

NEXT Renewable Fuels, Inc.

Felipe and Bobby De La Cruz
80393 Kallunki Rd
Clatskanie, OR 97016

CONTACT: Mackenzie, Attn: Brian Varricchione
1515 SE Water Avenue, Suite 100
Portland, OR 97214
(503) 224-9560
bvarricchione@mcknze.com

LOCATION: 81009 Kallunki Rd. Clatskanie, Oregon

TAX MAP ID #: Facility
Port of Columbia County: 8422-00-00100, 8422-00-00200, 8422-00-01100, 8421-00-00700, 8416-00-00200, 8416-00-00300
NEXT Renewable Fuels, Inc.: 8422-00-00300

Branch Line
Port of Columbia County: 8421-00-00600, 8422-00-00400, 8422-00-00500, 8422-00-00600, 8423-B0-00700
De La Cruz: 8423-B0-00800

TAX ACCOUNT #: Facility
Port of Columbia County: 28060, 28063, 28064, 28065, 28107
NEXT Renewable Fuels, Inc.: 28062

Branch Line
Port of Columbia County: 28060, 28063, 28064, 28065, 28107
De La Cruz: 28108

ZONING:

Facility

Resource Industrial – Planned Development (RIPD)

Branch Line

Primary Agricultural Use Zone (PA-80)

Both

Riparian Corridors (RP); Wetland Area (WA)

SIZE:

Site

680 Acres

Facility Development Area

Approx. 150 Acres - 109 acres for the primary site development, ~41 acres for driveway, pipelines and associated improvements.

Branch Line Development Area

12.3 Acres

REQUEST:

- Use Permitted Under Prescribed Conditions in the RIPD zone, Site Design Review for a proposed renewable diesel production facility at Port Westward Industrial Park
- Variance to buffering and screening standards
- Conditional use to allow a rail branch line in the PA-80 zone

APPLICATION COMPLETE:

07/15/21

150 DAY DEADLINE:

02/23/22

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SUMMARY

The applicant, NEXT Renewable Fuels proposes to develop a renewable diesel production facility at the Port Westward Industrial Park (Port Westward), within the Resource Industrial-Planned Development (RIPD) zone. The facility will produce renewable diesel fuel from materials such as cooking oil, animal fats and tallow, and corn oil. The applicant has submitted two separate applications, which the County has consolidated for review: (1) an application for a Site Design Review, Use Permitted Under Prescribed Conditions in the RIPD zone and Variance for the facility; and (2) a Conditional Use for the rail branchline in the Primary Agriculture – 80 Acres (PA-80) Zone.

The project proposed with this application includes the construction of a renewable diesel production facility consisting of multiple buildings (office, laboratory, warehouse, maintenance, process, controls, etc.), parking, private roadways, storage tanks, processing equipment, a gas flare, wastewater treatment facilities, outdoor laydown yards, electrical equipment, landscaping, and security fencing. Development of the proposed facility within the RIPD zone requires a **Site Design Review** application and approval of a Use Permitted Under Prescribed Conditions in the RIPD zone. Due to security requirements relating to fence height and line-of-sight, a **Variance** from landscaping and fencing requirements is proposed.

Primary site access is proposed from a driveway to Hermo Road, with secondary emergency access to Kallunki Road. The driveway is proposed within the RIPD zone. The applicant also proposes to develop a “rail branchline” that will be accessory to and serve the proposed renewable diesel production facility. The branchline is proposed to connect to Portland & Western Railroad’s facilities to accommodate shipment of additional materials and potentially a small amount of finished product. Rail transport may amount to approximately 313 rail cars per week, on average. Access to the branchline will be from the Portland & Western Railroad line and the proposed fuel facility site. A gravel-surfaced rail crossing will be provided on Tax Lot 8423-00-00800. A portion of the rail branchline is outside the RIPD zone and within the Primary Agriculture (PA-80) zone southeast and southwest of the site – development of the branchline in the PA-80 zone requires a **Conditional Use** application.

Water, wastewater, and storm drainage utilities operated by the Port are proposed to be extended to the site to accommodate this rural industrial development. Electrical, natural gas, and telecommunications facilities are also proposed to be extended to the site.

Finished product and raw materials for facility operations will largely be transported by vessels utilizing the Port of Columbia County-owned dock on the Columbia River. A terminaling company that already operates at Port Westward will unload the feedstock and transfer it via their existing pipeline to the confluence with the Applicant’s newly constructed pipeline. This is where the Applicant will take possession. The feedstock will be refined into renewable diesel. Finished products will be stored on-site before being transferred back to the terminal via pipeline to ship via barge and vessel from the Port Westward dock. A gravel service road is proposed adjacent to a portion of the pipe rack to allow maintenance access to the pipes.

The proposed construction of facility, pipelines, and branchline will result in temporary and permanent impacts to wetlands. The County requested recommendations from the Department of State Lands (DSL), Oregon Department of Fish & Wildlife (ODFW), and the Columbia Soil and Water Conservation District (SWCD) regarding the significance of the wetlands and received a recommendation from DSL that the impacted wetlands are not significant. The applicant has submitted applications to the U.S. Army Corps of Engineers and the Oregon Department of State Lands for wetland alterations and proposes to perform off-site wetland mitigation south of the site. The proposed wetland removal and mitigation requires approval by the Department of State Lands and the US Army Corps of Engineers.

Application Timeline

The brief timeline below provides an overview of materials received by the County for the NEXT application. Staff raised concerns regarding the proposed branchline definition, water-related use definition, and wetland significance. The Applicant responded with updated application submissions on December 14, 2021.

- NEXT Pre-Application Conference: February 6, 2020
- NEXT Application Submissions: January 19, 2021
- County Incompleteness Letters: February 17, 2021
- NEXT Updated Application Submissions: July 13, 2021
 - Including significant changes to rail location and rail volume.
- NEXT ORS 215.427 Completeness: July 15, 2021
- NEXT Updated Application Submissions: August 12, 2021
- NEXT Memorandum on Interpretation of CCZO 1175.B, 1184.E and OAR 660-012-0065: September 30, 2021
- County Memo Identifying Critical Issues: sent October 25, 2021
- NEXT Updated Application Submissions: December 14, 2021

Staff Summary

Staff notes this multi-faceted application and staff report are complex and lengthy. In general, Staff finds the proposed facility is well-suited to the adopted intent of the Port Westward exception area and implementing RIPD zone. The RIPD zone is designed to be supportive of large-scale development and has relatively few requirements. As discussed in these findings, Staff finds the facility and associated branchline, driveway access, pipelines and utilities generally meet the development standards of the base zones, or can be met with proposed conditions of approval.

Where base zone requirements for landscaping and screening are not met, the applicant has requested a variance. There are also elements of the application's interaction with County code that have received additional scrutiny and are worth County Board review and determination. These items are outlined below.

- The applicant has provided evidence that indicates a variance to landscaping and screening standards to meet security requirements for sightlines and fence height is merited. Staff concurs. Please see Staff findings under Section 1504 for further information on the variance proposal.
- The proposed rail development through the PA-80 zone raised definitional concerns related to design of the proposed use and applicability of the statutory exemption for railroad branchlines in farmland. However, the applicant provided evidence from Portland & Western Railroad clarifying the design and definition of the proposed branchline and addressing Staff concerns. Please see Staff findings under Section 303 for further information on the railroad branchline use.
- A small portion of the project crosses the 25-foot riparian boundary of the McLean Slough. The application provides evidence the project relies on proximity and access to the waters of the Columbia River, and therefore can meet the County's code exemption for water-related uses. Please see Staff findings under Section 1170 for further information on riparian area protection and exemptions.
- The proposed facility and nearly all associated improvements interact with delineated wetland areas. In response to Staff concerns, the applicant worked diligently with DSL to evaluate and address significance of these wetlands. Consistent with County code provisions, the County has received a recommendation from DSL, and the applicant has provided evidence, that the delineated wetlands are not significant and should therefore

not be regulated by the County’s wetlands overlay. The County has requested and received additional feedback from ODFW and CSWCD. All agency comments are included in Attachment 7. To be clear, regardless of County regulations the applicant must still meet DSL and Army Corps of Engineers requirements for wetlands fill, removal and mitigation. Please see Staff findings under Section 1180 for further information on wetlands significance and protection.

The remainder of this report includes findings for the proposed NEXT facility and associated rail branchline in relation to the applicable standards in the Columbia County Zoning Ordinance as well as the Columbia County Stormwater and Erosion Control Ordinance.

Figure 1 Aerial Map of Subject Property

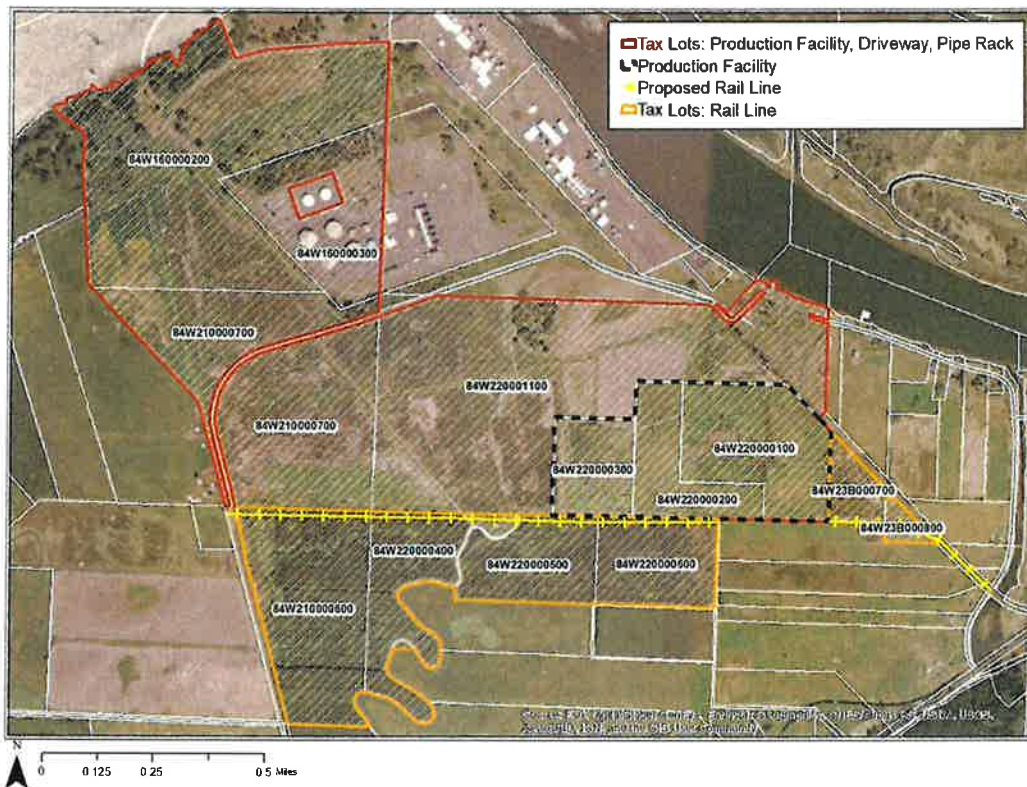
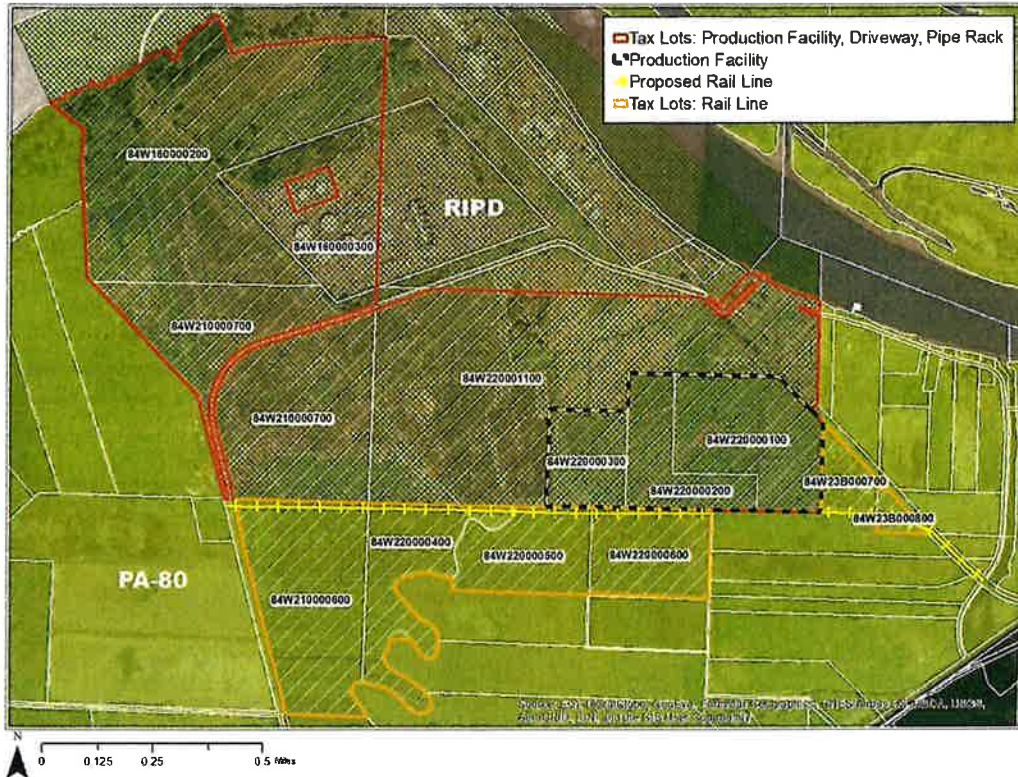


Figure 2 Zoning Map



REVIEW CRITERIA & FINDINGS - COLUMBIA COUNTY ZONING ORDINANCE:

Criteria Specific to the facility (DR 21-03 & V 21-05). The proposed facility, driveway access, pipelines, and utilities are located within the RIPD zone. These elements are addressed in findings for:

- Section 680 Resource Industrial – Planned Development (RIPD)
- Section 1550 Site Design Review
- Section 200 General Provisions
- Section 1300 Signs
- Section 1400 Off-Street Parking and Loading
- Section 1450 Transportation Impact Analysis
- Section 1504 Variances

Criteria Specific to the Rail Branchline in the PA-80 zone. Where the proposed rail branchline traverses the PA-80 zone, this staff report provides findings for:

- Section 300 Primary Agriculture Use Zone-80 (PA-80)
- Section 1503 Conditional Use Review

Criteria Applicable to Both Applications. Overlay zones are addressed for all elements of the proposal in findings for:

- Section 1100 Flood Hazard
- Section 1120 Sensitive Bird Habitat
- Section 1130 Historic Overlay
- Section 1170 Riparian Corridors
- Section 1180 Wetland Areas
- Section 1185 Natural Area Overlay
- Section 1190 Big Game Habitat
- Section 1603 Quasijudicial Public Hearings

Criteria Specific to the Facility

Section 680 Resource Industrial-Planned Development (RIPD)

681 Purpose:

The purpose of this district is to implement the policies of the Comprehensive Plan for Rural Industrial Areas.

These provisions are intended to accommodate rural and natural resource related industries which:

- .1 Are not generally labor intensive;*
- .2 Are land extensive;*
- .3 Require a rural location in order to take advantage of adequate rail and/or vehicle and/or deep water port and/or airstrip access;*
- .4 Complement the character and development of the surrounding rural area;*
- .5 Are consistent with the rural facilities and services existing and/or planned for the area; and,*
- .6 Will not require facility and/or service improvements at significant public expense.*

683 Uses Permitted Under Prescribed Conditions:

The following uses may be permitted subject to the conditions imposed for each use:

- .1 Production, processing, assembling, packaging, or treatment of materials; research and development laboratories; and storage and distribution of services and facilities subject to the following findings:*

Finding 1: The proposed renewable diesel production facility falls within the category of permitted uses noted above and is allowed if the conditions below are satisfied. The applicant is proposing a facility and associated accessory infrastructure (pipelines, rail spur, electrical lines, etc.) that will convert recycled organic materials into renewable transportation fuels.

- A. The requested use conforms with the goals and policies of the Comprehensive Plan specifically those policies regarding rural industrial development and exceptions to the rural resource land goals and policies.*

Finding 2: This application proposes development of an industrial facility, associated pipelines to the Port, rail access, and a private drive access. For development within the RIPD zone, applicable goals and policies are specified as related to rural industrial development and the relevant Port Westward exception statement. These policies include:

- Part X. Economy
- Part XII. Industrial Siting
- Industrial Lands Exceptions
- Port Westward Exception Statement

- Part XIV: Public Facilities and Services

RIPD-Applicable Goals and Policies.

The following information demonstrates how the use conforms to applicable Comprehensive Plan goals and policies, specifically those pertaining to the Goal Exceptions to accommodate rural industrial development at Port Westward.

1986 Comprehensive Plan Exception Statement

I. Proposal

The proposed use designation is Rural Industrial, and it is intended to take advantage of the location on the Columbia River, the existing dock facilities, railroad, and urban services, as well as potential linkages to the electric generating facilities.

V. Proposed Use Of The Property

Probable uses would likely be related to the existing services, including the railroad, the dock, and the tank farm.

*[***]*

Uses likely to be located here are best illustrated by four proposals submitted to the current leaseholder since 1980. Proposals have included a 200-acre oil refinery, a 150-to-200-acre coal port, an 80-acre petrochemical tank farm, and a 230-acre coal gasification plant. [...].

*[***]*

VII. LCDC Evaluation

A. Goal 2 Factors

1. "Why these other uses should be provided for."

*[***]*

d. Types of industrial users allowed on resource land.

The LCDC rules outline three specific types of industrial uses which might be used to justify an exception on resource land. Port Westward is an appropriate site for all three types of industrial uses.

The first types are "unique site-specific resources" which include a river or ocean port. Port Westward is already a partially developed, deep draft river port.

The second attribute is uses which are "hazardous or incompatible with densely populated areas." Port Westward clearly is an appropriate site for this type of user. The 80-acre petrochemical tank farm identified earlier is a clear example.

Those uses often require rail, harbor facilities, and large sites.

A third type of use includes those which would have a "significant competitive advantage due to the location of energy facilities."

Finding 3: The above excerpts explain the intended purpose of the Port Westward Exception Area. This application is consistent with its intended purpose for the following reasons:

- It will take advantage of marine transportation available on the Columbia River, specifically the deepwater port.
- It will use existing dock facilities.
- It will utilize existing rail connections.
- It will allow renewable diesel production to be located far from population centers, thus avoiding hazardous or incompatible impacts on densely populated areas.
- The proposed facility is similar to the existing tank farm, PGE electrical generating facilities, and the Columbia Pacific Bio-Refinery.

2007 Comprehensive Plan Exception Statement

The [rural industrial] use would have a significant comparative advantage due to its location (e.g., near existing industrial activity, an energy facility, or products available from other rural activities), which would benefit the county economy and cause only minimal loss of productive resource lands. Reasons for such decision should include a discussion of the lost resource productivity and values in relation to the county's gain from the industrial use, and the specific transportation and resource advantages which support the decision.

[***]

The County's Comprehensive Plan has designated 905 acres of the Port Westward area as a Goal 3 exception. The property is located adjacent to the Port Westward rural industrial area and can take advantage of the location with access to the Columbia River, and the existing dock facilities, railroad and urban services, including PGE's Beaver Power Plant. Allowing future rural industrial development on the Property would benefit the County's economy by bringing jobs to the area for construction of a project and then a lesser level of employment for the operation and management of any facility.

Finding 4: The above excerpts explain why the Board of Commissioners expanded the Port Westward Exception Area in 2007. This application is consistent with this statement for the following reasons:

- It will take advantage of the existing infrastructure (noted above).
- It will be in proximity to existing industrial operations with similar impacts.
- It will bring temporary construction jobs and permanent ongoing operations jobs to Port Westward.

PART X – ECONOMY

Goals:

1. *To strengthen and diversify the economy of Columbia County and insure stable economic growth.*

Finding 5: The proposed facility will require a significant amount of construction activity, resulting in high-paying construction jobs to build the project for approximately 24 months. Once built, the facility will employ office, management, and operations staff, at the following estimated staffing levels:

ESTIMATED STAFFING LEVELS				
Weekdays			Weekends	
Office/Mgt.	Shift 1	Shift 2	Shift 1	Shift 2
8:00 AM – 5:00 PM	6:00 AM – 6:00 PM	6:00 PM – 6:00 AM	6:00 AM – 6:00 PM	6:00 PM – 6:00 AM
83	35	35	35	35

In addition to the on-site employees, the project will also result in supportive jobs such as those for the terminaling company operating at the dock. Employees are also likely to patronize area businesses in and around Clatskanie, creating new indirect employment opportunities in surrounding areas. Products to support this facility will be imported via the river and rail from beyond the County, further contributing to economic growth in the immediate area and beyond.

The applicant will make a significant investment to construct and operate an industrial facility, broadening the County's employment base while complementing the existing uses at Port Westward.

2. *To utilize Columbia County's natural resources and advantages for expanding and diversifying the economic base.*

Finding 6: The project will utilize one of the County's best natural resources: the efficient transportation corridor provided by the Columbia River, designated as part of the U.S. Department of Transportation's M-84 Marine Highway Corridor. This resource was one of the main advantages during the site selection process. The proposed use does not yet exist at the Port, which contributes to the County's expanding and diversification of its economic base.

Policies: It shall be a policy of the County to:

1. *Encourage the creation of new and continuous employment opportunities.*

Finding 7: As noted above, following construction of the proposed facility, it will provide direct employment opportunities for office, management, and operations staff with approximately 220 new jobs and is anticipated to result in supportive jobs at area companies. The approximately 24-month construction duration is also expected to create temporary construction jobs on site.

2. *Encourage a stable and diversified economy.*

Finding 8: The proposed facility will increase the size and value of the County's industrial sector, which is an important part of Columbia County's overall economic base. The proposed development is planned to be a long-term facility to support renewable diesel fuel production on the site, showing a long term and stable commitment to the regional economy.

3. *Reflect the needs of the unemployed and of those persons who will enter the labor market in the future.*

Finding 9: The approximately 220 jobs created by the project will be family wage jobs, as opposed to lower-paying retail and consumer-facing service sector jobs.

6. *Preserve prime maritime industrial sites from pre-emptive uses until needed for industrial uses.*

Finding 10: As the project relies on a large site served by river and rail transportation and is isolated from a population center, it is entirely consistent with the intended purpose and uses of Port Westward and fulfills the County's policy of utilizing land set aside for marine-related industrial uses.

8. *Preserve valuable industrial sites for industrial uses.*

Finding 11: The proposed industrial project is proposed to be constructed on land zoned Resource Industrial - Planned Development. The industrial use is consistent with the zone.

12. *Encourage new industrial growth within the urban areas so as to utilize existing public facilities.*

Finding 12: Port Westward is an exception area located outside urban growth boundaries. When the Port Westward Exception Statement was adopted, the County found that the unique features of Port Westward made it substantially different from urban industrial land, and therefore likely to attract industries that could not necessarily use urban industrial land.

"Port Westward, Reichhold Chemicals, and the Bernet site are compatible with industrial uses that are either land extensive, incompatible with the urban environment, marine related or a combination of the above. These types of uses do not compete with industrial areas within urban growth boundaries but are complementary to those uses."

The proposed use is consistent with the Port Westward Exception Statement as detailed earlier because it is land extensive, has impacts that are potentially hazardous in densely populated areas, and requires marine access.

PART XII – INDUSTRIAL SITING

INDUSTRIAL DEVELOPMENT: GOALS AND POLICIES

Goals

- 1. To strengthen and diversify the economy of Columbia County and insure stable economic growth.***

Finding 13: The proposed facility will require a significant amount of construction activity, resulting in high-paying construction jobs to build the project. Once built, the facility will employ approximately 220 office, management, and operations staff. In addition to the on-site employees, the project will also result in supportive jobs such as those for the terminaling company operating at the dock. Employees are also likely to patronize area businesses in and around Clatskanie.

- 3. To encourage industrial growth in Columbia County to diversify its economy. New industry should locate to take maximum advantage of existing public and private investments.***

Finding 14: The proposed renewable diesel production facility will result in both construction and ongoing operational jobs, which helps improve economic diversification and results in Port fees and local property tax revenue. The site's location allows the facility to take advantage of the existing deepwater port, rail facilities, and both public and private utilities serving Port Westward.

Policies: It shall be policy of the County to establish, implement, and maintain an industrial development program that:

- 1. Encourages the creation of new and continuous employment opportunities.***

Finding 15: As noted above, following construction of the proposed facility, it will provide approximately 220 employment opportunities for office, management, and operations staff and is anticipated to result in supportive jobs at area companies.

- 5. Recognizes the existence of sites suitable to be developed as deep-water ports but are not needed at this time.***

Finding 16: The proposed facility will utilize the existing deepwater port at Port Westward, one of five (5) deepwater ports in the state.

- 11. Directs industries that are either land extensive, resource related, marine related, and/or incompatible with urban populations to those sites which are appropriate to the use and are currently zoned for that use.***

Finding 17: As detailed above, the proposed facility is land extensive (requiring 109 acres excluding off-site acreage for the driveway, pipe rack, etc.), and marine related (utilizing the Columbia River and the existing dock at the deepwater port). The facility will perform operations that are potentially hazardous and are thus appropriate outside urban locations. The site's location in the RIPD zone is consistent with this policy.

- 12. Is consistent with the exception statements for those sites requiring an exception to the applicable resource goal.***

Finding 18: Consistency with the exception statements for Port Westward is demonstrated above.

RESOURCE INDUSTRIAL DEVELOPMENT: GOALS AND POLICIES

Goal: It is a goal of the County to provide for industrial development on rural lands when such development can be shown to support, utilize, or in some manner be dependent upon, the natural resources of the area.

Finding 19: The County has provided for industrial development within Port Westward by adopting the Port Westward exception area and the RIPD zone. The proposed facility will utilize a natural resource (the Columbia River) as it will depend on the deepwater port for the tanker vessels that will transport materials to and from Port Westward. As the project is consistent with the intended and allowed uses within Port Westward, it is consistent with this goal.

Policies: It shall be a policy of the County to:

3. *Restrict industrial development on land zoned Resource Industrial Planned Development to those uses that:*
 - A. *Are not generally labor intensive;*
 - B. *Are land extensive;*
 - C. *Are located with adequate rail and/or vehicle and/or deep water port and/or airstrip access;*
 - D. *Complement the character and development of the surrounding area;*
 - E. *Are consistent with the rural facilities and existing and/or planned for the area; and,*
 - F. *Will not require facility and/or service improvements at public expense; or,*

Finding 20: Policies 3A through 3F are nearly identical to the purpose statement outlined in CCZO Section 681. The applicant provided responses to that section to demonstrate how the proposed facility is consistent with the purpose of the RIPD zone so the responses to those items are not repeated here.

- G. *Are not appropriate for location within Urban Growth Boundaries due to their hazardous nature.*

Finding 21: The proposed use will rely on the deepwater port facility at Port Westward. While regulated by federal and state safety protocols, production of renewable diesel involves flammable inputs and outputs, chemical emissions, and heavy transportation infrastructure, which may present potential hazards to incompatible uses, such as residential living. For these reasons, the Board can find that the proposed use is consistent with Policy 3G.

PART XIII – TRANSPORTATION

Objectives:

1. *To maximize efficient use of transportation infrastructure for all users and modes.*

Finding 22: The project will be served by existing transportation infrastructure, including marine, rail, and roadways. Consistent with TSP Project #9, the Applicant proposes to satisfy Public Works requirements for necessary improvements to Hermo Road. A condition of approval is proposed to meet this standard. The applicant will install a rail branchline connecting to Portland & Western Railroad's existing rail line, providing rail access to Astoria and the Portland region.

Policies:

2. *The dedication of adequate rights-of-way to meet the standards set in the Transportation Plan shall be required of any person seeking a Zone Change, Conditional Use Permit, Subdivision, or Partition. [...].*

Finding 23: The applicant is not seeking a Zone Change, Conditional Use Permit, Subdivision, or Partition as part of this application for the development of the facility. The applicant is seeking a Conditional Use permit for accessory rail infrastructure through farmland in a separate application. The closest public roadway is Hermo Road, which is classified as a local road in the 2017 Columbia County TSP.

The TSP recommends an optimum right-of-way width of 50 feet and an optimum roadway width of 28 feet (to accommodate ten-foot lanes and four-foot shoulders). The existing right-of-way width at the driveway location is 60 feet. Therefore, no right-of-way dedication is merited.

The closest segment of Kallunki Road (to which the site will have secondary emergency access) is also designated as a local road. This roadway has a 40-foot right-of-way, which is below the TSP's stated optimum right-of-way width.

However, as the existing roadway fits within the right-of-way and the site does not immediately abut Kallunki Road, no right-of-way dedication is required for this application.

3. *All expanding or new development shall contribute a fair and proportionate share toward appropriate off-site improvements to county roads whenever a development results in a major increase in traffic on an existing county road.*

Finding 24: As discussed in the Transportation Impact Analysis (Attachment 2n), the proposed facility is anticipated to generate 667 weekday trips, 91 of which will occur in the AM peak hour and 84 of which will occur within the PM peak hour. The report analyzed traffic operations at six study area intersections in 2020 and in 2024, both with and without the proposed development. The report found that all six (6) study intersections meet applicable Columbia County, Oregon Department of Transportation, and City of Clatskanie mobility standards in 2020, in 2024 without NEXT Renewable Fuels, and in 2024 with NEXT Renewable Fuels and improvements to Hermo Road, which the Applicant proposes to fund through a road improvement agreement with the County. A condition of approval for Hermo Road improvements is proposed to meet this standard.

Based on this analysis, the TIA does not recommend any mitigation strategies as a result of the proposed facility. The County has a planned project (TSP Project #9) to improve Hermo Road in the vicinity of the project site. The Applicant will satisfy Public Works requirements for necessary improvements to Hermo Road, through a condition of approval.

4. *County will manage access to roadways to reduce congestion and conflicting travel patterns. The County will work with the Oregon Department of Transportation (ODOT) to limit the number of access points onto Principle Arterials. Direct access to U.S. Highway 30 will be limited as much as is practical in order to reduce the potential for congestion and conflicting traffic patterns which would disrupt the flow of traffic.*

Finding 25: The project will not have direct access onto Highway 30 or Principal Arterials.

5. *The County shall work to enhance freight efficiency, access, capacity and reliability, including access to intermodal facilities such as ports and airports. Industrial uses shall be encouraged to locate in such a manner that they may take advantage of the water and rail transportation systems which are available to the County.*

Finding 26: Although this is a policy for the County to implement, the project is consistent with this policy because it is specifically located at Port Westward to take advantage of existing water and rail transportation facilities.

6. *The County will support reducing the number of rail crossings and will support measures to enhance safety at rail crossings.*

Finding 27: The project does not require a new public road rail crossing.

7. *The County will work with the Port of [Columbia County] to encourage the establishment and use of dock facilities.*

Finding 28: The project will utilize the Port of Columbia County's existing deepwater dock facilities at Port Westward.

9. *Restriction of the location of new pipelines and high voltage transmission lines to within existing rights-of-way will be encouraged whenever possible.*

Finding 29: The proposal is to develop pipelines within the project site; the proposed pipelines cross Hermo Road and are within the Hermo Road right-of-way to the extent possible.

20. *The County will coordinate transportation and land use planning and decision-making with other transportation agencies and public service providers, such as ODOT, cities within the County, and the Port, when their facilities or services may be impacted by a County decision or there may be opportunities to increase the efficiency and benefits of a potential improvement.*

Finding 30: As part of its evaluation of land use applications including this one, the County coordinates with affected agencies and partners. The applicant has also coordinated with Port, County, and ODOT staff with respect to site design and transportation analysis.

PART XIV – PUBLIC FACILITIES AND SERVICES

Policies

- .1 *Require that adequate types and levels of public facilities and be provided in advance of or concurrent with development.*

Finding 31: Port Westward Industrial Park already contains multiple public and private facilities that can accommodate development of the site. Port Westward has the PGE electrical generating facilities, the Clatskanie People's Utility District electrical substation, roadways, rail lines, utilities, drainage facilities, levees, pipelines, electrical transmission lines, and associated support facilities. The project will be served by existing transportation infrastructure, including marine, rail, and roadways. Consistent with TSP Project #9, the Applicant will satisfy Public Works requirements for necessary improvements to Hermo Road, through a proposed condition of approval. Taken together, these conditions provide adequate types and levels of public facilities for the proposed project.

- .2 *Require that the level of facilities and [sic] provided be appropriate for, but limited to, the needs and requirements of the area(s) to be served. The types and level of public facilities allowed within Rural Residential, Rural Center, Existing Commercial, and Rural Industrial areas are:*
- A. *Public or community water systems.*
 - B. *Public or community sewage systems.*
 - C. *Collector and/or arterial street systems.*
 - D. *Fire protection by a rural fire protection district, or an equivalent level of service.*

Finding 32: The site is within a Rural Industrial zone (Rural Industrial – Planned Development). Port Westward is served by private water systems and a small private industrial wastewater system (see Attachment 2p), local roads, and the Clatskanie Rural Fire Protection District, consistent with this policy. No expansions to these systems are proposed or required for this project.

4. *Encourage new development on lands within urban growth boundaries or built and committed exception areas.*

Finding 33: The site is outside an urban growth boundary but is within an exception area that was created to accommodate industrial development that capitalizes on the unique combination of rail and deepwater port access available at Port Westward. The proposed development is consistent with this policy.

13. *Support a level of fire safety and service in all areas of the County sufficient to minimize the risk of fire damage to life and property.*

Finding 34: The site's location within the Clatskanie Rural Fire Protection District capitalizes on the District's experience and partnership with existing Port Westward industrial operations to ensure appropriate levels of fire protection.

PART XV – ENERGY CONSERVATION

Policies

3. *The County shall encourage the development of recycling facilities and the use of recycled resources.*

Finding 35: The proposed renewable diesel production facility will create fuel by using recycled organic materials such as used cooking oil, which is fully supportive of this policy.

4. *The County will encourage the development of alternative energy sources.*

Finding 36: The proposed renewable diesel production facility will create fuel by recycling existing materials rather than by refining fossil fuels. This facility will help implement the County's policy.

Contd. 683 Uses Permitted Under Prescribed Conditions:

B. *The potential impact upon the area resulting from the proposed use has been addressed and any adverse impact will be able to be mitigated considering the following factors:*

.1 *Physiological characteristics of the site (i.e., topography, drainage, etc.) and the suitability of the site for the particular land use and improvements;*

Finding 37: The site is relatively flat, with existing elevations that vary by less than 10 feet across the entire production facility site (see Attachment 2c, Sheet C1.10), which is ideal for large industrial development. The site is protected from flooding by the Beaver Drainage District's dikes and associated stormwater conveyance and pumps and is therefore adequately drained. As detailed in the preliminary stormwater report (Attachment 2m), sufficient infrastructure is in place or proposed to collect, treat, and discharge runoff. The site has been planned for industrial development for many years and the proposed use is appropriate given its physiological characteristics.

However, proposed development in this application impacts riparian areas associated with McLean Slough (allowance of impacts to the riparian area relies on definition of the project as "water-dependent" or "water related" – see discussion under Section 1170), mapped NWI wetlands (prohibited – see discussion under Section 1180), and additional delineated wetlands that will be impacted by the proposed development (Attachment 2k). The applicant is also seeking approval from the U.S. Army Corps of Engineers and the Oregon Department of State Lands for wetland alterations and has proposed off-site wetland mitigation.

.2 *Existing land uses and both private and public facilities and services in the area;*

Finding 38: The site is part of the Port Westward Industrial Park, which is home to multiple industrial uses (PGE power generation facilities, Columbia Pacific Bio-Refinery, Clatskanie PUD substation) and supporting facilities and services (roadways, rail lines, utilities, drainage facilities, levees, pipelines, and electrical transmission lines, private water system, and wastewater system). The nearby industrial uses are not sensitive to expansion of industrial activity at Port Westward. The existing dock serves these industrial uses and is particularly well suited for serving the proposed use for shipment of feedstock and finished products. The existing agricultural uses to the east and south are not likely to be negatively impacted by the proposed industrial use due to the applicable County land use regulations and permit

standards, fire code provisions implemented by the Clatskanie Rural Fire Protection District, and multiple state and Federal permits which the applicant will need to obtain prior to beginning operation of the facility. The proposed site development is consistent with existing land uses and available facilities and services.

- .3 The demonstrated need for the proposed use is best met at the requested site considering all factors of the rural industrial element of the Comprehensive Plan.*

Finding 39: The goals and policies of the Comprehensive Plan's rural industrial element were addressed above. As explained, the project is consistent with all the applicable rural industrial goals and policies, and the site is suitable for the proposed use given the existing services available to serve rural industrial development at the site.

- C. *The requested use can be shown to comply with the following standards for available services:*
- .1 Water shall be provided by an on-site source of sufficient capacity to serve the proposed use, or a public or community water system capable of serving the proposed use.*

Finding 40: The Port has water rights authorizing intake of water from the Columbia River/Bradbury Slough. Port Westward Industrial Park is served by private water systems that utilize wells and draw from the river. As illustrated on Attachment 2c, Sheet C1.30, a connection to the existing water supply will be made near the north end of the site. The Port has indicated that sufficient capacity is available within the Port's existing water rights (see Attachment 2p).

- .2 Sewage will be treated by a subsurface sewage system, or a community or public sewer system, approved by the County Sanitarian and/or the State DEQ.*

Finding 41: Port Westward Industrial Park has a private industrial wastewater system and a discharge system for tenants' process water (see Attachment 2p). As illustrated on Attachment 2c, Sheet C1.11, the applicant is proposing a wastewater pretreatment facility for all storm and greywater prior to discharging to the sewer system near the north end of the site. Discharge from domestic use within buildings may be stored in holding tanks prior to being hauled off or may be treated via sand filters and leach fields pending results of on-site system evaluation. The applicant will obtain all necessary permits from County Sanitarian and/or the Oregon Department of Environmental Quality, as applicable.

- .3 Access will be provided to a public right-of-way constructed to standards capable of supporting the proposed use considering the existing level of service and the impacts caused by the planned development.*

Finding 42: The applicant proposes to construct a private driveway between the site and Hermo Road. Hermo Road, a public right-of-way, is currently gravel near the site. Consistent with TSP Project #9, the Applicant will satisfy Public Works requirements for necessary improvements to Hermo Road through a proposed condition of approval. The TIA (Attachment 2n) demonstrates that the roadway network, following improvements consisting of roadway widening and paving along Hermo Road, has adequate capacity for the proposed development. In light of the applicant's plan to improve the roadway, the TIA does not recommend any additional mitigation strategies. The site will have secondary emergency access to Kallunki Road (a public right-of-way) but the secondary access is not proposed for regular use.

- .4 The property is within, and is capable of being served by, a rural fire district; or, the proponents will provide on-site fire suppression facilities capable of serving the proposed use. On-site facilities shall be approved by either the State or local Fire Marshall*

Finding 43: Port Westward Industrial Park has an existing high-pressure fire suppression system designed to accommodate development in the industrial park, and the site is within the Clatskanie Rural Fire Protection District. The proposed on-site fire protection facilities will be designed per Oregon Fire Code standards and industry best practices

and will be reviewed and approved by the Fire Marshal prior to utilization, consistent with a proposed condition of approval.

- .2 Accessory buildings may be allowed if they fulfill the following requirements:*
- A. If attached to the main building or separated by a breezeway, they shall meet the front and side yard requirements of the main building.*
 - B. If detached from the main building, they must be located behind the main building or a minimum of 50 feet from the front lot or parcel line, whichever is greater.*
 - C. Detached accessory buildings shall have a minimum setback of 50 feet from the rear and/or side lot or parcel line.*

Finding 44: The proposed site plan (Attachment 2c, Sheet C1.11) depicts the proposed structures within the facility. Accessory buildings include office and maintenance buildings on site. Accessory buildings are shown at least 50 feet from lot lines.

- .3 Signs as provided in Chapter 1300.*

Finding 45: Prior to sign installation, the applicant will obtain all necessary permits and submit signage designs to County staff for review where required by code, consistent with a proposed condition of approval. Preliminary signage designs are depicted in Attachment 2c, Sheet C1.40.

- .4 Off street parking and loading as provided in Chapter 1400.*

Finding 46: The proposed use complies with applicable parking and loading standards, as discussed below in the responses to Section 1400.

Conclusion: Staff finds that this proposal is consistent with the purpose of the RIPD Zone and the provisions for Uses Permitted Under Prescribed Conditions in Section 683.3 with conditions.

Contd. Section 680 Resource Industrial-Planned Development (RIPD)

685 Standards:

- .1 The minimum lot or parcel size for uses allowed under Section 682 shall be 38 acres.*

Finding 47: The proposed use is allowed under CCZO Section 683 rather than CCZO Section 682. Therefore, the 38-acre minimum parcel size does not apply. Even if it did, the combined site area under the Applicant's control is approximately 109 acres, thereby exceeding this standard.

- .2 The minimum lot or parcel size, average lot or parcel width and depth, and setbacks for uses allowed under Section 683, shall be established by the Planning Commission, and will be sufficient to support the requested rural industrial use considering, at a minimum, the following factors:*
- A. Overall scope of the project. Should the project be proposed to be developed in phases, all phases shall be considered when establishing the minimum lot size.*

Finding 48: The site for the production facility, which consists of property owned by NEXT Renewable Fuels and property leased by NEXT Renewable Fuels from the Port of Columbia County, will have an area of approximately 109 acres (not counting off-site acreage for the driveway, pipe rack, etc.). As illustrated in the proposed site plan (Attachment 2c, Sheet C1.11), this size is sufficient for facility operations, including office, warehouse, production areas, staging areas, pipe racks, electrical equipment, storage tanks, wastewater treatment, a flare, and a rail spur. The project is not proposed to be developed in phases. This standard is met.

B. Space required for off street parking and loading and open space, as required.

Finding 49: Parking requirements in the CCZO are set forth in Section 1400. As discussed in the response to that section, the applicant is proposing 128 parking spaces, which complies with the 118-space minimum requirement for the proposed manufacturing use. The applicant proposes loading docks on the warehouse, together with multiple outdoor storage areas and rail loading/unloading areas. This standard is met.

C. Setbacks necessary to adequately protect adjacent properties.

Finding 50: The site for the production facility consists of property owned by NEXT Renewable Fuels and property leased by NEXT Renewable Fuels from the Port of Columbia County. Only minimal setbacks are merited due to the existing and planned development of the adjacent (off-site) properties. Properties to the north and west are within the Port Westward Industrial Park and zoned RIPD. Properties immediately to the south and east are currently in agricultural use (primarily crops) and do not contain sensitive receptors such as residences, schools, churches, hospitals, etc. As illustrated in the proposed site plan (Attachment 2c, Sheet C1.11), all proposed buildings are set back at least 95 feet from the site boundary, which is appropriate for the proposed use in this site context. Landscape buffers are provided on the south and east boundaries where facing other uses and where not precluded by overhead power lines and rail lines (see Attachment 2c, Sheets L1.10-L1.11 and Exhibit 17). This standard is met.

.3 Access shall be provided to a public right-of-way of sufficient construction to support the intended use, as determined by the County Roadmaster.

Finding 51: The applicant proposes to construct a private driveway between the site and Hermo Road. Hermo Road, a public right-of-way, is currently gravel near the site. Consistent with TSP Project #9, the Applicant will satisfy Public Works requirements for necessary improvements to Hermo Road through a proposed condition of approval. The TIA (Attachment 2n) demonstrates that the roadway network, following improvements consisting of roadway widening and paving along Hermo Road, will have adequate capacity for the proposed development. In light of the obligations in the Development Agreement, the TIA does not recommend any mitigation strategies. The site will have secondary emergency access to Kallunki Road (a public right-of-way) but the secondary access is not proposed for regular use. For the above reasons, the County Roadmaster, and by extension the County Board, can find that the proposed access is "sufficient to support the intended use."

686 Review Procedures:

The Planning Commission shall review, in accordance with Section 1600, all requests made pursuant to Section 683 to assure that:

- .1 The use conforms to the criteria outlined in Section 681.*
- .2 The conditions outlined in Section 683 can be met.*
- .3 The Design Review Board or Planning Commission reviewed the request and found it to comply with the standards set out in Section 1550 and the minimum lot or parcel size provisions set out in Section 684.*

Finding 52: The County Board of Commissioners has taken jurisdiction of the hearing consistent with Ordinance 91-2. Findings reviewing Sections 681, 683, 684, and 1550 are included in this staff report.

Section 1550 SITE DESIGN REVIEW

The Site Design Review process shall apply to all new development, redevelopment, expansion, or improvement of all community, governmental, institutional, commercial, industrial and multi-family residential (4 or more units) uses in the County.

1551 Types of Site Design Review:

B. Type 2: Projects, developments and building expansions which meet any of the following criteria:

- 1. Have an area of 5,000 sq. or more, or are 10% or more of the square footage of an existing structure.*
- 2. Change the category of use (e.g., commercial to industrial, etc.).*
- 3. New off-site advertising signs or billboards.*
- 4. Any project meeting any of the Type 2 criteria shall be deemed a Type 2 Design Review application.*

Finding 53: The proposed development within the RIPD zone is classified as a Type 2 project since it affects greater than 5,000 square feet. The applicant is seeking Type 2 Design Review approval with this application. This standard is met.

1552 Design Review Process:

The Planning Director shall review and decide all Type 1 Site Design Review applications. The Planning Commission shall review all Type 2 Design Review applications. Applications shall be processed in accordance with Sections 1600 and 1700 of this ordinance.

Finding 54: The proposed development is classified as a Type 2 project since it affects greater than 5,000 square feet. The applicant is seeking Type 2 Design Review approval. The County Board of Commissioners has taken jurisdiction of this review consistent with Ordinance 91-2. This standard is met.

1553 Pre-application Conference:

A pre-application conference is required for all projects applying for a Site Design Review, unless the Director or his/her designate determines it is unnecessary. The submittal requirements for each application are as defined in this section and the standards of the applicable zone, and will be determined and explained to the applicant at the preapplication conference.

Finding 55: A pre-application conference for this application was held with County staff on February 6, 2020.

1554 Pre-application Conference Committee:

The committee shall be appointed by the Planning Director and shall consist of at least the following officials, or their designated staff members.

Only affected officials need to be present at each pre-application conference.

- A. The County Planning Director.*
- B. The County Director of Public Works.*
- C. The Fire Marshal of the appropriate Rural Fire District.*
- D. The County Building Official.*
- E. The County Sanitarian.*
- F. A city representative, for projects inside Urban Growth Boundaries.*
- G. Other appointees by the Planning Director, such as an Architect, Landscape Architect, real estate agent, appropriate officials, etc.*

Finding 56: This is a Type 2 Design Review. A Pre-application conference was held on February 6, 2020 where the applicant was given the submittal requirements prior to Land Development Services accepting an application for this land use proposal in the RIPD Zone. Notice of this pre-application meeting was sent to the County Public Works Department, Columbia River Fire and Rescue, the County Building Official, County Sanitarian, and the applicant. Staff finds the criteria in Sections 1551.B, 1552 and 1553 have been met.

1554 Submittal documents:

The following documents, when applicable, are required for a Site Design Review. The scope of the drawings and documents to be included will be determined at the preapplication conference by the Pre-application Conference Committee, and a Site Design Review Submittal Checklist will be given to the applicant, documenting which items are deemed not applicable or not necessary to determine compliance with County and State standards, with a short explanation given for each item so determined.

- A. *History.*
- B. *Project narrative.*
- C. *Existing site plan.*
- D. *Proposed site plan.*
- E. *Grading plan.*
- F. *Drainage plan.*
- G. *Wetland mitigation plan. Goal 5 Resource Protection Plans (streams, wetlands, riparian areas, natural areas, fish and wildlife habitat).*
- H. *Landscaping plan.*
- I. *Architectural plans.*
- J. *Sign drawings.*
- K. *Access, parking and circulation plan.*
- L. *Impact assessment.*
- M. *Site Design Review Submittal Checklist.*

Finding 57: Applicant provided A, B, C, D, E, F, G, H, J, K, and L. Applicant did not include I (Architectural Plans) or M (Site Design Review Submittal Checklist). Applicant was notified of missing items in an incompleteness letter dated February 17, 2021. Applicant required the County to proceed with review of the application despite the missing information in a letter dated July 15, 2021 as allowed by ORS 215.427.

1560 Existing Site Plan:

The degree of detail in the existing site plan shall be appropriate to the scale of the proposal, or to special site features requiring careful design. An existing site plan shall include the following, unless it is determined by the Planning Director that the information is not applicable or is not necessary to determine compliance with County and State standards, and a short explanation will be given for each item so determined:

- A. *A vicinity map showing location of the property in relation to adjacent properties, roads, pedestrian ways and bikeways, and utility access. Site features, manmade or natural, which cross property boundaries are to be shown.*

Finding 58: Vicinity maps are included as Attachment 2b and Attachment 2c, Sheet G0.01.

- B. *A site description map at a suitable scale (i.e. 1"=100'; 1"=50'; or 1"=20') showing parcel boundaries and gross area, including the following elements, when applicable:*
 - 1. *Contour lines at the following minimum intervals:*
 - a. *2 foot intervals for slopes 0-20%;*
 - b. *5 or 10 foot intervals for slopes exceeding 20%;*
 - c. *Identification of areas exceeding 35% slope.*
 - 2. *In special areas, a detailed slope analysis may be required. Sources for slope analysis include maps located at the U.S. Natural Resources Conservation Service office.*
 - 3. *Potential natural hazard areas, including potential flood or high ground water, landslide, erosion, and drainage ways. An engineering geologic study may be required.*

4. *Wetland areas, springs, wildlife habitat areas, wooded areas, and surface features such as mounds and large rock outcroppings.*
5. *Streams and stream corridors.*
6. *Location, species and size of existing trees proposed to be removed.*
7. *Significant noise sources.*
8. *Existing structures, improvements, utilities, easements and other development.*
9. *Adjacent property structures and/or uses.*

Finding 59: An existing conditions plan depicting these elements is included as Attachment 2c, Sheets V1.10 and V1.11.

1556 Site Plan Submittal and Analysis:

Columbia County Stormwater and Erosion Control Ordinance *an application and any necessary supplemental information as required by this ordinance to the Land Development Services Department. The Planning Director or designate shall review the application and check its completeness and conformance with this ordinance. Once a Type 2 application is deemed complete, it shall be scheduled for the earliest possible hearing before the Planning Commission. A staff report shall be prepared and sent to the applicant, the Planning Commission, and any interested party requesting a copy.*

Finding 60: Applicant was notified of missing items in an incompleteness letter dated February 17, 2021. Applicant required the County proceed with review of the application despite the missing information in a letter dated July 15, 2021 as allowed by ORS 215.427.

1561 Proposed Site Plan:

A complete application for design review shall be submitted, including the following plans, which may be combined, as appropriate, onto one or more drawings, unless it is determined by the Planning Director that the information is not applicable or is not necessary to determine compliance with County and State standards, and a short explanation will be given for each item so determined:

- A. *Site Plan: The site plan shall be drawn at a suitable scale (i.e. 1"=100', 1"=50', or 1"=20') and shall include the following:*
1. *The applicant's entire property and the surrounding area to a distance sufficient to determine the relationships between the applicant's property and proposed development and adjacent properties and developments.*
 2. *Boundary lines and dimensions of the property and all proposed property lines. Future buildings in phased development shall be indicated.*
 3. *Identification information, including names and addresses of project designers.*
 4. *Natural features which will be utilized in the site plan.*
 5. *Location, dimensions and names of all existing or platted roads or other public ways, easements, and railroad rights-of-way on or adjacent to the property, city limits, section lines and corners, and monuments.*
 6. *Location and dimensions of all existing structures, improvements, or utilities to remain, and structures to be removed, all drawn to scale.*
 7. *Historic structures, as designated in the Comprehensive Plan.*
 8. *Approximate location and size of storm water retention or detention facilities and storm drains.*
 9. *Location and exterior dimensions of all proposed structures and impervious surfaces.*
 10. *Location and dimension of parking and loading areas, pedestrian and bicycle circulation, and related access ways. Individual parking spaces shall be shown.*
 11. *Orientation of structures, showing entrances and exits.*
 12. *All exterior lighting, showing type, height, wattage, and hours of use.*

13. *Drainage, Stormwater and Erosion Control, including possible adverse effects on adjacent lands.*
 14. *Service areas for waste disposal and recycling.*
 15. *Noise sources, with estimated hours of operation and decibel levels at the property boundaries.*
 16. *Goal 5 Resource Protection Plans. Indicate how project will protect streams, wetlands, riparian areas, natural areas, and fish and wildlife habitat from negative impacts.*
 17. *A landscaping plan which includes, if applicable:*
 - a. *Location and height of fences, buffers, and screening;*
 - b. *Location of terraces, decks, shelters, play areas, and common open spaces;*
 - c. *Location, type, size, and species of existing and proposed shrubs and trees; and*
 - d. *A narrative which addresses soil conditions and erosion control measures.*
- B. *Grading Plans: A preliminary grading plan indicating where and to what extent grading will take place, including general contour lines, slope ratios, slope stabilization proposals, and natural resource protection proposals.*
- C. *Architectural Drawings:*
1. *Building elevations and sections;*
 2. *Building materials (color and type);*
 3. *Floor plan.*

Finding 61: On July 15, 2021 the applicant indicated the application for DR 21-03 was complete and required the County to process the application under ORS 215.427. Documentation submitted with DR 21-03 included civil, landscaping, and stormwater plans. The application did not include building elevations, sections, materials information or floor plans.

1562 Landscaping: Buffering, Screening and Fencing:

A. *General Provisions*

1. *Existing plant materials on a site shall be protected to prevent erosion. Existing trees and shrubs may be used to meet landscaping requirements if no cutting or filling takes place within the dripline of the trees or shrubs.*

Finding 62: The majority of existing vegetation will be removed from the site to accommodate the proposed development. Appropriate erosion control measures will be implemented as depicted in Attachment 2c, Sheets EC1.10-EC5.10.

2. *All wooded areas, significant clumps or groves of trees, and specimen conifers, oaks or other large deciduous trees, shall be preserved or replaced by new plantings of similar size or character.*

Finding 63: The site is nearly devoid of trees and does not contain wooded areas, significant clumps or groves of trees, or specimen conifers, oaks or other large deciduous trees. This standard does not apply.

B. *Buffering Requirements*

1. *Buffering and/or screening are required to reduce the impacts on adjacent uses which are of a different type. When different uses are separated by a right of way, buffering, but not screening, may be required.*

Finding 64: Adjacent properties to the north and west are zoned RIPD and are in the Port Westward Industrial Park, so no buffering or screening is required to the north and west. Adjacent properties to the south and east are agricultural, so buffering is required to the south and east.

2. *A buffer consists of an area within a required setback adjacent to a property line, having a width of up to 10 feet, except where the Planning Commission requires a greater width, and a length equal to the length of the property line adjacent to the abutting use or uses.*

Finding 65: Portland General Electric has provided comments discouraging the planting of any trees under the nearby transmission lines (see Attachment 2q). As depicted on Attachment 2c, Sheet L1.10, 10 feet of perimeter plantings are provided on the south and east fence lines where facing other uses and where not precluded by overhead power transmission lines and rail lines. This standard is not met but can be met through a variance to buffering and screening requirements. Perimeter plantings are also proposed south of the paved permanent laydown yard south of the driveway.

3. *Buffer areas shall be limited to utilities, screening, pedestrian and bicycle paths, and landscaping. No buildings, roads, or parking areas shall be allowed in a buffer area.*

Finding 66: As depicted on Attachment 2c, Sheet L1.10, no buildings, roads, or parking are proposed in the required buffers along the south and east boundaries. This standard is met.

4. *The minimum improvements within a buffer area shall include:*
 - a. *One row of trees, or groupings of trees equivalent to one row of trees. At the time of planting, these trees shall not be less than 10 feet high for deciduous trees and 5 feet high for evergreen trees, measured from the ground to the top of the tree after planting. Spacing of trees at maturity shall be sufficient to provide a year round buffer.*
 - b. *In addition, at least one 5-gallon shrub shall be planted for each 100 square feet of required buffer area.*
 - c. *The remaining area shall be planted in grass or ground cover, or spread with bark mulch or other appropriate ground cover (e.g. round rock). Pedestrian and bicycle paths are permitted in buffer areas.*

Finding 67: As depicted on Attachment 2c, Sheets L1.10 and L1.11, the proposed buffers will have a row of trees, shrubs, and groundcover, except in locations where a variance is requested due to PGE requirements. Should a variance be approved, this standard is met.

C. *Screening Requirements*

1. *Where screening is required, the following standards shall apply in addition to those required for buffering:*
 - a. *A hedge of evergreen shrubs shall be planted which will form a four-foot high continuous screen within two years of planting; or,*
 - b. *An earthen berm planted with evergreen plant materials shall be provided which will form a continuous screen six feet in height within two years. The unplanted portion of the berm shall be planted in lawn, ground cover or bark mulch; or,*
 - c. *A five foot or taller fence or wall shall be constructed to provide a continuous sight obscuring screen. Fences and walls shall be constructed of any materials commonly used in the construction of fences and walls such as wood, brick, or other materials approved by the Director. Corrugated metal is not an acceptable fencing material. Chain link fences with slats may be used if combined with a continuous evergreen hedge.*

Finding 68: The applicant has requested a variance to buffering and screening requirements in order to meet PGE and Homeland Security requirements. Please see variance findings under Section 1504.

2. *When the new use is downhill from the adjoining zone or use being protected, the prescribed heights of required fences, walls, or landscape screening along the common property line shall be measured from the actual grade of the adjoining property at the common property line. This requirement may be waived by the adjacent property owner.*

Finding 69: Adjoining properties are at the same elevation as the proposed use. This standard does not apply.

3. *If four or more off-street parking spaces are required, off-street parking adjacent to a public road shall provide a minimum of four square feet of landscaping for each lineal foot of street frontage. Such landscaping shall consist of landscaped berms or shrubbery at least 4 feet in total height at maturity. Additionally, one tree shall be provided for each 50 lineal feet of street frontage or fraction thereof.*

Finding 70: All proposed parking areas are at least a third of a mile from Hermo Road. Therefore, no screening is required between parking areas and the road.

4. *Landscaped parking areas may include special design features such as landscaped berms, decorative walls, and raised planters.*

Finding 71: No berms, walls, or raised planters are proposed in the parking area landscaping.

5. *Loading areas, outside storage, and service facilities must be screened from adjoining properties.*

Finding 72: A variance for screening is proposed to meet Homeland Security-related sight line regulations.

D. Fences and Walls

1. *Fences, walls or combinations of earthen berms and fences or walls up to four feet in height may be constructed within a required front yard. Rear and side yard fences, or berm/fence combinations behind the required front yard setback may be up to six feet in height.*
2. *The prescribed heights of required fences, walls, or landscaping shall be measured from the lowest of the adjoining levels of finished grade.*
3. *Fences and walls shall be constructed of any materials commonly used in the construction of fences and walls such as wood, brick, or other materials approved by the Director. Corrugated metal is not an acceptable fencing material. Chain link fences with slats may be used if combined with a continuous evergreen hedge.*
4. *Re-vegetation: Where natural vegetation or topsoil has been removed in areas not occupied by structures or landscaping, such areas shall be replanted to prevent erosion.*

Finding 73: As illustrated on Attachment 2c, Sheet C1.11, the applicant proposes to surround the majority of the facility (except for the office area) with seven-foot-high chain link fencing topped by one foot of barbed wire per ASTM F2611-15 for security as required by U.S. Department of Homeland Security requirements (see Attachments 4 and 6b). The applicant is seeking a variance to authorize fencing taller than the specified six-foot limit and to authorize chain link without slats and without a continuous an evergreen hedge due to the need to maintain sight lines to the facility. With the approval of the variance request, this standard is met.

1563 Standards for Approval:

The Planning Commission or Director shall make a finding with respect to each of the following criteria when approving, approving with conditions, or denying an application:

- A. *Flood Hazard Areas: See CCZO §1100, Flood Hazard Overlay Zone. All development in Flood Hazard Areas must comply with State and Federal Guidelines.*

Finding 74: CCZO Section 1102 identifies the "Area of Special Flood Overlay" as "the land in the flood plain within a community subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V." According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map 41009C0050D, dated November 26, 2010, the site is in shaded Zone X, which is outside the Special Flood Hazard Area (see Attachments 2d & 3d). Therefore, the Board can find that this standard does not apply.

- B. *Wetlands and Riparian Areas: Alteration of wetlands and riparian areas shall be in compliance with State and Federal laws.*

Finding 75: As detailed in the responses to Sections 1170 and 1180, proposed development in this application impacts the Riparian Corridors, Wetlands, Water Quality, and Fish and Wildlife Habitat Protection Overlay Zone and the Wetland Area Overlay. The applicant is seeking approval from the U.S. Army Corps of Engineers and the Oregon Department of State Lands for wetland alterations and has proposed off-site wetland mitigation south of the site. Staff recommends a condition requiring approval from the Army Corps of Engineers and DSL prior to issuance of any development permits.

- C. *Natural Areas and Features: To the greatest practical extent possible, natural areas and features of the site shall be preserved.*

Finding 76: The applicant is proposing a renewable diesel production facility as permitted in the RIPD zone under prescribed conditions. The site contains mapped NWI wetlands; the applicant also identified delineated wetlands extending across most of the main facility site. All wetlands on the main facility site are proposed for removal. There are no other significant natural areas or features on the site. As detailed in the responses to Sections 1120, 1185, and 1190, the site is outside the Sensitive Bird Habitat Overlay, Natural Area Overlay, and Big Game Habitat Overlay. The applicant will perform stormwater management in accordance with applicable standards (as outlined in the stormwater report, Attachment 2m) and will obtain all necessary environmental permits to minimize impacts on off-site natural areas and features.

- D. *Historic and Cultural sites and structures: All historic and culturally significant sites and structures identified in the 1984 Comprehensive Plan, or identified for inclusion in the County Periodic Review, shall be protected if they still exist.*

Finding 77: Historic and culturally significant sites and structures are identified in Article XI of the Comprehensive Plan. None of the listed sites and structures are on or adjacent to the site. This standard does not apply.

- E. *Lighting: All outdoor lights shall be shielded so as to not shine directly on adjacent properties and roads.*

Finding 78: Proposed lighting will be provided as illustrated in Attachment 2c, Sheets C1.50 and C1.51. Light fixtures are proposed to be shielded and placed far enough from property lines so they focus light on the work area rather than casting light on adjoining properties or public streets. This standard is met.

- F. *Energy Conservation: Buildings should be oriented to take advantage of natural energy saving elements such as the sun, landscaping and land forms.*

Finding 79: The proposed buildings will be oriented along axes corresponding to cardinal directions, allowing for solar effects to the east, south, and west faces. The site is relatively flat so slopes do not affect building orientation.

G. Transportation Facilities: Off-site auto and pedestrian facilities may be required by the Planning Commission, Planning Director or Public Works Director consistent with the Columbia County Road Standards and the Columbia County Transportation Systems Plan.

Finding 80: The TIA (Attachment 2n) found that all study intersections meet applicable Columbia County, Oregon Department of Transportation, and City of Clatskanie mobility standards in 2020, in 2024 without NEXT Renewable Fuels, and in 2024 with NEXT Renewable Fuels and improvements to Hermo Road as proposed by the Applicant. The TIA did not identify a need for mitigation strategies. Hermo Road is currently gravel near the site but the County has a planned project (TSP Project #9) to improve the road from Quincy Mayger Road to just west of the existing rail spur south of the PGE site. The Applicant will satisfy Public Works requirements for necessary improvements to Hermo Road through a proposed condition of approval.

There is an existing paved roadway from Kallunki Road to the PGE Beaver Generation site and this road has an existing paved rail crossing. The applicant's proposed secondary driveway is the existing gravel driveway that connects to this existing paved roadway west of the rail line, so no rail improvements are required. No changes are proposed to this existing paved roadway or rail crossing. Attachment 2c, Sheet C1.11 specifies that the secondary driveway will be 20 feet wide and surfaced with gravel. Final design of signage and gates will be deferred to the building permit stage of the project, though conceptual wording of the "emergency access only" signage is shown on Sheet C1.40.

1564 Final Site Plan Approval:

If the Planning Director or Planning Commission approves a preliminary site plan, the applicant shall finalize all the site drawings and submit them to the Director for review. If the Director finds the final site plan conforms with the preliminary site plan, as approved by the Director or Planning Commission, the Director shall give approval to the final site plan. Minor differences between the preliminary site plan and the final site plan may be approved by the Director. These plans shall be attached to the building permit application and shall become a part of that permit.

Finding 81: The preliminary site plan, once approved, is forwarded to the County Building Official and other departments. Its contents dictate their review and standards. As such the final site plan shall be approved only if it conforms to the preliminary site plan reviewed and approved by the Board. In addition, the County Building Official will require the project to comply with all applicable requirements of the County Codes related to Building, Safety and Fire Protection Standards in effect at the time of building permit applications. Staff finds that the criteria in Section 1563 will be met with conditions.

Section 200 GENERAL PROVISIONS

215 Ingress and Egress:

Every use of property shall hereafter have a defined point of usable ingress and egress onto any street. Such defined points of access shall be approved at the time of issuance of a building permit.

Finding 82: As depicted on Attachment 2c, Sheets G0.01 and C1.13, the proposed development will utilize a driveway to Hermo Road as its primary access point, with secondary emergency egress to Kallunki Road. Each of these serves as a defined ingress and egress point. This standard is met.

Section 1300 SIGNS

1301 Use:

No sign may be established, altered, or expanded hereafter in any district in Columbia County, except in accordance with the provisions outlined in this Section. The sign provisions apply to signs established in conjunction with any use in the county.

Finding 83: Prior to sign installation, the applicant will obtain all necessary permits and submit signage designs to County staff for review where required by code.

1302 General Provisions:

.1 Design Review: In addition to complying with the standards in this Section, the design and color of commercial and industrial signs and supporting structures of signs 100 square feet or larger in size shall be compatible with the architectural design and color of existing and proposed buildings on the site as determined during site design review according to the provisions of Section 1550 of this Ordinance.

Finding 84: The applicant is not proposing any signage over 100 square feet. See Attachment 2c, Sheet C1.40. This standard does not apply.

.2 Setbacks:

A. All signs shall be situated in a manner so as not to adversely affect safety, corner vision, or other similar conditions and shall not overhang or encroach upon public rights of way.

Finding 85: As illustrated in Attachment 2c, Sheet C1.40, no signage is proposed in locations that affect vehicle sight lines or overhang or encroach upon Hermo Road or Kallunki Road. This standard is met.

B. Unless otherwise specified, all signs in residential zoning districts shall observe the yard setback requirements of the zoning district in which they are located.

Finding 86: The site is not in a residential zoning district. This standard does not apply.

C. No setbacks from property lines shall be required for signs in non-residential zoning districts except that in all zoning districts, setbacks shall be required at corners as may be necessary to provide adequate corner vision or in cases where a sign is placed adjacent to a street, as provided is 1302.2(D), below.

Finding 87: As illustrated in Attachment 2c, Sheet C1.40, no signage is proposed in locations that obstruct corner vision. This standard is met.

D. Setbacks shall be required which comply with setback requirements of the abutting residential zoning district when a sign is placed on a parcel abutting a street (except Highway 30), which separates a non-residential parcel from a residential parcel or when a sign is placed on a property line separating a nonresidential parcel from a residential parcel.

Finding 88: The site does not abut a residential zoning district and is not near a residential parcel. This standard does not apply.

.3 Visual Obstructions: No sign shall be situated in a manner which results in the complete visual obstruction of an existing sign.

Finding 89: There are no existing signs in the vicinity of the site. This standard does not apply.

.4 Illuminated Signs: Artificially illuminated signs, or lights used to indirectly illuminate signs, shall be placed, shielded, or deflected so as not to shine into residential dwelling units or structures. The light intensity of an illuminated sign shall not exceed the following standards:

- A. No exposed reflective type bulb, par spot or incandescent lamp, which exceeds twenty-five (25) Watts, shall be exposed to direct view from a public street or highway, but may be used for indirect light illumination of the display surface of a sign.*

Finding 90: As depicted on Attachment 2c, Sheet C1.40, the proposed sign near Hermo Road will be externally illuminated. The proposed LED lamps will be shielded so as not to be directly visible from the street. This standard is met.

- B. When neon tubing is employed on the exterior or interior of a sign, the capacity of such tubing shall not exceed three hundred (300) milliamperes rating for white tubing or one hundred (100) milliamperes rating for any colored tubing.*

Finding 91: No neon tubing is proposed. This standard does not apply.

- C. When fluorescent tubes are used for the interior illumination of a sign [...]*

Finding 92: No fluorescent tubes are proposed. This standard does not apply.

.6 Sign Clearance: A minimum of 8 feet above sidewalks and 15 feet above driveways shall be provided under free-standing signs.

Finding 93: As illustrated in Attachment 2c, Sheet C1.40, no signage is proposed over sidewalks or driveways. All signage will be monument signage. This standard does not apply.

1313 Commercial and Industrial Districts:

.1 Signs Permitted: Signs shall be permitted in Commercial and Industrial zoning districts subject to the provisions of this Section, except to the extent such provisions conflict with the specific development standards for signs in the underlying zoning district.

Finding 94: Prior to sign installation, the applicant will obtain all necessary permits and submit signage designs to County staff for review where required by code. The RIPD zone has no specific development standards for signage and instead to defers to the provisions of Section 1300.

.2 Limit on Sign Area: Except as otherwise permitted in Section 1302.5, no sign having a sign area greater than 200 square feet shall be permitted.

Finding 95: As illustrated in Attachment 2c, Sheet C1.40, no sign over 200 square feet is proposed. This standard is met.

.3 Aggregate Sign Area Per Parcel.

- A. Except as otherwise provided herein, the maximum permitted area of all signs, including the total area of each face of a double-faced sign, or the sole face of a single faced sign for each parcel, is as follows: 40 square feet; plus*

- 1) For the first fifty (50) linear feet of building frontage on a public road, an additional square foot of sign area per linear foot of building frontage on such public road; plus*
- 2) For the next two hundred and twenty (220) linear feet of building frontage on a public road, an additional one-half (½) square foot of sign area per linear foot of building frontage on such public road.*

- B. For the purpose of this section, "building frontage" means the linear length of a building facing a public right of way or the linear length of the public right of way facing a building, whichever is smaller.*

Finding 96: This standard allows the site to have 40 square feet of signage plus an additional 160 square feet for the 285 feet of buildings facing Hermo Road, for a total allowable sign area of 200 square feet. The proposed signage depicted on Attachment 2c, Sheet C1.40 will have a total area of approximately 65 square feet. This standard is met.

- C. The area of any legal non-conforming sign which is greater than 200 square feet in size shall not be included in the calculation of maximum sign area per parcel under this Section.*

Finding 97: The site has no existing signage. This standard does not apply.

- D. The area of any temporary sign permitted under 1313.7 shall not be included in the calculation of maximum sign area per parcel under this section.*

Finding 98: Any temporary signage will be permitted in accordance subsection 1313.7, irrespective of the area limits for permanent signage.

.4 Free Standing Signs: *Free standing signs, including ground mounted signs, must comply with the following additional standards:*

- A. Height: Free standing signs shall not exceed 20 feet in height above grade or above road grade, whichever is higher.*

Finding 99: The proposed signage depicted on Attachment 2c, Sheet C1.40 will have a height of approximately 4 feet. This standard is met.

- B. Total Area: The total sign area of all freestanding signs allowed by this section plus the area of all other allowed signs on the parcel shall not exceed the aggregate sign limits for the parcel as provided in Section 1313.3.*

Finding 100: Section 1313.3 allows up to 200 square feet of signage at this location. The proposed signage depicted on Attachment 2c, Sheet C1.40 will have a total area of approximately 65 square feet. This standard is met.

- C. Center/Complex Signs: Only one freestanding sign shall be allowed for a center/complex even when there is more than one parcel in or owner of the center/complex, unless one additional sign is needed to provide identification of the development at a major public access point on a different roads. No more than two freestanding signs will be allowed. For purposes of this Section, "Center/Complex" means any number of businesses greater than one which share the same site using common points of ingress and egress and/or common parking facilities. Legal non-conforming signs shall not be included in the calculation of the number of freestanding signs per parcel under this Section.*

Finding 101: No center/complex signage is proposed. This standard does not apply.

- D. Illumination: Free standing signs may be illuminated subject to subsection 1302.4.*

Finding 102: Compliance with the illumination standards is addressed in the response to subsection 1302.4. This standard is met.

.5 Building Mounted Signs: *Signs mounted or painted on buildings must comply with the following additional standards:*

- A. *Area. The total sign area of all building mounted signs allowed pursuant to this section in addition to the area of all other allowed signs per parcel shall not exceed the aggregate sign limits for the parcel as provided in section 1313.3.*
- B. *Height. Building mounted signs shall not extend more than four (4) feet above the roof of the building on which it is mounted.*
- C. *Illumination. Building mounted signs may be illuminated subject to the illumination standards set forth in subsection 1302.4.*

Finding 103: The applicant may later choose to paint a logo on one or more tanks. If the County classifies a logo on a tank as a building sign, the applicant will seek the appropriate permits prior to installation.

.6 Traffic Control/Directional Signs: On-site traffic control and directional identification signs shall be required as may be necessary, commensurate with the size and use of the site, in conjunction with site design review, if such review is required. Centers/ complexes combining several uses shall provide tenant directories, or building identification and directional signing oriented toward on-site vehicle and pedestrian circulation.

Finding 104: No directional signs are needed for the facility with the exception of the information proposed on the signage depicted on Attachment 2c, Sheet C1.40. The applicant proposes to defer internal site signage design to the permitting stage to provide the opportunity for coordination with the Fire Marshal. The anticipated protocol is that emergency responders would be escorted by facility staff from the security gate to any locations requiring assistance. This standard is met.

- .7 Temporary Signs. Signs of a temporary nature may be allowed provided they meet the following standards. For purposes of this section, "temporary" shall mean not to exceed one year.*
- A. *The temporary sign area shall not exceed 60 square feet.*
 - B. *The temporary sign shall observe the setback provisions under subsection 1302.2.*
 - C. *Only one temporary sign shall be permitted per parcel.*
 - D. *The temporary sign shall not be artificially illuminated.*
 - E. *The temporary sign shall be removed from the premises after the one year temporary sign period has expired.*

Finding 105: Any temporary signage will be permitted in accordance with this section.

- .8 Animated or Video Signs Prohibited: No sign shall contain, include, or be illuminated by any flashing, intermittent, revolving, rotating, or moving light or move or have any animated or moving parts except that this Section shall not apply to:*
- A. *Traffic control signs.*
 - B. *Signs, displays, devices, or portions thereof with lights that may be changed at intermittent intervals by electronic process or remote control. The maximum size of the display area for such changing numbers or letters is ten (10) square feet.*

Finding 106: No animated or video signs are proposed. This standard is met.

1314 Calculating Sign Area:

The structure supporting or appearing to support a freestanding sign shall not be included in the area of the sign, unless such structural element is typically used to carry signage. In calculating the square footage of a sign, the width shall be measured at the widest part of the sign, including any cut-outs, and the length shall be

measured at the longest part of the sign, including any cut-outs. The maximum square footage limitation of the sign shall be calculated such that no cutouts or other Copy shall be permitted outside of the size limitation.

Finding 107: The proposed signage depicted in Attachment 2c, Sheet C1.40 has been measured in accordance with this provision.

1315 Copy Area:

Copy is allowed only on the face of the sign. Copy is prohibited in the ledger area of the sign, on the post of the sign, or other structure of the sign, except to the extent that the sign owner's logo or other disclosure is required by law to be placed on the ledger, post or other structure of the sign. For purposes of this Section, "copy" is defined as any text or image.

Finding 108: The proposed signage depicted in Attachment 2c, Sheet C1.40 has been designed in accordance with this provision.

Section 1400 OFF-STREET PARKING AND LOADING

1401 General Provisions:

At the time of the erection of a new building, or an addition to an existing building, or any change in the use of an existing building, structure, or land which results in an intensified use by customers, occupants, employees, or other persons, off-street parking and loading shall be provided according to the requirements of this section.

Finding 109: The applicant proposes to provide parking and loading for the new facility for the convenience of site users and employees. As detailed below, the proposed parking and loading conforms to applicable code standards. This standard is met.

1402 Continuing Obligation:

The provisions for and maintenance of off-street parking and loading facilities shall be a continuing obligation of the property owner. No building or any other required permit for a structure or use under this or any other applicable rule, ordinance, or regulation shall be issued with respect to off street parking and loading, or land served by such land, until satisfactory evidence is presented that the property is, and will remain, available for the designated use as a parking or loading facility.

Finding 110: The applicant acknowledges the ongoing responsibility to maintain the parking and loading areas. This standard is met.

1403 Use of Space:

.1 Required parking spaces shall be available for parking of vehicles of customers, occupants, and employees.

Finding 111: The applicant proposes to construct the parking areas illustrated in Attachment 2c, Sheets C1.11 and C1.12 for use by vehicles of site users as required. Most of the proposed parking is located on the southeast portion of the site, near the main office building, with the balance near the central control building. This standard is met.

.2 No parking of trucks, equipment, or the conduct of any business activity shall be permitted on the required parking spaces.

Finding 112: The applicant does not propose to park trucks or equipment in the required off-street parking spaces. This standard is met.

.3 Required loading spaces shall be available for the loading and unloading of vehicles concerned with the transportation of goods and services.

Finding 113: The applicant proposes to construct truck loading areas including docks on the warehouse building as illustrated in Attachment 2c, Sheets C1.11 and C1.12. This standard is met.

.4 Excepting residential and local commercial districts only, loading areas shall not be used for any other purpose than for loading and unloading.

Finding 114: The applicant does not propose to utilize loading areas for any use other than loading. This standard is met.

.5 In any district it shall be unlawful to store or accumulate goods in a loading area in a manner which would render the area temporarily or permanently incapable of immediate use for loading operations.

Finding 115: The applicant does not propose to serve store goods in a loading area in such a way that the loading spaces become unusable. As illustrated in Attachment 2c, Sheets C1.11 and C1.12, the applicant proposes outdoor storage areas which are separate from loading areas. This standard is met.

1404 Joint Usage of Facilities:

Owners of two or more uses, structures, or parcels of land may agree to utilize jointly the same parking and loading spaces when hours of operation do not overlap, provided that satisfactory legal evidence is presented to the Planning Director in the form of deeds, leases, or contracts securing full access to such parking or loading areas for all the parties jointly using them.

Finding 116: The applicant does not propose to share parking spaces with uses on other sites. This standard does not apply.

1405 Plans Required:

A plot plan shall be submitted in duplicate to the Director with each application for a building permit or for a change of classification to OP. The plot plan shall include the following information:

- .1 Dimensions of the parking lot.*
- .2 Access to streets and location of curb cuts.*
- .3 Location of individual parking spaces.*
- .4 Circulation pattern.*
- .5 Grade and drainage.*
- .6 Abutting property.*
- .7 A landscaping plan which shall include the location and names of all vegetation, and the location and size of fencing or other screening material. This plan shall be approved by the Director.*

Finding 117: The proposed site plan depicts the parking areas in Attachment 2c, Sheets C1.11 and C1.12, while Sheet C1.20 depicts proposed grading and Sheets L1.10-L1.11 depict proposed landscaping. This standard is met.

1406 Location:

- .1 Spaces required by this section shall be provided on the site of the primary uses, provided that, when practical difficulties prevent their establishment upon the same site, the Planning Director may permit the facility to be located within 300 feet therefrom, measured in a straight line (including streets and alleys) from the nearest property line to the nearest parking space; but in any case the location shall meet all provisions of this ordinance which apply.*
- .2 Loading spaces and maneuvering area shall be located only on or abutting the property served.*

Finding 118: As illustrated on Attachment 2c, Sheet C1.11 and C1.12, parking and loading spaces are proposed within the site boundaries. Truck turning diagrams are included where necessary to demonstrate that adequate clearance has been provided. This standard is met.

1407 Change of Use:

In case of enlargement or change of use, the number of parking or loading spaces required shall be based upon the total area involved in the enlargement or change in use.

Finding 119: No enlargement or change of use is proposed as the site currently has no structures or parking areas. This standard does not apply.

1408 Design Standards:**.1 Scope:**

- A. *These design standards shall apply to all parking, loading, and maneuvering areas except those for single and two-family residential dwellings on individual lots.*
- B. *All parking and loading areas shall provide for the turning, maneuvering, and parking of all vehicles on the lots.*

Finding 120: As illustrated on Attachment 2c, Sheet C1.11, parking and loading areas are proposed with widths adequate to allow for efficient site circulation of vehicles. Truck turning diagrams are included where necessary to demonstrate that adequate clearance has been provided. This standard is met.

1409 Loading Spaces:

- .1 *Apartment: Each required space shall be at least 12 feet in width and 25 feet in length.*
- .2 *Commercial: Each required space shall be at least 12 feet in width and 35 feet in length.*
- .3 *Industrial: Each required space shall be at least 12 feet in width and 60 feet in length.*
- .4 *Clearance: The height of each required loading space shall provide a minimum vertical clearance of 13 feet.*

Finding 121: As illustrated on Attachment 2c, Sheet C1.12, in conformance with the Industrial standard noted above, three loading dock spaces are proposed on the warehouse, with widths exceeding 12 feet and lengths of 60 feet and no limitations on vertical clearance. This standard is met.

1410 Size:

- .1 *The standard size of a parking space shall be 9 feet by 18 feet.*
- .2 *Handicapped parking spaces shall be 12 feet by 18 feet.*
- .3 *Parallel parking, the length of the parking space shall be increased to 22 feet.*

Finding 122: As illustrated on Attachment 2c, Sheet C1.12, all standard parking spaces are proposed to be 9 feet wide and 18 feet long, while handicapped parking spaces are proposed to be 9 feet wide and 18 feet long with 9-foot access aisles. No parallel parking spaces are proposed. This standard is met.

1411 Aisles:

Aisles shall not be less than:

- .1 *25'0" in width for 90 degree parking;*
- .2 *20'0" in width for 60 degree parking;*
- .3 *20'0" in width for 45 degree parking; and*
- .4 *12'0" in width for parallel parking.*

Finding 123: As illustrated on Attachment 2c, Sheet C1.12, all parking areas are proposed to utilize 90-degree parking with aisles at least 25 feet wide. This standard is met.

1412 Access:

There shall be no more than one 45-foot-wide curb cut driveway per 150 feet of street frontage, or fraction thereof, permitted per site.

Finding 124: As illustrated on Attachment 2c, Sheet C1.13, the proposed driveway will utilize a 45-foot curb cut to Hermo Road. Mackenzie civil engineers have performed truck turning simulations to confirm that the driveway connection has adequate width for incoming and outbound vehicles. This standard is met.

1413 Surfacing and Marking:

- .1 The surfacing of each parking area shall meet minimum County standards to handle the weight of the vehicles which will use the parking area. All areas used for parking and maneuvering of vehicles shall be marked in accordance with the approved plan and such marking shall be continuously maintained. Handicapped parking spaces shall be marked with a wheelchair symbol.*
- .2 The parking and loading areas for commercial, industrial, or apartment uses shall be paved with concrete, asphaltic concrete, or another comparable surface.*

Finding 125: The proposed driveway and all parking areas will be hard-surface paved, with parking spaces marked with paint and handicapped spaces marked in accordance with the Oregon Structural Specialty Code. This standard is met.

1414 Drainage and Lighting:

Adequate drainage shall be provided to dispose of the run-off generated by the impervious surface area to the parking area. The drainage system shall function so it will not adversely affect adjoining property.

Artificial lighting shall be provided in such a manner as to insure the safety of the parking area without interfering with adjoining properties or creating traffic hazards on adjoining streets.

Finding 126: The proposed grading and drainage patterns are depicted in Attachment 2c, Sheets C1.20 and C1.30, respectively. Stormwater will flow into catch basins in the parking area before being conveyed to the wastewater treatment facility at the north end of the site, which will discharge to the existing Port Westward stormwater system. Further discussion of stormwater management is included in Attachment 2m.

Parking lot lighting will be provided as illustrated in Attachment 2c, Sheets C1.50 and C1.51; light fixtures are proposed to be placed far enough from property lines so they will not cast light on adjoining properties or public streets. This standard is met.

1415 Parking Areas:

All parking areas, excluding one and two-family dwellings, shall meet the following requirements:

- .1 All parking areas of less than 20 parking spaces shall have one handicapped parking space.*

Parking areas with more than 20 spaces shall provide one handicapped parking space for every 50 standard parking spaces.

Finding 127: The proposed handicapped spaces will be provided at the rate specified in the Oregon Structural Specialty Code, which is higher than that required by this code provision. This standard is met.

- .2 All parking areas shall be divided into bays of not more than 20 parking spaces. Between, and at the end of each parking bay, there shall be planters which have a minimum width of 5 feet and be at least 17 feet in length. Each planter shall contain one major structural tree and ground cover which has been deemed appropriate by the Director. Truck loading areas need not comply with the preceding requirements.*

Finding 128: As illustrated on Attachment 2c, Sheet C1.12, the proposed parking area utilizes landscape islands to separate the space into bays with 20 or fewer spaces. Landscaping is provided in each of the planter bays as illustrated on Attachment 2c, Sheet L1.11. This standard is met.

.3 Parking areas shall be separated from the exterior wall of a structure, exclusive of paved pedestrian entranceways, by a 5 foot strip of landscaping.

Finding 129: As illustrated on Attachment 2c, Sheet C1.12, all proposed parking areas are at least five feet from buildings, with sidewalks provided between the parking and buildings as illustrated on Attachment 2c, Sheets C1.11 and C1.12. Since these sidewalks are paved, landscaping is not required between the parking and the building. This standard is met.

.4 Industrial or commercial parking areas, which abut a residential or apartment district, shall meet the building setback of the most restrictive adjoining residential or apartment district.

Finding 130: The site does not abut a residential or apartment district. This standard does not apply.

.5 When industrial or commercial parking areas adjoin a residential or apartment district, there shall be a sight obscuring planting, which is at least 80 percent opaque and when viewed horizontally from between 2 and 8 feet above ground level. This planting shall be composed of materials which are an adequate size so as to achieve the required degree of screening within 12 months after installation.

Finding 131: The site does not adjoin a residential or apartment district. This standard does not apply.

.6 Parking areas shall be set back from a lot or parcel line adjoining a street. The setback area shall be landscaped.

Finding 132: As illustrated on Attachment 2c, Sheets G0.01 and C1.11, the parking area is proposed on TL 8422-00-00300, which does not have a lot line adjoining a street. This standard is met.

.7 All parking area setbacks shall be landscaped with major trees, shrubs, and ground cover as approved by the Director.

Finding 133: No parking area setback is required as noted above. This standard is met.

.8 A minimum of 10 percent of the parking area shall be landscaped and maintenance of the landscaping shall be the owner's responsibility.

Finding 134: Based on the parking area and landscape areas denoted on Attachment 2c, Sheet L1.10, the north parking lot will include 46% landscaping, the southern parking lot will include 20% landscaping, and the central control building parking lot will include 32% landscaping. The applicant acknowledges the continuing obligation to maintain landscaping. This standard is met.

.9 Internal pedestrian connections shall be provided in parking lots with greater than ten (10) parking spaces. These connections shall be a minimum of five (5) feet wide and distinguished from vehicular areas through changes in elevation or contrasting paving materials (such as light-color concrete inlay between asphalt). Paint or thermo-plastic striping and similar types of non-permanent applications may be approved for crossings of parking lot areas that do not exceed 24 feet in crossing length.

Finding 135: As illustrated on Attachment 2c, Sheet C1.12, parking lots have more than 10 parking spaces and thus provide the required pedestrian connections. The pedestrian connections are five feet wide. This standard is met.

.10 In urban growth boundaries and urban unincorporated communities, parking lots for commercial, industrial, and public/quasi-public uses that have designated employee parking and more than 20 parking spaces shall provide at least 10% of the employee parking spaces (with a minimum of two spaces) as preferential long-term carpool and vanpool parking spaces. Preferential carpool and vanpool parking spaces shall be closer to the entrances of the building than other parking spaces, with the exception of ADA accessible parking spaces.

Finding 136: The site is not within an urban growth boundary and is not within an urban unincorporated community. This standard does not apply.

.11 A portion of existing parking areas may be redeveloped for transit-oriented improvements, such as a bus stops and pullouts, bus shelters, park and ride stations, transit-oriented developments, and similar facilities, where identified in or consistent with an adopted County transit plan. Subject sites incorporating transit improvements as part of a development proposal are eligible for up to a 10% reduction in required vehicular parking spaces.

Finding 137: The site does not have an existing parking area, and no transit improvements are proposed. This standard does not apply.

1416 Minimum Required Off-Street Parking Space:

.5 Industry

Manufacturing: One space per employee on the largest shift.

Finding 138: Estimated staffing levels by shift are denoted in the table below.

ESTIMATED STAFFING LEVELS				
Weekdays			Weekends	
Office/Mgt.	Shift 1	Shift 2	Shift 1	Shift 2
8:00 AM – 5:00 PM	6:00 AM – 6:00 PM	6:00 PM – 6:00 AM	6:00 AM – 6:00 PM	6:00 PM – 6:00 AM
83	35	35	35	35

Based on this information, the largest shift will occur weekdays between 8:00 AM and 5:00 PM, during which time there will be a total of 118 employees. As illustrated on Attachment 2c, Sheets C1.11 and C1.12, the applicant proposes 128 parking spaces which meets the standard of at least one space per employee of the largest shift. This standard is met.

1417 Unspecified Uses:

Any use not specifically listed in the foregoing list shall have the requirements of the listed use or uses deemed equivalent by the Director.

Finding 139: The proposed manufacturing use has a parking ratio specified in Section 1416. This standard does not apply.

1418 Minimum Required Off-Street Loading Spaces:

.3

MINIMUM REQUIRED OFF-STREET LOADING SPACES (EXCERPT)		
USE	SQUARE FEET OF FLOOR USE OR LAND AREA	MINIMUM LOADING SPACES REQUIRED
Manufacturing, Wholesale Storage or Hospital	under 5,000	0
	5,000 - 39,999	1
	40,000 - 99,999	2
	100,000 - 159,999	3
	160,000 - 239,999	4
	240,000 - 319,999	5
	320,000 - 399,999	6
	400,000 - 489,999	7
	490,000 - 579,999	8
	580,000 - 669,999	9
	670,000 - 759,999	10
	760,000 - 849,999	11
	850,000 - 939,999	12
	940,000 - 1,029,999	13
over 1,030,000	14	

Finding 140: As noted on Attachment 2c, Sheet C1.11, the combined floor area for the proposed buildings is approximately 78,330 square feet. Based on the table above, the facility therefore will need at least two loading spaces. The applicant proposes loading docks on the warehouse building to serve loading needs, together with multiple outdoor storage areas and rail loading/unloading areas. The proposed loading dock area shown on Attachment 2c, Sheet C1.12 can accommodate three trucks. This standard is met.

1419 Minimum Required Bicycle Parking Spaces:

- .1 All Public and Semi-Public buildings and uses, Retail uses, Apartment Dwelling uses and Commercial Recreation uses [...]
- .2 The following are the required number of bicycle parking spaces: [...]
- .3 Single-family dwellings, mobile homes, warehouse, storage and wholesale businesses, and manufacturing establishments shall be exempted from the requirements of Subsection 1419 Bicycle Parking.

Finding 141: The proposed manufacturing use is exempt from providing bicycle parking via criterion .3. This standard is met.

Section 1450 TRANSPORTATION IMPACT ANALYSIS

1450 Transportation Impact Analysis:

Transportation Impact Analysis (TIA) must be submitted with a land use application if the proposal is expected to involve one or more of the conditions in 1450.1 (below) in order to minimize impacts on and protect transportation facilities, consistent with Section 660-012-0045(2)(b) and (e) of the State Transportation Planning Rule.

- .1 Applicability – A TIA shall be required to be submitted to the County with a land use application if the proposal is expected to involve one (1) or more of the following:
 - A. Changes in land use designation, or zoning designation that will generate more vehicle trip ends.
 - B. Projected increase in trip generation of 25 or more trips during either the AM or PM peak hour, or more than 400 daily trips.
 - C. Potential impacts to intersection operations.
 - D. Potential impacts to residential areas or local roadways, including any nonresidential development that will generate traffic through a residential zone.

- E. *Potential impacts to pedestrian and bicycle routes, including, but not limited to school routes and multimodal roadway improvements identified in the TSP.*
- F. *The location of an existing or proposed access driveway does not meet minimum spacing or sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or such vehicles are likely to queue or hesitate at an approach or access connection, thereby creating a safety hazard.*
- G. *A change in internal traffic patterns may cause safety concerns.*
- H. *A TIA is required by ODOT pursuant with OAR 734-051.*
- I. *Projected increase of five trips by vehicles exceeding 26,000-pound gross vehicle weight (13 tons) per day, or an increase in use of adjacent roadways by vehicle exceeding 26,000-pound gross vehicle weight (13 tons) by 10 percent.*

Finding 142: Mackenzie transportation engineers estimate that the proposed development will generate 667 weekday trips, 91 of which will occur in the AM peak hour and 84 of which will occur within the PM peak hour. Accordingly, the applicant has provided a TIA as required (Attachment 2n). This standard is met.

- .2 *Consistent with the County’s Guidelines for Transportation Impact Analysis (TIA), a landowner or developer seeking to develop/redevelop property shall contact the County at the project’s outset. The County will review existing transportation data to establish whether a TIA is required. It is the responsibility of the applicant to provide enough detailed information for the County to make a determination. An applicant should have the following prepared, preferably in writing:*
 - A. *Type of uses within the development*
 - B. *The size of the development*
 - C. *The location of the development*
 - C. *Proposed new accesses or roadways*
 - D. *Estimated trip generation and source of data*
 - E. *Proposed study area*

If the County cannot properly evaluate a proposed development’s impacts without a more detailed study, a TIA will be required. The County will provide a scoping summary detailing the study area and any special parameters or requirements, beyond the requirements set forth in the County’s Guidelines for Transportation Impact Analysis, when preparing the TIA.

Finding 143: The applicant’s transportation engineers submitted a scoping letter for review and approval by Columbia County staff and Oregon Department of Transportation staff prior to commencing the TIA. The scoping letter identified those items that would be addressed as part of the analysis. This standard is met.

- .3 *Approval Criteria. When a TIA is required, a proposal is subject to the following criteria:*
 - A. *The TIA addresses the applicable elements identified by the County Public Works Director and the County’s Guidelines for Transportation Impact Analysis;*
 - B. *The TIA demonstrates that adequate transportation facilities exist to serve the proposed development or, identifies mitigation measures that resolve identified traffic safety problems in a manner that is satisfactory to the County Public Works Director and, when state highway facilities are affected, to ODOT;*
 - C. *For affected non-highway facilities, the TIA establishes that mobility standards adopted by the County have been met; and*
 - D. *Proposed public improvements are designed and will be constructed consistent with County Road Standards and access spacing standards in the Transportation System Plan.*

Finding 144: The project TIA (Attachment 2n) addresses those items identified in the scoping letter approved by County and ODOT staff to ensure compliance with approval standards. The TIA indicates that the proposed development will generate 667 weekday trips, 91 of which will occur in the AM peak hour and 84 of which will occur within the PM peak hour. The report analyzed traffic operations at six study area intersections in 2020 and in 2024, both with and without the proposed development.

The report found that all six study intersections meet applicable Columbia County, Oregon Department of Transportation, and City of Clatskanie mobility standards in 2020, in 2024 without NEXT Renewable Fuels, and in 2024 with NEXT Renewable Fuels and improvements to Hermo Road. The report also found that existing and future traffic queues can be accommodated within the existing storage areas at all study intersections. Based on this analysis, the TIA does not recommend any mitigation strategies as a result of the proposed facility.

The site does not abut any public rights-of-way but is near Hermo Road, which is classified as a local road in the 2017 Columbia County Transportation System Plan (TSP). The TSP recommends an optimum right-of-way width of 50 feet and an optimum roadway width of 28 feet (to accommodate ten-foot lanes and four-foot shoulders). The existing right-of-way width at the driveway location is 60 feet so no right-of-way dedication is merited. Hermo Road is currently gravel near the site but the County has a planned project (TSP Project #9) to improve the road from Quincy Mayger Road to just west of the existing rail spur south of the PGE site. The Applicant will satisfy Public Works requirements for necessary improvements to Hermo Road through a proposed condition of approval.

Based on the information noted above and the full TIA, the applicant has demonstrated compliance with the identified approval criteria.

.4 Conditions of Approval.

- A. The County may deny, approve, or approve a proposal with conditions necessary to meet operational and safety standards; provide the necessary right-of-way for improvements; and to require construction of improvements to ensure consistency with the future planned transportation system.*
- B. Construction of off-site improvements may be required to mitigate impacts resulting from development that relate to capacity deficiencies and public safety; and /or to upgrade or construct public facilities to County Standards. Improvements required as a condition of development approval, when not voluntarily provided by the applicant, shall be roughly proportional to the impact of the development on transportation facilities. Findings in the development approval shall indicate how the required improvements directly relate to and are roughly proportional to the impact of development.*

Finding 145: The Applicant proposes to satisfy Public Works requirements for necessary improvements to Hermo Road through a road improvement agreement. Staff recommends a condition of approval to ensure Public Works requirements are met.

Section 1500 DISCRETIONARY PERMITS (Variances)

1504 Variances:

Except as provided in Section 1504.4 below, there are 2 classes of variances to the standards established in this ordinance. A Minor Variance is defined as a request for a variance of less than 25% from a dimensional requirement such as setbacks, height, lot or parcel coverage, lot or parcel width, or lot or parcel depth, or a request for a variance of less than 10% from a minimum lot or parcel size requirement.

All other variances are defined as Major Variances. Use variances are not permitted under this ordinance except as permitted under Section 1505.1 "Temporary Permits: Use Not Allowed in District".

Major Variances from the lot or parcel size requirements of the Primary Agriculture (PA-38), Forest Agriculture (FA-19), Primary Forest (PF-76) and Rural Residential (RR-5) zones are not permitted under this ordinance.

Finding 146: To comply with PGE requirements and Department of Homeland Security regulations, the applicant is proposing a variance to screening and buffering standards by not planting trees under PGE powerlines, and proposing eight foot-fencing (seven feet of chain link topped by one foot of barbed wire per ASTM F2611-15) with no slats or associated plantings (see Attachment 2c, Sheet C1.11). As a result, the applicant is requesting a Major Variance from CCZO Section 1562.B and 1562.D, which includes requirements for buffering, and limits fences to four feet in height in front yards and six feet in height in rear and side yards and also specifies that chain link fences with slats may be used if combined with a continuous evergreen hedge. The applicant has provided evidence below responding to applicable approval criteria for the requested variance.

.1 Major Variances: The Planning Commission may permit and authorize a variance from the requirements of this ordinance when unusual circumstances cause undue hardship in the application of it. The granting of such a variance shall be in the public interest.

A. A variance shall be made only when all the following conditions and facts exist:

1. The granting of the variance will not be detrimental to the public safety, health, or welfare, or injurious to other property;

Finding 147: Granting the proposed variance will help improve public safety and maintain health and welfare by ensuring that the facility complies with Department of Homeland Security fencing and sight-line regulations (see Attachments 4 and 6b). Security around the facility requires that the surrounding area be visible in order to detect any unauthorized persons attempting to enter the site. A chain link fence provides security with good visibility. By contrast, utilizing fencing that complies with CCZO Section 1562.D would create a security risk that could result in serious harm due to inadequate height and impaired sightlines. The proposed fencing will be located within the site boundaries and thus will not be injurious to other properties.

2. The conditions upon which the request for a variance is based are unique to the property for which the variance is sought and are not applicable generally to other property;

Finding 148: The proposed variance is unique in that the Port Westward Industrial Park is one of the locations in the County where a facility such as this could be authorized under the zoning designation. Other nearby areas outside Port Westward are in agricultural or rural residential use and thus do not require the type of security fencing and sight-lines necessary for a fuel production facility. The need for the variance is related to the unique security requirements of the facility.

3. Approval of the application will allow the property to be used only for purposes authorized by the Zoning Ordinance;

Finding 149: Approval of the proposed variance will have no effect on the types of uses occurring at the site; the applicant proposes a renewable diesel fuel production facility which is consistent with *Uses under Prescribed Conditions* in the RIPD zone.

4. Strict compliance with the Zoning Ordinance would create an unnecessary hardship;

Finding 150: Compliance with the standards of CCZO Section 1562.B and D would result in buffering and screening that does not comply with Department of Homeland Security regulations and could impact the viability of the facility.

5. The granting of the variance will not adversely affect the realization of the Comprehensive Plan nor violate any other provision of the Zoning Ordinance.

Finding 151: This narrative demonstrates how the proposed use is consistent with applicable portions of the Comprehensive Plan and how the proposal complies with the CCZO. The proposed variance for buffering and screening does not adversely affect this determination of consistency. Rather, the variance will allow productive use of the land for which this site has been planned for many years. The variance will provide the requisite level of security without adversely affecting the objectives of the Comprehensive Plan or violating the CCZO.

B. A variance so authorized shall become void after the expiration of 1 year if the next step in the development process has not been applied for.

Finding 152: The applicant intends to seek appropriate approvals and permits prior to the specified expiration period.

C. The Planning Commission may impose whatever reasonable requirements it feels will fulfill the intent of this ordinance.

Finding 153: Based on the evidence that the proposed variance does not cause negative impacts on area properties, no additional requirements are necessary in this instance.

Criteria Specific to the Rail Branchline in the PA-80 Zone

Section 300 PRIMARY AGRICULTURE USE ZONE – 80 (PA-80)

301 Purpose:

The Primary Agriculture Zone or Exclusive Farm Use (EFU) This district is intended to preserve, enhance, and stabilize those prime agricultural lands and farm use areas within the County which are being used, and offer the greatest potential, for food and fiber production. This district also provides for open space, watershed protection, maintenance of clean air and water, and fish and wildlife habitat, including the creation, restoration and enhancement of wetlands.

303 Table of Authorized Uses and Development:

The following uses, activities and development are authorized in the Primary Agriculture Zone, subject to review and approval under applicable regulatory standards:

TABLE OF AUTHORIZED USES & DEVELOPMENT			
Roads, highways and other transportation facilities, requiring an exception	CUP/PC	CUP/PC	306.9, 307, 308

TRANSPORTATION – 306 CUP:

.9 Roads, Highways and other Transportation Facilities and Improvements as set forth in OAR 660-012-0065 related to Transportation Improvements on Rural Lands and not otherwise provided for in this Section, subject to adoption of an Exception to Statewide Planning Goal 3 and to any other applicable goal with which the facility or improvement does not comply, subject to compliance with Section 307, General Review Standards and Section 1503.

Finding 154: The application narrative provides the following response to this criterion:

“The proposed rail branchline is a transportation facility subject to Conditional Use Permit approval. This narrative provides responses to the cited Sections 306.9, 307, and 308. However, it should be noted that contrary to the language in the table regarding such facilities “requiring an exception,” no goal exception is required for this use pursuant to ORS 215.283(3), ORS 215.296, and OAR 660-012-0065. Those statutes and rules are discussed below, in the response to subsection 306.9.”

The application continues:

“Specifically, ORS 215.283(3) states that:

Roads, highways and other transportation facilities and improvements not allowed under subsections (1) and (2) of this section may be established, subject to the approval of the governing body or its designee, in areas zoned for exclusive farm use subject to:

(a) Adoption of an exception to the goal related to agricultural lands and to any other applicable goal with which the facility or improvement does not comply; or

(b) ORS 215.296 (Standards for approval of certain uses in exclusive farm use zones) for those uses identified by rule of the Land Conservation and Development Commission as provided in section 3, chapter 529, Oregon Laws 1993.

Criterion (b) refers both to ORS 215.296 and to the “...rules of the Land Conservation and Development Commission as provided in section 3, chapter 529, Oregon Laws 1993.” These rules are codified at OAR 660-012-0065, Transportation Improvements on Rural Lands, which states in part that:

(1) This rule identifies transportation facilities, services and improvements which may be permitted on rural lands consistent with Goals 3, 4, 11, and 14 without a goal exception.

(3) The following transportation improvements are consistent with Goals 3, 4, 11, and 14 subject to the requirements of this rule:

(b) Transportation improvements that are allowed or conditionally allowed by ORS 215.213 (Uses permitted in exclusive farm use zones in counties that adopted marginal lands system prior to 1993), 215.283 (Uses permitted in exclusive farm use zones in nonmarginal lands counties) or OAR chapter 660, division 6 (Forest Lands);

(j) Railroad mainlines and branchlines;

ORS 215.296, Standards for approval of certain uses in exclusive farm use zones, states that:

(1) A use allowed under ORS 215.213 (Uses permitted in exclusive farm use zones in counties that adopted marginal lands system prior to 1993) (2) or (11) or 215.283 (Uses permitted in exclusive farm use zones in nonmarginal lands counties) (2) or (4) may be approved only where the local governing body or its designee finds that the use will not:

(a) Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or

(b) Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.

(2) An applicant for a use allowed under ORS 215.213 (Uses permitted in exclusive farm use zones in counties that adopted marginal lands system prior to 1993) (2) or (11) or 215.283 (Uses permitted in exclusive farm use zones in nonmarginal lands counties) (2) or (4) may demonstrate that the standards for approval set forth in subsection (1) of this section will be satisfied through the imposition of conditions. Any conditions so imposed shall be clear and objective.

The provisions above outline the rationale through which the rail branchline should be authorized by the County. The analysis required by ORS 215.296 is included in the response to Section 307.1, below.”

Staff has questioned whether the proposed rail development constitutes a “mainline” or “branchline” because it serves one property and appears to function more like an accessory access and rail yard. In response, the Applicant has provided a letter from Portland and Western Railroad stating that the Applicant’s tracks are “considered industry track, which is another term for branch line or spur.” The letter goes on to say that “[a]s a general matter, ‘branch line’ is a broad term that encompasses any track that branches off from mainline track.” As “branchline” and “mainline” are industry terms, and neither are defined in OAR 660-012, staff finds the applicant has provided evidence in Attachment 6h (Portland & Western Railroad Letter) that the proposed rail development can be classified as a rail branchline. If the Board finds that the proposed rail development is a rail branchline, the use does not require a goal exception as described in the applicant’s submission.

307 General Review Standards:

.1 All uses in the Primary Agriculture Zone shall meet the review standards found in the above enabling Sections 304, 305 or 306. To also ensure compatibility with farming and forestry activities, the Planning Director, hearings body or Planning Commission shall determine that a use authorized by Sections 304, 305, or 306, except as specifically noted, shall meet the following requirements:

Finding 155: Findings for Section 307 generally begin by quoting large/entire sections of the applicant’s narrative responses in order to capture the applicant’s argument. These large quotes are followed by staff evaluation and findings. The application narrative addresses Section 307 criteria as follows:

“Consistent with the Oregon Supreme Court’s ruling in *Stop the Dump Coalition v. Yamhill County*, this narrative provides a farm-by farm analysis for the farm impacts test. Two separate impact areas are examined: the first is the impact area associated with Branchline Section A (which extends from the Portland & Western Railroad mainline to the proposed renewable diesel production facility and the second is the impact area associated with Branchline Section B (which begins at the southern boundary of the proposed renewable diesel production facility and extends westward toward Hermo Road). The analysis then characterizes existing agricultural practices in the two impact areas and demonstrates that the proposed rail branchline does not violate either of the approval criteria in this subsection. Responses to each criterion are outlined below.”

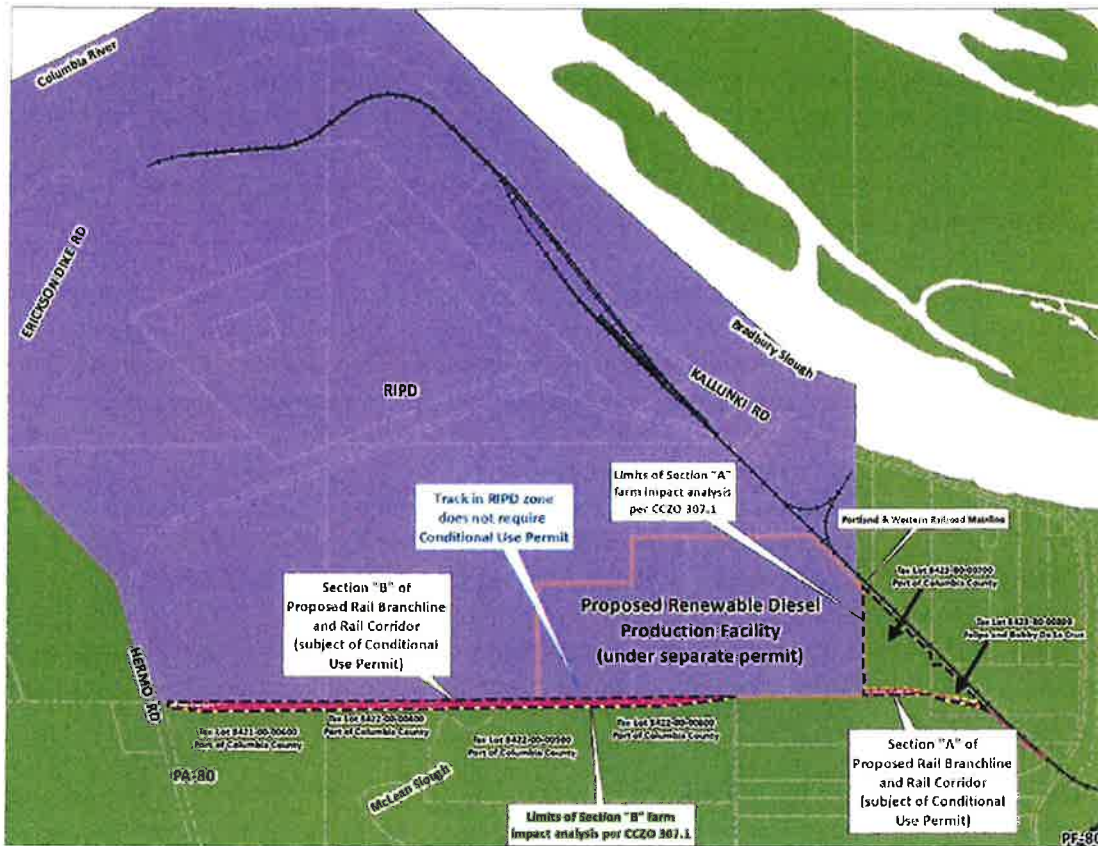
- A. *The proposed use will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and*

Finding 156: The application narrative provides the following rationale to address this criterion:

“As illustrated in Figure 3, Section A of the proposed rail branchline crosses two (2) parcels: one (1) owned by Felipe and Bobby De La Cruz (tax lot 8423-B0-00800) and one (1) owned by the Port of Columbia County (tax lot 8423-B0-00700). Section B of the proposed rail branchline crosses four (4) parcels owned by the Port of Columbia County (tax lots 8421-00-00600, 8422-00-00400, 8422-00-00500, and 8422-00-00600). As illustrated in Figure 3 and the zoning map in Exhibit 2, all six parcels are zoned PA-80. Adjacent resource lands include property zoned PA-80 in all directions.

Based on the location of the Portland & Western Railroad mainline, which bifurcates a small amount of resource land, the only area affected by the proposed branchline will be land north of the branchline and south and west of the existing Portland & Western mainline. Furthermore, since the proposed rail branchline will isolate a triangle bounded by the rail mainline to the northeast, the proposed rail branchline to the south, and the proposed renewable diesel production facility to the west and north (on land zoned RIPD), the impact area analyzed for this standard is limited to portions of the six parcels that will be crossed by the rail branchline. For ease of reference, the branchline site has been further broken down into two sections as depicted in Figure 1 and Figure 3 [*Figure 3 reproduced below*].

Figure 3 Area Zoning and Limits of Farm Impacts Analysis (Application Submission Figure 3)



Turning first to the analysis area for branchline Section A, totaling 14.1 acres, aerial photography and the Cropland Data Layer8 indicates that the northern tip of the De La Cruz parcel is wetland. The wetland delineation report (Exhibit 11) depicts rail branchline Section A as a wetland, but the report did not analyze the remainder of the Section A impact area. The central portion of the De La Cruz parcel (within and north of the proposed rail branchline corridor), has been farmed in recent years with hay/grassland and row crops such as mint. Similarly, the single Port parcel west of the De La Cruz parcel contains wetlands, though it appears that in recent years portions have been vegetated with grassland and mint as well. Hay and row crops are fairly resilient and are not sensitive to the sound or vibration associated with rail traffic, as evidenced by the proximity of these crops to the existing rail mainline.

Farm practices for hay production and row crops include activities such as tilling/soil preparation, planting, irrigation, spraying fertilizer, managing weeds, mowing, and harvesting. Construction and operation of the branchline could cause minor changes in access routes to fields (for instance, the branchline will cross an existing access route) and changes in patterns of cultivation, seeding, fertilizing, and harvesting near the facility.

Train traffic could also lead to increased time to access farm fields north of the branchline and east of the proposed renewable diesel production facility, though these delays would be brief and infrequent on the proposed branchline. The farming activities north of the proposed rail line could continue even with the construction of the rail branchline since the applicant (as the owner of the rail branchline) proposes to provide a private rail crossing to allow passage of farm equipment (see Exhibit 3, Sheets C1.17 and C1.18). The risk of

conflict between farm equipment and trains on the branchline would be relatively low since the trains will be infrequent and moving slowly due to their proximity to their origin and destination.

Taken individually, neither alterations to access routes nor increased time to access fields is by itself a condition that would cause farm operators to significantly change their farm practices. Furthermore, in the aggregate, the cumulative effect of these changes does not require farm operators to significantly change their practices. Based on this information, the Commission can conclude that the proposed rail branchline will not force a significant change in farm or forest practices within the Section A impact area.

Turning next to the analysis area for branchline Section B, totaling 10.7 acres, the four Port parcels south of the renewable diesel production facility are largely in tree farm use. A nominal amount of grassland is present north of McLean Slough, but this grassland would be removed to accommodate the rail branchline. The wetland delineation report (Exhibit 11) depicts the Section B impact area is classified as a wetland.

Management practices for tree farms may include site preparation and planting, weed control, pruning, harvesting, loading, transport. Elimination of the existing tree farm and grassland acreage would not cause farm operators within the impact area to significantly change their farm practices, as the owner (the Port) is willingly taking the impact area out of agricultural production within those specific boundaries to accommodate the rail branchline. As the rail branchline is proposed to replace the northern portion of the existing tree farm on Port property, it will not affect the remaining acreage to the south, which can continue to be accessed from the west and south for all required tree farm management activities. The proposed rail corridor will not isolate or split tree farm areas into smaller areas.

Based on this information, the Commission can conclude that the proposed rail branchline will not individually or cumulatively force a significant change in farm or forest practices within the Section B impact area."

Staff notes that applicant has not clearly defined the frequency of unit trains entering or leaving the site or if crossing access will be available to farming activities at times consistent with farming activity needs. Staff recommends a condition of approval for crossing access and management to address this issue. At the writing of this staff report, staff has seen no evidence the proposed rail development – the subject of the CU application – will force a significant change in farm or forest practices.

B. The proposed use will not significantly increase the cost of accepted farm or forest practices on lands devoted to farm or forest use.

Finding 157: The application narrative provides the following rationale to address this criterion:

"As discussed in the response to criterion A, only six (6) parcels are within the impact area that have the potential to be affected by the proposed rail branchline. Again, as noted above, all parcels within the impact area contain wetlands, though portions have been used for grass/hay and mint and tree farms in recent years. The Section A impact area contains one (1) parcel owned by Felipe and Bobby De La Cruz and one (1) parcel owned by the Port of Columbia County. See Figure 3. [Figure 3 reproduced above]

Farm practices for hay production and row crops include activities such as tilling/soil preparation, planting, spraying fertilizer, managing weeds, mowing, and harvesting. Construction and operation of the branchline does not interfere with these activities by increasing land values (e.g., by converting agricultural land to non-farm/residential use) or by altering the landscape in a manner that would trigger the need for farm operators to incur significant additional expenses. Trains are designed to stay on their tracks, so unlike a roadway or path, the

rail branchline would not introduce automobiles, pedestrians, or cyclists into agricultural lands where they were not previously present. As a result, no additional measures need to be taken by farmers to prevent trespassers.

Train traffic on the rail branchline will not lead to any appreciably higher level of dust than is currently present from the Portland & Western Railroad mainline which already borders the impact area (all portions of the impact area are already within 800 feet of the rail mainline). Consequently, construction of the rail branchline will not cause farmers to incur significant costs to utilize additional water or pumping equipment to suppress dust or wash their products.

The rail branchline will not increase the cost of farming inputs (seed, fertilizer, pesticides, etc.) and will not increase farmers' liability or financial exposure. The impact area is not used for grazing so there would be no need to expend funds to install fencing to prevent livestock from crossing the tracks. The applicant proposes to construct a private rail crossing at its own expense to allow passage of farm equipment to the PA-80 property that would be isolated by the rail branchline (see Exhibit 3, Sheets C1.17 and C1.18).

Based on this information, the Commission can conclude that the proposed rail branchline will not individually or cumulatively significantly increase the cost of farm or forest practices within the Section A impact area.

The Section B impact area contains four (4) parcels owned by the Port of Columbia County, and the analysis area is largely in tree farm use. Management practices for tree farms may include site preparation and planting, weed control, pruning, harvesting, loading, transport. Construction and operation of the branchline does not interfere with these activities by increasing land values or by altering the landscape in a manner that would trigger the need for farm operators to incur significant additional expenses. As the rail branchline is proposed to replace the northern portion of the existing tree farm on Port property, it will not affect the remaining acreage to the south, which can continue to be accessed from the west and south for all required tree farm management activities.

Tree farms are not sensitive to dust from nearby rail lines. Consequently, construction of the rail branchline will not cause adjoining tree farm operators to incur costs to utilize additional water or pumping equipment to suppress dust. The rail branchline will not increase the cost of farming inputs (saplings, fertilizer, pesticides, etc.) and will not increase farmers' liability or financial exposure. The impact area is in tree farm use and not used for grazing so there would be no need to expend funds to install fencing to prevent livestock from crossing the tracks.

Based on this information, the Commission can conclude that the proposed rail branchline will not individually or cumulatively significantly increase the cost of farm or forest practices within the Section B impact area."

At time of writing this staff report, staff has seen no evidence the proposed rail development will significantly increase the cost of accepted farm and forest practices.

.2 In addition to the requirements in 307.1A. and B., the applicant may demonstrate that the standards for approval will be satisfied by imposing clear and objective conditions to ensure conformance to applicable standards of the proposed PA-80 use.

Finding 158: Staff proposes a condition of approval to prepare a management plan for the rail crossing to ensure farm activities will not be significantly affected by unit train activities. Staff has not received evidence that the proposed rail branchline will cause significant impacts to farm activities at the time of writing this staff report.

308 Development Standards:

- .1 *The minimum average lot width shall be 100 feet for all activities except farming and forestry.*
- .2 *The minimum average lot depth shall be 100 feet for all activities except farming and forestry.*
- .3 *All newly created lots or parcels and those with permitted, reviewed or conditional uses, shall have a minimum of 50 foot frontage on a public or private right-of-way and an approved access in accordance with this ordinance, the Columbia County Road Standards and the Rural Transportation System Plan.*

Finding 159: The parcels included in this application are well over 100 feet deep and wide. The proposal is to develop within an easement; the proposal does not create new lots or parcels. The proposal is for a rail use – access to the use is proposed via the proposed fuel facility and the existing rail spur serving Port Westward. The site includes well over 50 feet of frontage along Hermo Road at Tax Lot 8421-00-00600. These standards are met.

- .4 *Setbacks. The following are minimum setbacks for all buildings and structures. In addition, all structures are subject to any special setback lines, where specified on designated arterial or collectors.*
 - A. *No structure shall be constructed closer than 30 feet to a property line. In the event the subject property is bordered by a zone with more restrictive setbacks, the more restrictive setback of the adjoining zone shall control on the side of the subject property adjoining the more restrictive setback.*

Finding 160: As this criterion applies to the rail branchline and not the facility, no structures subject to setback standards are proposed.

- B. *Setbacks in wetland areas shall be required in accordance with Sections 1170 and 1180 of the Columbia County Zoning Ordinance.*

Finding 161: The proposed rail development extends through the McLean Slough riparian area and traverses delineated wetlands for nearly the entire length of the proposal. To the extent Sections 1170 and 1180 are met, this standard is met. Please see responses to Section 1170 and 1180.

- .5 *Height. There shall be a height limitation of 100 feet in the PA-80 Zone for farm use structures, except for on those lands containing abandoned mill sites that were rezoned to industrial uses pursuant to ORS 197.719 or are subject to Airport Overlay Zone, or any structure which has received a conditional use or variance approval which allows a greater height of said structure. Unless otherwise prohibited, the maximum building height for all non-farm, non-forest structures shall be 50 feet or 2½ stories, whichever is less.*

Finding 162: No buildings or structures regulated by height requirements are proposed as part of the rail branchline development. This standard is met.

- .6 *Signs. The standards and requirements described in Section 1300 of the Columbia County Zoning Ordinance shall apply to all signs and name plates in the Exclusive Farm Use Zone.*

Finding 163: The application indicates that “no advertising signs are proposed” and that “signs pertaining to rail safety are not regulated by Section 1300”. A condition of approval is proposed to ensure sign standards are met.

- .7 *The Oregon Department of Fish & Wildlife shall be notified and provided with the opportunity to comment on any development within a Goal 5 protected wildlife habitat area.*
- .8 *Dwellings and other structures to be located on a parcel within designated big game habitat areas pursuant to the provisions of Section 1190 are also subject to the additional siting criteria contained in Section 1190.*

Finding 164: Columbia County Comprehensive Plan, Part XVI, Article VIII(A), Big Game Wildlife Habitat, identifies three (3) types of big game habitat. As depicted in Attachment 2f, the site is not within a Big Game Habitat area, Peripheral Big Game Habitat area, or Columbia white-tailed deer range in the County's Wildlife Game Habitat map. The map does identify the area as major waterfowl habitat and ODFW has provided comment on this application (Attachment 7b). Please see additional findings under Section 1190.

Section 1503 CONDITIONAL USE

- .1 *Status: Approval of a conditional use shall not constitute a change of zoning classification and shall be granted only for the specific use requested; subject to such reasonable modifications, conditions, and restrictions as may be deemed appropriate by the Commission, or as specifically provided herein.*
- .2 *Conditions: The Commission may attach conditions and restrictions to any conditional use approved. The setbacks and limitations of the underlying district shall be applied to the conditional use. Conditions and restrictions may include a specific limitation of uses, landscaping requirements, off-street parking, performance standards, performance bonds, and other reasonable conditions, restrictions, or safeguards that would uphold the intent of the Comprehensive Plan and mitigate any adverse effect upon the adjoining properties which may result by reason of the conditional use being allowed.*
- .3 *Conditional Use Permit: A Conditional Use Permit shall be obtained for each conditional use before development of the use. The permit shall stipulate any modifications, conditions, and restrictions imposed by the Commission, in addition to those specifically set forth in this ordinance. On its own motion, or pursuant to a formal written complaint filed with the Planning Department, upon proper notice and hearing as provided by Sections 1603 and 1608 of this ordinance, the Commission, (or Board on appeal) may, but is not required to, amend, add to or delete some or all of the conditions applied to Conditional Use Permits issued by the Planning Commission or Board of Commissioners. The power granted by this subsection may only be exercised upon a finding such amendment, addition or deletion is reasonably necessary to satisfy the criteria established by Section 1503.5 below.*

Finding 165: Staff notes that Sections 300, 1170 and 1180 are directly relevant to Conditional Use applicability. If any of these Sections are not met, the Conditional Use cannot be permitted. These relationships are directly discussed below.

- .5 *Granting a Permit: The Commission may grant a Conditional Use Permit after conducting a public hearing, provided the applicant provides evidence substantiating that all the requirements of this ordinance relative to the proposed use are satisfied and demonstrates the proposed use also satisfies the following criteria:*
 - A. *The use is listed as a Conditional Use in the zone which is currently applied to the site;*

Finding 166: This standard requires a determination of consistency with Section 300. As discussed in findings under Section 306, Staff has received a letter from Portland & Western Railroad (Attachment 6h) that the proposal is a rail branchline. Should the Board find the proposed rail development is a transportation facility defined as a "rail branchline" consistent with Section 300, this standard is met.

- B. *The use meets the specific criteria established in the underlying zone;*

Finding 167: This standard requires a determination of consistency with Sections 300, 1170 and 1180. Staff finds the proposed rail development is consistent with standards in Section 300, the County has received evidence from DSL that the delineated wetlands should not be considered "significant" (Attachment 7a, also see Section 1180), and the Board

can find the proposed rail development is water-related (See Section 1170). Should the Board concur the delineated wetlands are not significant and the proposed rail development is water-related, this standard is met.

- C. The characteristics of the site are suitable for the proposed use considering size, shape, location, topography, existence of improvements, and natural features;*

Finding 168: The land use application provides the following rationale:

“The most persuasive evidence of the site’s suitability for a rail branchline is that it will branch off the nearby existing Portland & Western Railroad mainline. The branchline alignment is suitable because it is the most direct route to the portion of the site needing rail access (the southern end) and the size of the proposed rail corridor is relatively limited, consisting of a corridor identified as the minimum necessary by Portland & Western Railroad, with a total area of approximately 12.3 acres. The branchline will be located close to the existing mainline, which has operated for many years and has not been identified as being incongruous with the adjacent farm uses.

The rail branchline site is nearly flat. The site is protected from flooding by the Beaver Drainage District’s dikes and associated stormwater conveyance and pumps, and is therefore adequately drained. Culverts are proposed where existing ditches will be crossed by the rail infrastructure. As detailed in the preliminary stormwater report (Exhibit 13), sufficient infrastructure is in place or proposed to collect, treat, and discharge runoff. While the site does contain wetlands that will be impacted by the proposed development, the applicant is seeking approval from the U.S. Army Corps of Engineers and the Oregon Department of State Lands for wetland alterations and will perform over 480 acres of off-site wetland mitigation south of the site in accordance with Federal and State law.”

Staff agrees the proposed rail development area is large, generally flat, protected from flood, and can be designed to manage stormwater. The proposed rail corridor development area also includes natural features, such as the McLean Slough riparian area regulated by Section 1170 and wetlands potentially regulated by Section 1180. To the extent the application meets Section 1170 and 1180 requirements, as discussed below, this standard is met.

- D. The site and proposed development is timely, considering the adequacy of transportation systems, public facilities, and services existing or planned for the area affected by the use;*

Finding 169: The land use application provides the following rationale:

“The proposed rail branchline is intended to serve a renewable diesel production facility being proposed under a separate Site Design Review application. The rail line will not in itself generate more traffic on the area roadway system as it will instead facilitate increased usage of the Portland & Western Railroad mainline to move materials that would otherwise be shipped by truck. The rail line does not create a demand for public facilities as it needs no potable water, sanitary sewer, natural gas, or other utilities. The rail line does not impede existing or planned public facilities identified for the area surrounding the Port Westward Industrial Park.”

Staff finds there is no evidence that the proposed rail development will conflict with provision of transportation, public facilities, or services for the area. County engineering has reviewed the project and has not identified concerns relating to adequacy of service for the rail development.

- E. The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs, or precludes the use of surrounding properties for the primary uses listed in the underlying district;*

Finding 170: The land use application provides the following rationale:

“The new rail branchline will not alter the character of the area as the surroundings are already traversed by the Portland & Western Railroad mainline serving Port Westward Industrial Park. In the RIPD zone to the west and north, the primary permitted uses include farm and forest uses and industrial operations including “Production, processing, assembling, packaging, or treatment of materials; research and development laboratories; and storage and distribution of services and facilities” (CCZO 683.1). The current character of the RIPD property includes both agricultural land and industrial uses. The proposed rail branchline will complement the RIPD zone by serving a proposed renewable diesel production facility immediately to the west and north.

In the abutting PA-80 zone, the primary permitted uses include farm and forest uses and their accessory structures, including farm dwellings. The current character of the PA-80 property includes agricultural land, which can continue to exist in proximity to the proposed branchline (e.g., a rail crossing will be installed to allow passage of farm equipment, see Exhibit 3, Sheets C1.17 and C1.18). The response to Section 307.1 provides further evidence that the proposed rail branchline will not force a significant change in accepted farm or forest practices and will not significantly increase the cost of accepted farm or forest practices on lands.

The facility will comply with all applicable Federal, state, and local regulations regarding construction and operations to ensure that off-site impacts comply with governing standards.”

Staff concurs with the applicant and finds that while approximately 12.3 acres of farmland will no longer be farmable due to the proposed rail development, staff has seen no evidence the proposed use will alter the character of the surrounding area in a manner that will substantially limit, impair or preclude the use of surrounding properties for farm or forest uses.

- F. The proposal satisfies the goals and policies of the Comprehensive Plan which apply to the proposed use;*

Finding 171: The following findings address Comprehensive Plan goals and policies applicable to the rail branchline conditional use application.

Rail Conditional Use Goals and Policies:

PART V – AGRICULTURE

Goal: To preserve agricultural land for agricultural uses.

Finding 172: The proposed area for rail development is relatively small in size, totaling approximately 12.3 acres. Allowing this area to be developed with rail infrastructure will not result in a significant reduction in agricultural acreage. The response to Section 307.1 provides further evidence that the proposed rail development will not force a significant change in accepted farm or forest practices and will not significantly increase the cost of accepted farm or forest practices on agricultural lands.

Policies: It shall be a policy of the County to:

- 4. Protect agricultural lands from non-farm encroachments.*

Finding 173: The proposed rail development will be located in an area already heavily impacted by the existing Portland & Western Railroad line and electrical transmission lines, corridors, and easements. Farm use can continue in the vicinity of these existing impediments, so the proposed rail development does not represent a significant encroachment onto other adjacent agricultural lands.

15. Permit non-farm/non-forest uses only when not in conflict with agricultural or forestry activities.

Finding 174: Due to its relatively small area (approximately 12.3 acres), the proposed rail branchline can be conditioned to resolve potential conflicts with agricultural activities as detailed in the response to Section 300, and there are no nearby forest zones with forestry activities. The response to Section 307.1 provides further evidence that the proposed rail branchline, with the proposed condition of approval related to the rail crossing, will not force a significant change in accepted farm or forest practices and will not significantly increase the cost of accepted farm or forest practices on nearby lands. With the proposed condition of approval, existing agricultural uses will continue to function consistent with to the current status quo of farmland adjacent to existing rail and electrical transmission lines.

16. Require that an applicant for a non-farm use record a waiver of the right to remonstrate against accepted farm or forest practices including spraying.

Finding 175: A condition of approval requiring a waiver of remonstrance is proposed to meet this standard.

17. Allow non-farm uses in accordance with ORS 215.283 and ORS 215.284.

Finding 176: As discussed in responses to Sections 303 and 306, the proposed rail development relies on a determination by the Board that it is a rail branchline – a transportation facility authorized by ORS 215.283.

PART X – ECONOMY

Goals:

1. To strengthen and diversify the economy of Columbia County and insure stable economic growth.

Finding 177: The proposed rail development will improve the efficiency and augment an adjoining renewable diesel fuel production facility, proposed under a separate site design review application. That facility will generate both construction jobs and long-term office, management, and operational positions, contributing to economic growth in the immediate area and beyond.

2. To utilize Columbia County's natural resources and advantages for expanding and diversifying the economic base.

Finding 178: The proposed rail development will facilitate efficient transportation to and from a proposed adjoining renewable diesel production facility that will rely upon on Port Westward's dock and deepwater port facilities. Port Westward is home to a 1,500-foot dock on the Columbia River and is one of only five public deepwater ports in the state of Oregon, with a 43-foot navigation channel to accommodate vessels needing deepwater port access. The production facility itself will make use of this natural resource and strategic advantage, and the rail development will augment the facility by allowing for additional transportation options of limited amounts of material.

Policies: *It shall be a policy of the County to:*

1. Encourage the creation of new and continuous employment opportunities.

Finding 179: As noted above, following construction of the renewable diesel fuel production facility, the use will provide direct employment opportunities for office, management, and operations staff. The proposed rail development will support this proposed employment opportunity.

2. Encourage a stable and diversified economy.

Finding 180: The renewable diesel fuel production facility proposed under a separate application will increase the size and value of the County's industrial sector, which is an important part of Columbia County's overall economic base. The proposed rail development will support this employment opportunity and help diversify the County's economy.

6. Preserve prime maritime industrial sites from pre-emptive uses until needed for industrial uses.

Finding 181: The applicant proposes to construct and operate a renewable diesel production facility at Port Westward, which is a unique deepwater port resource unavailable elsewhere within Columbia County. Construction of the facility will be consistent with the County's policy of utilizing the prime maritime site for an industrial use that relies upon the port and dock. The proposed rail development will support the production facility by providing additional efficient transportation options for materials and product.

8. Reserve valuable industrial sites for industrial uses.

Finding 182: The proposed renewable diesel production facility makes use of land zoned Resource Industrial - Planned Development and identified as appropriate for industrial development by the County Board of Commissioners. The proposed rail development, though located on agriculturally zoned land, is limited in size and scope and will promote a significant investment at a site zoned for industrial development.

10. Support improvements in local conditions in order to make the area attractive to private capital investment.

Consideration of such factors as the following shall be undertaken:

A. Tax incentives

B. Land use controls and ordinances

C. Capital improvements programming

Finding 183: This policy calls upon the County to implement strategies that make the site attractive for private development. The applicant is willing to make a sizable investment in site and infrastructure upgrades as needed to accommodate the proposed renewable diesel production facility on property west of and adjacent to the proposed rail development. As noted by the applicant, the County can help realize some of this policy direction by granting the applicant's requested conditional use permit for the rail development in accordance with State and County land use regulations.

PART XIII – TRANSPORTATION

Goal: The creation of an efficient, safe, and multi-modal transportation system to serve the needs of Columbia County residents.

Finding 184: The proposed rail development capitalizes on the proximity of the existing rail line and will allow movement of materials that would otherwise be shipped by truck to and from the planned manufacturing use adjoining to the west. Proposed conditions of approval related to transportation needs for the facility are sufficient to meet this goal.

Objectives:

1. To maximize efficient use of transportation infrastructure for all users and modes.

Finding 185: The proposed rail development capitalizes on the proximity of the existing rail line and will allow movement of materials that would otherwise be shipped by truck to the proposed renewable diesel production facility. Proposed conditions of approval related to transportation needs for the facility are sufficient to meet this objective.

Policies:

5. *The County shall work to enhance freight efficiency, access, capacity and reliability, including access to intermodal facilities such as ports and airports. Industrial uses shall be encouraged to locate in such a manner that they may take advantage of the water and rail transportation systems which are available to the County.*

Finding 186: The proposed rail development is consistent with this policy because it will allow a proposed rural industrial use at Port Westward Industrial Park to take advantage of existing rail transportation facilities, namely Portland & Western Railroad's existing line. This will increase freight efficiency and provide added capacity to move product while minimizing impacts on roadways.

6. *The County will support reducing the number of rail crossings and will support measures to enhance safety at rail crossings.*

Finding 187: The project does not require a new public road crossing of any rail lines.

20. *The County will coordinate transportation and land use planning and decision-making with other transportation agencies and public service providers, such as ODOT, cities within the County, and the Port, when their facilities or services may be impacted by a County decision or there may be opportunities to increase the efficiency and benefits of a potential improvement.*

Finding 188: As part of its evaluation of land use applications including this one, the County coordinates with affected agencies and partners. The applicant has also coordinated with Port, County, and ODOT staff with respect to site design and transportation analysis.

Contd. Section 1503 Conditional Use:

G. *The proposal will not create any hazardous conditions.*

Finding 189: The applicant will be required to follow all applicable safety laws and regulations in constructing and operating the proposed rail development, as approved by Portland & Western Railroad and required by state and Federal regulations.

.6 *Design Review: The Commission may require the Conditional Use be subject to a site design review by the Design Review Board or Planning Commission.*

Finding 190: The proposed rail development contains no structures regulated by design review. Design review findings for the facility are found under Section 1550.

Criteria Related to Facility and Rail

Section 1100 FLOOD HAZARD OVERLAY (FH)

Finding 191: The site is protected from flooding by dikes and associated stormwater conveyance and pumps within the Beaver Drainage District. According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map 41009C0050D, dated November 26, 2010, the dike system has been provisionally accredited by FEMA. See Attachments 2d & 3d. This map indicates that the site is in FEMA's shaded Zone X, corresponding to areas protected by levees from 1% annual chance flood. The proposed driveway and pipe rack are also in shaded Zone X. Therefore, the site is not in the Special Flood Hazard Area and is not subject to the standards of this chapter.

Section 1120 SENSITIVE BIRD HABITAT OVERLAY (SBH)

Finding 192: Columbia County Comprehensive Plan, Part XVI, Article VIII(F), Non-Game Wildlife Habitat, lists areas identified as significant nesting sites by the Oregon Department of Fish and Wildlife. Port Westward is not a listed area for Bald Eagle nests, Blue Heron rookeries, or Northern Spotted Owl nests. As illustrated in Attachments 2e & 3e, the site is not within any areas identified as Natural Areas, Non-Game Areas, or Sensitive Areas on the County's Threatened, Endangered and Sensitive Wildlife and Plant and Natural Areas map. Columbia County Comprehensive Plan, Part XVI, Article VIII(G), Upland Game Habitat, lists three mineral spring areas identified as habitat for band-tailed pigeons, none of which include Port Westward. As illustrated in Attachments 2f & 3f, the site is not within an identified Upland Game Habitat area in the County's Wildlife Game Habitat map.

Since the site is not within the identified habitat areas, development at the site is not subject to the Sensitive Bird Habitat Overlay Zone.

Section 1130 HISTORIC OVERLAY (HO)

Finding 193: Historic and culturally significant sites and structures are identified in Article XI of the Comprehensive Plan. None of the listed sites and structures are on or adjacent to the site. Development at the site is not subject to the Historic Overlay.

Section 1170 RIPARIAN CORRIDORS, WETLANDS, WATER QUALITY, AND FISH AND WILDLIFE HABITAT PROTECTION OVERLAY ZONE (RP)

1172 Riparian Corridor Standards:

A. *The inventory of Columbia County streams contained in the Oregon Department of Forestry Stream Classification Maps specifies which streams and lakes are fish-bearing. Fish-bearing lakes are identified on the map entitled, "Lakes of Columbia County." A copy of the most current Stream Classification Maps is attached to the Comprehensive Plan, Technical Appendix Part XVI, Article X(B) for reference. The map, "Lakes of Columbia County" is attached to the Comprehensive Plan, Technical Appendix Part XVI, Article X(B), and is incorporated therein. Based upon the stream and lake inventories, the following riparian corridor boundaries shall be established:*

1. *Lakes. Along all fish-bearing lakes, the riparian corridor boundary shall be 50-feet from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below.*
2. *Fish-Bearing Streams, Rivers and Sloughs (Less than 1,000 cfs). Along all fish bearing streams, rivers, and sloughs with an average annual stream flow of less than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 50-feet from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below.*

Average annual stream flow information shall be provided by the Oregon Water Resources Department.

3. *Fish-Bearing and Non-Fish-Bearing Streams, Rivers and Sloughs (Greater than 1,000 cfs). Along all streams, rivers, and sloughs with an average annual stream flow greater than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 75-feet upland from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below. Average annual stream flow information shall be provided by the Oregon Water Resources Department.*

4. *Other rivers, lakes, streams, and sloughs. Along all other rivers, streams, and sloughs, the riparian corridor boundary shall be 25 feet upland from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below.*
5. *Wetlands. Where the riparian corridor includes all or portions of a significant wetland, as identified in the State Wetlands Inventory and Local Wetlands Inventories, the standard distance to the riparian corridor boundary shall be measured from, and include, the upland edge of the wetland. Significant wetlands are also regulated under provisions in the Wetland Overlay Zone, Columbia County Zoning Ordinance, Section 1180.*

Finding 194: Proposed facility development does not enter or abut any mapped lake, river or stream areas. However, the proposed rail branchline development intersects with McLean Slough.

The wetland delineation report (Attachments 2k & 3k), which has now been approved by the Oregon department of State Lands, indicates that the wetlands in the study area are supported by precipitation, irrigation water, surface runoff, and groundwater rather than rivers, streams, or sloughs (the wetlands fall into the “flats” rather than “riverine” hydrogeomorphic class). Therefore, the distance to the riparian corridor boundary need not be measured from the edge of the wetlands since the wetlands are not riparian in nature.

Based on this information, construction of the proposed rail branchline is subject to the riparian overlay as a portion falls within McLean Slough’s 25-foot riparian buffer established by criterion (A)(4).

B. Distance Measurement.

1. *Except as provided in Subsection 1172(5) above, the measurement of distance to the riparian corridor boundary shall be from the top-of-bank. In areas where the top-of-bank is not clearly delineated, the riparian corridor boundary shall be measured from the ordinary high water level, or the line of non-aquatic vegetation, whichever is most landward.*
2. *The measurement shall be a slope distance. In areas where the predominant terrain consists of steep cliffs, the distances to the corridor boundary shall be measured as a horizontal distance until the top of the cliff is reached, and as a slope distance on from that point.*

Finding 195: The 25-foot buffer (per CCZO Section 1172(A)(4)) for McLean slough is illustrated on the plans in Attachment 3c.

1173 Activities Prohibited within the Riparian Corridor Boundary:

In addition to the prohibitions in the underlying zone, the following activities are prohibited within a riparian corridor boundary, except as provided for in Sub-sections 1175 and 1176 of this Section:

- A. *The alteration of a riparian corridor by grading, placement of fill material, and/or impervious surfaces, including paved or gravel parking areas, or paths, and/or the construction of buildings or other structures which require a building permit under the State of Oregon Uniform Building Code, as amended.*
- B. *The removal of riparian trees or vegetation.*

Finding 196: The proposed branchline will cross McLean Slough, the only identified riparian area. Riparian impacts are limited to the crossing and not a wholesale displacement of the riparian corridor. The applicant argues the proposal is water-related or water-dependent and therefore exempt from riparian protection per sub-sections 1175(A)(2) and 1175(B)(5). Should the Board find the use is water-related or water-dependent, the proposal is exempted from riparian protections and can be permitted. This is discussed under Section 1175 below.

1175 Permitted Uses and Activities:

Notwithstanding the prohibitions set forth in Subsection 1173 above, the following activities are allowed within the riparian corridor boundary:

- A. *The following riparian vegetation may be removed within the riparian corridor boundary: [...]*
 - 1. *Vegetation which is necessarily removed for the development of approved water-related or water dependent uses. Vegetation removal shall be kept to the minimum necessary to allow the water-dependent and water-related use. [...]*
- B. *The following development is allowed within the riparian corridor boundary.*
 - 5. *Water-related and water-dependent uses. [...]*

Finding 197: Proposed construction of the rail branchline will result in temporary and permanent impacts to the McLean Slough riparian corridor. This is only allowable through exemptions for “water-related” or “water-dependent” uses. The applicant argues the project as a whole (the renewable diesel production facility and associated infrastructure including the proposed rail branchline) depends upon the dock and falls under the category of water-related and water-dependent uses. The applicant’s full argument from the rail application narrative submission is provided below:

“The renewable diesel production facility (under separate application) is proposed to be located at Port Westward because of the presence of the dock and proximity to the Columbia River. As noted above, Port Westward is one of only five public deepwater ports in the state of Oregon. This invaluable resource, which was largely the basis of the County’s 1986 and 2007 Goal Exceptions for Port Westward Industrial Park, is necessary for the efficient operation of the production facility.

The 1986 Exception statement codified in the Comprehensive Plan relied in part upon Port Westward’s “unique site-specific resource” in the deep draft river port and further noted the following:

I. Proposal

The proposed use designation is Rural Industrial, and it is intended to take advantage of the location on the Columbia River, the existing dock facilities, railroad, and urban services, as well as potential linkages to the electric generating facilities.

V. Proposed Use Of The Property

Probable uses would likely be related to the existing services, including the railroad, the dock, and the tank farm.

*[***]*

Uses likely to be located here are best illustrated by four proposals submitted to the current leaseholder since 1980. Proposals have included a 200-acre oil refinery, a 150-to-200-acre coal port, an 80-acre petrochemical tank farm, and a 230-acre coal gasification plant. [...].

Similarly, the 2007 Exception statement codified in the Comprehensive Plan noted that:

The property is located adjacent to the Port Westward rural industrial area and can take advantage of the location with access to the Columbia River, and the existing dock facilities, railroad and urban services, including PGE’s Beaver Power Plant. Allowing future rural industrial development on the

Property would benefit the County's economy by bringing jobs to the area for construction of a project and then a lesser level of employment for the operation and management of any facility

Taken together, these Exception statements indicate that the intent of zoning land RIPD at Port Westward was to both accommodate and encourage industrial uses that take advantage of the dock, rail, and energy generating sources.

As explained below, the Renewable Diesel Production Facility, including its rail component, is a "water-dependent" and/or "water-related" use.

Columbia County Zoning Ordinance (CCZO) Sections 1170 and 1180 allow development within riparian areas and wetland riparian areas for projects that are either "water dependent" or "water related." The only identified riparian corridor within or near the site is McLean Slough, which will be crossed by the portion of the proposed rail branchline on PA-80 land.

Neither the CCZO nor the Columbia County Comprehensive Plan define the terms "water-related" or "water-dependent," except as relevant to the Willamette River Greenway, which is not applicable at this location. The County's riparian area and wetland regulations are a component of the County's Statewide Planning Goal 5 program, which purports to adopt a "safe harbor" approach as discussed in Article X of the Comprehensive Plan. However, the Comprehensive Plan's Goals and Policies do not categorically intend to prohibit uses conflicting with riparian areas or wetlands; rather, the Plan's stated intent is to protect such areas from "nonwater-dependent uses." See, e.g. Article X.E, Policy 9.

The Goal 5 safe harbor process essentially requires local governments to directly implement certain Goal 5 rules in Oregon Administrative Rules (OAR) 660 Division 23. Consequently, the County's riparian and wetland regulations roughly resemble the riparian rules in OAR 660-023-0090 and -0100, except that they notably do not include the variance provisions required under OAR 660-023-0100(4)(b)(B). These sections allow development of "water-dependent or water-related uses" within riparian areas and wetlands and allow removal of riparian vegetation "as necessary for development of water-related or water-dependent uses." The OARs require less strict riparian protections in farm and forest zones: OAR 660-023-0090(8)(c) provides that "(c) Notwithstanding subsection (b) [regulating removal of riparian vegetation] of this section, the ordinance need not regulate the removal of vegetation in areas zoned for farm or forest uses pursuant to statewide Goals 3 or 4."

The definition of "water-dependent" and "water-related" in the Statewide Planning Goals is helpful in interpreting those terms in the CCZO. In the current version of the Statewide Planning Goals, those terms are defined as follows:

WATER-DEPENDENT. A use or activity which can be carried out only on, in, or adjacent to water areas because the use requires access to the water body for water-borne transportation, recreation, energy production, or source of water.

WATER-RELATED. Uses which are not directly dependent upon access to a water body, but which provide goods or services that are directly associated with water-dependent land or waterway use, and which, if not located adjacent to water, would result in a public loss of quality in the goods or services offered. Except as necessary for water-dependent or water-related uses or facilities, residences, parking lots, spoil and dump sites, roads and highways, restaurants, businesses, factories, and trailer parks are not generally considered dependent on or related to water location needs.

The County can find that the proposed renewable diesel production facility within the existing RIPD zone is “water-dependent” because the facility requires access to the water body (namely, the Columbia River) for riverine transportation. Renewable diesel product and renewable diesel feedstocks are proposed to be imported and exported by water-borne vessels on the Columbia River, including ships and barges. This connection is reflected in Exhibit 15, which shows the piping directly connecting the facility to the Port Westward docks. Also, the facility relies on Columbia River water as part of the renewable diesel production process – namely for steam production, cooling tower process water, and fire water reserve. This is also reflected on Exhibit 15.

In summary, the facility is proposed at Port Westward entirely due to its location at one of Oregon’s few deepwater ports capable of being served by cargo ships.⁵ Therefore, the County can find that the renewable diesel facility within the existing RIPD zone “can be carried out only [...] adjacent to water areas because the use requires access to the water body for water-borne transportation” and as a “source of water.”

For the same reasons, the County can find that the proposed rail branchline located on PA-80 lands is also “water-dependent.” The purpose of the proposed rail branchline is to deliver renewable diesel feedstocks to the renewable diesel production plant for conversion into renewable diesel, to export such renewable diesel, and to remove waste products from the facility. As the branchline exists only to serve the renewable diesel production plant and is part of the overall project, it is just as river-dependent as the production plant itself. Put another way, the branchline is water-dependent because, like the renewable diesel production plant, it relies on river transportation as the other end of the renewable diesel supply/production chain. The export of waste products also makes the rail line a necessary component of the overall water-dependent use.

Although the PA-80 portion of the branchline is requested in a separate application from the renewable diesel production facility, it is exclusively associated with, part of, and entirely dependent on the renewable diesel plant. It was proposed in a separate application because a portion of the rail branchline is to be located just outside of the existing Port Westward Exception Area and within an exclusive farm use zone, and is therefore subject to the criteria of ORS 215.296; rail not located within that zone is not subject to those criteria.

If the County does not find that the renewable diesel production plant or rail branchline is “water-dependent,” the County can nonetheless find that they are “water-related.” This is because the facility as a whole is intended to provide “goods [...] that are directly associated with water-dependent land or waterway use, and which, if not located adjacent to water, would result in a public loss of quality in the goods or services offered.” There is no dispute that the Project is intended to import and export “goods” (in this case, feedstocks and renewable diesel) to and from the Port Westward Dock via pipeline, shown in Exhibit 15. As explained above, the renewable diesel facility must be located near the water because the use itself depends on river water and transportation, and would not be viable without a water-adjacent location. Put in terms of the above definition, without a water-adjacent location, the facility would “result in a public loss of quality in the goods or services offered” because it could not economically provide the proposed goods or services without a river-adjacent location. Likewise, if the PA-80 portion of the proposed branchline is not located adjacent to the renewable diesel production plant, the efficiency of the renewable diesel use would suffer substantially because a large portion of the necessary feedstocks could not be economically imported to the Project, which would make the Project itself infeasible.”

As the applicant states, “water-related” is not defined in the County’s zoning ordinance or Comprehensive Plan. The term is defined in the Statewide Planning Goals, and the Board can apply that definition here.

Staff notes that the “water-dependent” and “water-related” definitions from Statewide Planning Goals (cited by the applicant above) both indicate these uses are located “on or adjacent to” water. However, neither the fuel facility nor the rail branchline are “on or adjacent to” the Columbia River – the water body the applicant indicates the use is dependent on and related to. No portion of the project interacts with the mapped Columbia River riparian area. The County-regulated riparian area the project impacts is the McLean Slough – a water body located over ½ mile from the Columbia River that no use applied for in this application is dependent on or related to. Staff considers the applicant’s argument and use of terminology to be highly irregular.

Although staff questions whether the branchline is water-related under the State’s definition, staff concedes that an argument can be made, as the applicant has done, that it is. In light of the ambiguity, staff consulted with DLCD regarding application of State definitions of water-related and water-dependent. DLCD feedback indicated that “water-dependent” would not be a viable definition for this proposal from their perspective but “water-related” has enough uncertainty to defer to a local determination. Given the lack of a County definition and the ambiguity of the State definition, the Board can interpret water-related either way. In order to meet this standard, the Board must find the project and associated rail branchline are “water-related” uses.

1177 Requirements for new activities and development identified in Sub-section 1175 and 1176, above, shall be allowed in the riparian corridor boundary subject to the following requirements:

- A. *All applicable permits from state and federal agencies, such as the Oregon Division of State Lands (DSL) and Oregon Department of Fish and Wildlife (ODFW) must be obtained by the land owner prior to commencing the use or activity.*
- B. *For activities and development for which land use permits, building permits, grading permits, variances or stormwater/erosion control permits are required, the County shall provide notification to ODFW of the proposed development activity. The County shall consider the recommendations of ODFW, including any mitigation recommendations, prior to issuance of permits and may condition permit approval on recommended measures to mitigate loss of fish and wildlife habitat pursuant to applicable provisions of OAR Chapter 635, Division 415.*

Finding 198: The applicant is seeking approval from the U.S. Army Corps of Engineers and the Oregon Department of State Lands for wetland and waterway alterations and will perform over 480 acres of off-site wetland mitigation south of the site in accordance with Federal and State law, as permitted by this subsection. The County has provided notice to ODFW and received comments (see Attachment 7b).

Section 1180 WETLAND AREA OVERLAY (WA)

1182 Definition:

A significant wetland is an area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. In case of dispute over whether an area is of biological value and should be considered a significant wetland, the County shall obtain the recommendation of the Oregon Department of Fish and Wildlife, the Columbia County Soil and Water Conservation District, and the Division of State Lands.

Finding 199: Columbia County Comprehensive Plan, Part XVI, Article X(A), Wetlands, provides the following clarification on the County’s determination of wetland significance:

2. INVENTORY AND SIGNIFICANCE: Columbia County will apply the “safe harbor” provisions of Goal 5 to significant wetlands. The adopted inventory of wetlands for Columbia County is the State Wetlands Inventory

(SWI), as amended. A current copy of the SWI is contained in the Technical Appendix Part XVI, Article X(A), for reference. All wetlands inventoried on the SWI or any more detailed inventories such as the Local Wetlands Inventories (LWI) produced by individual cities are considered significant for the purposes of Goal 5. The State Wetlands Inventory incorporates wetlands identified on the National Wetlands Inventory (NWI). The Wetland Overlay Zone shall be applied to locations of wetlands as shown on the SWI or LWIs. However, a wetland not listed in an inventory may still be protected by relevant Oregon Administrative Rules (OAR) and policies set forth by the Oregon Division of State Lands. It shall be the responsibility of individual landowners to verify the existence or nonexistence of wetlands on any property prior to any development activity or other impact.

Essentially, the County's Goal 5 program begins with the assumption that all wetlands mapped on the SWI are significant. The definition for "significant wetland" provided in Section 1182 is verbatim the national (EPA, Corps) and state (DSL) definition of "wetland". However, the definition also provides a method for determining whether the wetland should be considered significant if there is a dispute over an area's biological value.

The applicant's conditional use (rail) narrative indicates the wetlands are not significant:

"Potential wetlands exist within the vicinity of the rail branchline site as illustrated in the Statewide Wetlands Inventory excerpt in Exhibit 10 and in the County's map in Exhibit 7. The applicant therefore engaged a wetlands consultant to perform a site-specific wetland delineation, with the resulting report attached as Exhibit 11. As discussed in Exhibit 14, based on the wetland delineation report approved by DSL, the presence of plants adapted solely to wetlands is very low, as most of the plants consist of species that grow in wetlands and non-wetlands. Since the vegetation within the delineated wetland does not constitute a prevalence of plants "adapted for life in saturated soil conditions," the wetlands do not meet the County's adopted definition of significant wetlands.

In addition to the vegetation profile, the biological value of the delineated wetlands is limited. Exhibit 14 notes that the wetland delineation report analyzed 17 functions, of which only four received higher ratings, while five received moderate ratings, and seven received lower ratings. Since the wetland delineation report has been approved by DSL so there does not appear to be any dispute by subject matter experts on whether these wetlands have little biological value. The Applicant expects DSL to issue a written statement explaining the non-significance of affected wetlands in December, 2021. This further supports the contention that the wetlands do not meet the County's adopted definition of "significant" wetlands."

Because there is a reasonable dispute over the significance of the wetlands, consistent with Section 1182, the County requested and received recommendations of DSL, ODFW, and the Columbia SWCD related to significance of the delineated wetland areas proposed for development. These materials are provided in Attachment 7. While there was some variance in feedback between agencies, as one might expect given different mandates, DSL provided a definitive statement regarding significance of the wetlands impacted by the proposed facility and rail development:

"Based on the finding of the OFWAM Assessment tool, the wetlands located behind the levee (inside the levee within the Beaver Drainage District and associated with the propose NEXT Project) in the Resource Industrial Planned Development area at Port Westwards are NOT significant, nor are the wetlands that continue off the project site that were converted for farming and are zoned Primary Agriculture."

Staff finds the evidence presented is persuasive and recommends the Board find the impacted wetlands are not significant based on the recommendation of DSL.

1183 Permitted Uses:

Uses and development activities permitted outright or conditionally in the underlying zone shall be permitted in the Wetland Area Overlay Zone if they will not result in filling, drainage, removal of vegetation, or other alteration which would destroy or degrade a significant wetland as defined in Section 1182. Minor drainage improvements necessary to ensure effective drainage on surrounding agricultural lands under Oregon Department of Agriculture wetland rules shall be allowed where such an action has been fully coordinated with the Oregon Department of Fish and Wildlife, the Columbia County Soil and Water Conservation District, and the Division of State Lands. Existing drainage ditches may be cleared to original specifications without County review.

Finding 200: The applicant is proposing a renewable diesel production facility as permitted in the RIPD zone, and a rail branchline as permitted through the Conditional Use process in the PA-80 zone. No development is allowed that will impact significant wetlands. If the Commission finds the wetlands are not significant consistent with DSL's recommendation, the proposed facility and rail development are allowed. If the Commission finds the wetlands are significant, the proposed facility and rail development are not allowed. As noted under Section 1182 findings, Staff finds that based on DSL's recommendation, the wetlands lack the biological value to be considered significant.

While Section 1180 prohibits development that will destroy or degrade significant wetlands, it allows limited development within riparian corridors – essentially mirroring the riparian corridor development standards of Section 1170.

1184 Development Standards:

- A. *Riparian Corridor Standards for Wetlands. For the purposes of this Section, "Fish-bearing streams" shall mean all streams identified as being fish-bearing, by the Oregon Department Forestry in the Stream Classification Maps, as amended, and "Fish-bearing lakes" shall mean those streams identified in "Lakes of Columbia County". The current Oregon Department of Forestry Stream Classification Map is attached to the Comprehensive Plan, Technical Appendix, Part XVI, Article X(B), for reference. The Map, "Lakes of Columbia County" is also attached to the Comprehensive Plan, Technical Appendix, Part XVI, Article X(B), and is incorporated therein. Significant Wetlands are identified on the State Wetlands Inventory (SWI), and Local Wetlands Inventories (LWI's).*

The SWI is attached to the Comprehensive Plan, Part XVI, Article X(A), for reference.

1. *Fish-Bearing Lakes. Along all wetlands associated with fish-bearing lakes, the riparian corridor boundary shall be 50 feet from the upland edge of the wetland.*
2. *Streams, Rivers, and Sloughs (Greater than 1,000 cfs). Along all wetlands associated with all fish-bearing rivers, streams and sloughs, with an average annual stream flow greater than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 75 feet from the upland edge of the wetland. Average annual stream flow information shall be provided by the Oregon Water Resources Department.*
3. *Fish-Bearing Streams, Rivers and Sloughs (Less than 1,000 cfs). Along all wetlands associated with fish bearing streams, rivers, and sloughs, with an average annual stream flow less than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 50 feet from the upland edge of the wetland. Average annual stream flow information shall be provided by the Oregon Water Resources Department.*

4. *Other Rivers and Streams, or Sloughs. For all other wetlands associated with streams, rivers, or sloughs, the riparian corridor boundary shall be 25 feet from the upland edge of the wetland.*

Finding 201: As discussed under Section 1170, delineated wetlands are adjacent to McLean Slough. The application narrative indicates these wetlands are not associated with the slough. Staff finds the protections of Section 1170 apply to riparian areas, but non-significant wetlands are not regulated by Section 1180. Therefore, the riparian protections of 1170 are the extent of riparian protection on the development site. Please see findings under Section 1170.

5. *Wetlands not associated with Streams, Rivers, Sloughs, or Fish-Bearing Lakes. Along all wetlands not associated with a stream, river, slough, or non-fish-bearing lake, there shall not be a protective riparian corridor boundary. However, development is prohibited from encroaching within a delineated wetland boundary.*

Finding 202: As discussed above, the proposed facility and rail development impact delineated wetlands. However, if these wetlands are not considered to be significant, this standard does not apply.

- B. *Corridor Boundary Measurement: The riparian corridor boundary begins at the upland edge of the wetland and is measured outward, further upland, the required riparian corridor boundary distance.*

Finding 203: As noted above, Staff finds Section 1180 applies only to significant wetlands; should the Board concur with DSL's recommendation that the delineated wetlands are not significant, this standard does not apply. Riparian corridors not associated with significant wetlands are addressed in Section 1170.

- C. *Activities Prohibited within the Wetland Riparian Corridor Boundary. In addition to the prohibitions of the underlying zone, the following development activities are prohibited in wetland riparian corridor boundaries, except as provided for in Sub-sections 1184(E) and (F) of this Sub-section:*
 1. *The alteration of the wetland riparian corridor by grading, the placement of fill material, and/or impervious surfaces, including paved or gravel parking areas or paths, and/or the construction of buildings or other structures which require a building permit under the State of Oregon Uniform Building Code, as amended, or other land use permit.*
 2. *The removal of riparian trees or vegetation.*

Finding 204: Staff finds the riparian corridor regulation in Section 1180 applies only to significant wetlands; should the Board concur with DSL's recommendation that the delineated wetlands are not significant, this standard does not apply.

- D. *Exempted Activities. This Overlay Zone does not apply to land legally used for commercial forestry operations or standard farm practices, both of which are exempt from the riparian corridor protection standards of this Section. The use of land for commercial forestry is regulated by the Oregon Department of Forestry. The use of land for standard farm practices is regulated by the Oregon Department of Agriculture, with riparian area and water quality issues governed specifically by ORS 568.210 to ORS 568.805.*

Finding 205: The applicant is not proposing commercial forestry operations or standard farm practices. This standard does not apply.

- E. *Exceptions to prohibited activities. Notwithstanding the prohibitions set forth in sub-section (C), above, the following development activities are allowed within the wetland riparian corridor boundary:*
 1. *The following wetland riparian vegetation may be removed:*
 - a. *Non-native vegetation, invasive species, and noxious weeds, if replaced with native plant species. The replacement vegetation shall cover, at a minimum, the area from which*

- vegetation was removed, and shall provide for maximum soil retention and shade cover. Replacement vegetation shall, upon maturity, maintain 75%-100% canopy and ground cover.*
- b. Vegetation which is necessarily removed for the development of water related and water dependent uses. Vegetation removal shall be kept to the minimum necessary to allow the water dependent and/or water related use.*
 - c. Trees and vegetation in danger of falling and/or posing a hazard to life or property. If no hazard will be created, the trees, once felled, shall be left in place in the riparian area.*
- 2. The following development is allowed within the riparian corridor boundary:*
- a. Streets, roads, and driveways, if:

 - i It is not possible to locate the street, road or driveway outside of the riparian corridor boundary; and*
 - ii The street, road or driveway is designed to minimize intrusion into the riparian corridor boundary;**
 - b. Pedestrian walkways, paths and trails;*
 - c. Fencing and signs, not including billboards;*
 - d. Drainage facilities, utilities and irrigation pumps;*
 - e. Water-related and water-dependent uses;*
 - f. New or expanded shoreline stabilization and flood control grading and structures;*
 - g. Portable furniture, and other portable outdoor equipment for the private use of the property owner/resident. For purposes of this subsection, "portable" shall mean that the item is not affixed to the ground, other than with a chain or other lock which is capable of being removed at any time.*

Finding 206: Staff finds the riparian protections relating to Section 1180 are only applicable to significant wetlands. If the Board finds the delineated wetlands are not significant, proposed development is not regulated by Section 1180.

- F. Legal non-conforming uses are allowed to continue within the wetland riparian corridor boundary subject to the requirements in Section 1506, ORS 215.130, applicable state laws, and the following additional requirements:*
- 1. For replacement of legal non-conforming structures with new structures, any new structure shall be located in the same location and in the same footprint as the existing structure, and shall not disturb additional riparian surface area within the wetland riparian corridor boundary.*
 - 2. For expansion or alteration of legal non-conforming structures existing fully or partially within the riparian corridor, the expansion or alteration shall not occur within the wetland riparian corridor boundary. If the pre-existing structure is completely within the riparian corridor, expansion is allowed only on the side opposite the water resource.*
 - 3. Legal non-conforming lawn within the riparian corridor boundary may be maintained. However, such lawn shall not be expanded within the riparian corridor boundary.*
 - 4. Legal non-conforming shoreline stabilization and flood control structures may be maintained.*

Finding 207: There are no existing non-conforming structures, lawns, or shoreline stabilization and flood control structures on site. This standard does not apply.

- G. New activities and development identified in Sub-section 1184(E) and 1184(F), above, shall be allowed in the wetland riparian corridor boundary subject to the following requirements:*

1. *All applicable permits from state and federal agencies, such as the Oregon Division of State Lands (DSL) and Oregon Department of Fish and Wildlife (ODFW) must be obtained by the land owner prior to commencing the use or activity.*
2. *For activities and development for which land use permits, building permits, grading permits, variances or stormwater/erosion control permits are required, the County shall provide notification to ODFW of the proposed development activity. The County shall consider the recommendations of ODFW, including any mitigation recommendations, prior to issuance of permits and may condition permit approval on recommended measures to mitigate loss of fish and wildlife habitat pursuant to applicable provisions of OAR Chapter 635, Division 415.*

Finding 208: The applicant is pursuing DSL and Corps approval for removal of approximately 109 acres of delineated wetlands for facility, driveway, and rail development. The applicant shall obtain all applicable permits and approvals from the Oregon Department of Fish and Wildlife and the Department of State Lands regarding all new activities and development within all identified wetland areas. These approvals include, but are not limited to, mitigation recommendations to mitigate the loss of fish and wildlife habitat pursuant to applicable provisions of OAR Chapter 635, Division 415. A condition of approval is proposed requiring approval of all applicable state and federal permits.

H. Variance Provisions

1. *In cases where encroachment into the riparian corridor boundary by activities and development not otherwise allowed by Sub-section 1184(E), or 1184(F) cannot be avoided, a property owner may request a Variance to the riparian corridor boundary prohibition. In addition to the criteria found in Section 1504, and the requirements in Sub-section 1184(G), a variance to the riparian corridor boundary prohibitions shall not be granted unless all of the following criteria are met:*

Finding 209: The applicant is not requesting a variance to riparian corridor protections.

Section 1185 NATURAL AREA OVERLAY (NA)

Finding 210: The Oregon State Register of Natural Heritage Resources (Attachments 2l & 3l), does not include any sites in the vicinity of Port Westward. Furthermore, the Nature Conservancy does not own any natural areas within Columbia County. Finally, the inventory of natural areas in Columbia County Comprehensive Plan, Part XVI, Article IX, Natural Areas, does not identify any sites in the vicinity of Port Westward. Therefore, development at the site is not subject to the Natural Area Overlay Zone.

Section 1190 BIG GAME HABITAT OVERLAY (BGR)

Finding 211: Columbia County Comprehensive Plan, Part XVI, Article VIII(A), Big Game Wildlife Habitat, identifies three types of big game habitat. As depicted in Attachments 2f & 3f, the site is not within a Big Game Habitat area, Peripheral Big Game Habitat area, or Columbia white-tailed deer range in the County's Wildlife Game Habitat map. Therefore, development at the site is not subject to the Big Game Habitat Overlay Zone.

Section 1603 QUASIJUDICIAL PUBLIC HEARINGS

- .1 *The applicant shall submit an application and any necessary supplemental information as required by this ordinance to the Planning Department. The application shall be reviewed for completeness and the applicant notified in writing of any deficiencies. The application shall be deemed complete upon receipt of all pertinent information. If an application for a permit or zone change is incomplete, the Planning Department shall notify the applicant of exactly what information is missing within 5 days of receipt of the application and allow the applicant to submit the missing information. The application shall be*

deemed complete for the purpose of this section upon receipt by the Planning Department of the missing information.

- .2 Once an application is deemed complete, it shall be scheduled for the earliest possible hearing before the Planning Commission or Hearings Officer. The Director will publish a notice of the request in a paper of general circulation not less than 10 calendar days prior to the scheduled public hearing. Notices will also be mailed to adjacent individual property owners in accordance with ORS 197.763*

Finding 212: The review and process for DR 21-03, CU 21-04, and V 21-05 has been lengthy with several iterations of application materials. In order to meet process requirements and statutory review timeframes, the County Board of Commissioners took jurisdiction of the hearing consistent with Ordination 91-02. Process dates from pre-application conference to the first Board of Commissioners hearing are identified below:

- NEXT Pre-Application Conference: February 6, 2020
- NEXT Application Submissions: January 19, 2021
- County Incompleteness Letters: February 17, 2021
- NEXT Updated Application Submissions: July 13, 2021
 - Including significant changes to rail location and rail volume.
- NEXT ORS 215.427 Completeness: July 15, 2021
- NEXT Updated Application Submissions: August 12, 2021
- NEXT Memorandum on Interpretation of CCZO 1175.B, 1184.E and OAR 660-012-0065: September 30, 2021
- County Board of Commissioners took jurisdiction consistent with Ordinance 91-2: October 20, 2021
- County Memo Identifying Critical Issues: sent October 25, 2021
- County Board Hearing Scheduled: December 6, 2021
- NEXT Updated Application Submissions: December 14, 2021
- Notice provided to Clatskanie Chief newspaper for December 29, 2021 publication: December 22, 2021
- Notice sent to adjacent property owners: December 23, 2021
- County Staff Report published: January 12, 2022
- County Board Hearing Date: January 19, 2022

Columbia County Stormwater and Erosion Control Ordinance

I. INTRODUCTION B. Applicability

1. Provisions of this ordinance apply to:

- a. Building permits for residential, commercial, industrial and accessory uses that involve disturbing more than 2000 square feet of land or activities disturbing more than 1000 square feet of land on sites with known and apparent erosion problems;*

Finding 213: The proposal requested for DR 21-03 involves disturbing over 100 acres of land. Attachments 2m & 3m include the applicant's Preliminary Storm Report.

1. The submittal generally meets the intent of the Columbia County Stormwater and Erosion Control Ordinance, however a Final Stormwater Plan is required and a Building Permit will not be issued until the plan is approved by the county.
2. For the "Oily Water Sewer Basin and "Main Plant Stormwater Basin" (45.16 acres and 57.30 acres, respectively or 72% of the total existing site area) it appears that the applicant is meeting or exceeding the standards set forth in the Ordinance. Specific areas of stormwater are being intercepted and directed by pipeline to an onsite treatment plant to then be discharged into the Columbia River (a tidal waterbody) using the Port of Columbia County's existing outfall. The intercepted and treated runoff is exempt from the peak runoff control measures by Ordinance because of its discharge into a tidal waterbody.

The overall result of this is the applicant is proposing to intercept stormwater that was infiltrating or otherwise making it to conveyances, thereby reducing the overall amount of runoff leaving the site once developed. It is assumed that the treated stormwater will meet or exceed water quality standards.

3. The "Pipeline Maintenance and Rail Spur Basins" are proposed to maintain "existing drainage paths" including sheet flow over land, therefore causing no difference between pre-development and post-development conditions and no need for specific conveyance system sizing. The applicant is however proposing water filter strips along the roadway and rail for water quality and sizing them to meet the 9-minute residence time.
4. The "Access Road Basin" (10.44 acres) is the only stormwater basin that will need to have peak runoff control measures. The applicant is proposing to use drainage swales with weirs and check dams to address both water quality and quantity requirements. The proposed design appears to meet or exceed the water quality and quantity requirements of the Ordinance. The Final Stormwater Plan should include specific swale design plan and profile details for review by the County.
5. Erosion Control Plan. Looking at the Site Design Review Plans (Attachment 2c), the applicant has met the intent of the Ordinance. A Final Erosion Control Plan will be required and a Building Permit will not be issued until the plan is approved by the county.

Staff finds the proposal can be conditioned to be consistent with the County's Stormwater and Erosion Control Ordinance.

Agency Comments

County Building Official: Obtain all permits for construction. Engineered plans with Code Summary is required.

County Sanitarian: No comments have been received.

County Engineering Technician: Has reviewed the proposal and has no objections to its approval.

County Assessor: No comments have been received.

Clatskanie Rural Fire and Protection District: No comments have been received as of the date of this report.

Clatskanie-Quincy CPAC: No comments have been received.

CONCLUSION, RECOMMENDATION & CONDITIONS

Based on the above findings, if the Board finds:

1. The delineated wetlands on the site are not “significant” consistent with DSL recommendation;
2. The proposed renewable fuel facility and associated development (including the rail branchline) are “water-related” uses consistent with the applicant’s definition; and
3. The proposed rail development meets the definition of a “rail branchline” consistent with Portland & Western Railroad’s definition.

Planning Staff recommends **APPROVAL** of this Type II Site Design Review and Variance (**DR 21-03**) and Type III Conditional Use (**CU 21-04**) to allow the development of the proposed renewable fuel facility and associated development (including the rail branchline) on properties within the RIPD Zone and PA-80 Zone associated with the Tax Lot numbers:

Facility

- Port of Columbia County: 8422-00-00100, 8422-00-00200, 8422-00-01100, 8421-00-00700, 8416-00-00200, 8416-00-00300
- NEXT Renewable Fuels, Inc.: 8422-00-00300

Branch Line

- Port of Columbia County: 8421-00-00600, 8422-00-00400, 8422-00-00500, 8422-00-00600, 8423-B0-00700
- De La Cruz: 8423-B0-00800

Subject to the following conditions:

CONDITIONS OF APPROVAL

- 1) This Design Review, Variance and Conditional Use shall remain valid for two (2) years from the date of the final decision. This permit shall become void, unless the proposal has commenced in conformance with all conditions and restrictions established herein within the two-year validity period. Extensions of time may be granted by the Planning Director if requested in writing with the appropriate fee before the expiration date, given the applicant is not responsible for failure to develop.
- 2) All applicable permits from state and federal agencies, such as the Oregon Division of State Lands (DSL) and Oregon Department of Fish and Wildlife (ODFW) must be obtained by the land owner prior to commencing site clearing or development activities.
- 3) Applicant shall prepare a management plan for the rail crossing providing clear timeframes for unobstructed use of the rail crossing consistent with farm activity requirements and a means to resolve conflicts.
- 4) The property owner shall sign and record, in the deed records of Columbia County, a Waiver of Remonstrance regarding past, current or future accepted farm or forest operations of adjacent and nearby lands. A copy of this recorded document shall be submitted to LDS.

- 5) The applicant shall obtain all applicable permits for any proposed future signage. These proposals shall meet all requirements in Section 1300 as well as any other applicable sections of the Columbia County Zoning Ordinance.
- 6) The proposed development area shall be sited as presented in the applicant's submitted site plans and specifications reviewed and approved by the Board. This shall include all improvements including the proposed stormwater retention areas.
- 7) The applicant shall obtain approval from Clatskanie Rural Fire Protection District prior to the authorization of the Final Site Plan.
- 8) The applicant shall prepare a Final Stormwater Plan including specific swale design plan and profile details; a Building Permit will not be issued until the plan is approved by the county.
- 9) The applicant shall prepare a Final Erosion Control Plan; a Building Permit will not be issued until the plan is approved by the county.
- 10) Any changes to approved plan(s) and/or elevations shall be reviewed and approved by the County prior to implementation in compliance with the applicable provisions of the Oregon Structural Specialty and Fire Codes. All work shall accurately reflect County approved plans.

Prior to the Issuance of Occupancy:

- 11) The applicant shall complete the following road improvements: The complete reconstruction of approximately 1.65 miles of Hermo Road between Quincy-Mayger Road to the entrance to the Port Westward Industrial site to include two 12-foot travel lanes, rock shoulders, safety slopes, and roadside ditches then paving of the entire length of Hermo Road to final grade between Quincy-Mayger Road to Kallunki Road to bring the entire road up to current County road standards. This work includes final design, permitting, and construction.
- 12) Planning Staff shall review all proposed parking and landscaping improvements in order to conduct a site visit to ensure that all requirements have been constructed as proposed. This site visit is required prior to final planning approval.

ATTACHMENTS

- 1) Site Design Review Application Form, Variance Application Form, Conditional Use Application Form, and Owner Authorization Letters
- 2) Applicant Prescribed Use, Site Design Review, and Variance Submission Package January 19, 2021
 - a. Prescribed Use, Site Design Review, and Variance Narrative
 - b. Exhibit 02 SDR Vicinity Map and Zoning Map
 - c. Exhibit 03 Site Design Review Plans
 - d. Exhibit 04 Flood Insurance Rate Map 41009C0050D, dated November 26, 2010 (annotated)
 - e. Exhibit 05 Clatskanie-Quincy CPAC Threatened, Endangered and Sensitive Wildlife and Plant and Natural Areas map, Beak Consultants Inc., June 1995 (annotated)
 - f. Exhibit 06 Clatskanie-Quincy CPAC Wildlife Game Habitat map, Beak Consultants Inc., June 1995 (annotated)

- g. Exhibit 07 Clatskanie-Quincy CPAC Wetland and Hydric Soils map, Beak Consultants Inc., June 1995 (annotated)
 - h. Exhibit 08 Stream Data Map
 - i. Exhibit 09 Excerpt from Lakes of Oregon, Volume 1, Clatsop, Columbia, and Tillamook Counties, U.S. Geological Survey, 1973
 - j. Exhibit 10 Statewide Wetland Inventory (annotated)
 - k. Exhibit 11 Anderson Perry Wetland Delineation Report
 - l. Exhibit 12 Oregon State Register of Natural Heritage Resources
 - m. Exhibit 13 Preliminary Stormwater Report
 - n. Exhibit 14 Transportation Impact Analysis
 - o. Exhibit 15 Architectural Rendering
- 3) Applicant Conditional Use Submission Package January 19, 2021
- a. Conditional Use Narrative
 - b. Exhibit 02 CUP Vicinity Map and Zoning Map
 - c. Exhibit 03 Conditional Use Permit Plans
 - d. Exhibit 04 Flood Insurance Rate Map 41009C0050D, dated November 26, 2010 (annotated)
 - e. Exhibit 05 Clatskanie-Quincy CPAC Threatened, Endangered and Sensitive Wildlife and Plant and Natural Areas map, Beak Consultants Inc., June 1995 (annotated)
 - f. Exhibit 06 Clatskanie-Quincy CPAC Wildlife Game Habitat map, Beak Consultants Inc., June 1995 (annotated)
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 - i. Exhibit 09 Excerpt from Lakes of Oregon, Volume 1, Clatsop, Columbia, and Tillamook Counties, U.S. Geological Survey, 1973
 - j. Exhibit 10 Statewide Wetland Inventory (annotated)
 - k. Exhibit 11 Anderson Perry Wetland Delineation Report
 - l. Exhibit 12 Oregon State Register of Natural Heritage Resources
 - m. Exhibit 13 Preliminary Stormwater Report
- 4) Applicant Prescribed Use, Site Design Review, and Variance Submission Package August 12, 2021
- a. Prescribed Use, Site Design Review, and Variance Narrative
 - b. Exhibit 02 SDR Vicinity Map and Zoning Map
 - c. Exhibit 03 Site Design Review Plans
 - d. Exhibit 04 Flood Insurance Rate Map 41009C0050D, dated November 26, 2010 (annotated)
 - e. Exhibit 05 Clatskanie-Quincy CPAC Threatened, Endangered and Sensitive Wildlife and Plant and Natural Areas map, Beak Consultants Inc., June 1995 (annotated)
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 - i. Exhibit 09 Excerpt from Lakes of Oregon, Volume 1, Clatsop, Columbia, and Tillamook Counties, U.S. Geological Survey, 1973
 - j. Exhibit 10 Statewide Wetland Inventory (annotated)
 - k. Exhibit 11 Anderson Perry Wetland Delineation Report

- l. Exhibit 12 Oregon State Register of Natural Heritage Resources
 - m. Exhibit 13 Preliminary Stormwater Report
 - n. Exhibit 14 Transportation Impact Analysis
 - o. Exhibit 15 Architectural Rendering
 - p. Exhibit 16 Port of Columbia County Utility Service Letter
 - q. Exhibit 17 Portland General Electric Correspondence Regarding Trees Near Transmission Lines
- 5) Applicant Conditional Use Submission Package August 12, 2021
- a. Conditional Use Narrative
 - b. Exhibit 02 CUP Vicinity Map and Zoning Map
 - c. Exhibit 03 Conditional Use Permit Plans
 - d. Exhibit 04 Flood Insurance Rate Map 41009C0050D, dated November 26, 2010 (annotated)
 - e. Exhibit 05 Clatskanie-Quincy CPAC Threatened, Endangered and Sensitive Wildlife and Plant and Natural Areas map, Beak Consultants Inc., June 1995 (annotated)
 - f. Exhibit 06 Clatskanie-Quincy CPAC Wildlife Game Habitat map, Beak Consultants Inc., June 1995 (annotated)
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 - j. Exhibit 10 Statewide Wetland Inventory (annotated)
 - k. Exhibit 11 Anderson Perry Wetland Delineation Report
 - l. Exhibit 12 Oregon State Register of Natural Heritage Resources
 - m. Exhibit 13 Preliminary Stormwater Report
- 6) NEXT Memorandum on Interpretation of CCZO 1175.B, 1184.E and OAR 660-012-0065 (September 30, 2021)
- 7) County Memo Identifying Critical Issues (sent October 25, 2021)
- 8) NEXT Supplemental Fence Height Evidence (November 2, 2021)
- 9) NEXT Supplemental Landscape Buffer and Screening Variance Evidence (November 2, 2021)
- 10) Applicant Submission Package December 14, 2021
- a. Prescribed Use, Site Design Review, and Variance Narrative (December 14, 2021)
 - b. Exhibit 18 PIP Chain Link Fence and Gates Installation Specification (December 2016)
 - c. Exhibit 19 Anderson Perry Wetland Memo (December 8, 2021)
 - d. Exhibit 20 Pipeline and Water Intake Map
 - e. CUP Narrative (December 14, 2021)
 - f. Exhibit 14 Anderson Perry Wetland Memo (December 8, 2021)
 - g. Exhibit 15 Pipeline and Water Intake Map
 - h. Exhibit 16 Portland and Western Railroad Letter (November 19, 2021)
- 11) Agency Comments
- a. Department of State Lands (December 15, 2021)
 - b. Oregon Department of Fish & Wildlife (December 21, 2021)
 - c. Columbia Soil & Water Conservation District (January 5, 2022)
- 12) Waiver of Remonstrance

Jacyn Normine

From: Stephenson, Garrett H. <GStephenson@SCHWABE.com>
Sent: Wednesday, January 24, 2024 3:13 PM
To: Planning Department.UserGroup
Cc: Hayden Richardson; 'Brian Varricchione (BVarricchione@mcknze.com)'; Hicks, Jane M.
Subject: RE: CU 23-11 & DR 21-03 MOD - Applicant's First Open Record Period Submittal (Email 2)
Attachments: 00LTR-Columbia County Board of Commissioners-CUP and DR MOD Supplemental Evidence-240124 (003).pdf; 1-23-24 CCA-NEXT Rail Mitigation Recommendations.pdf; Mf_NEXT BDIC Response to Commissioners.pdf

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Also, do NOT scan any 'QR' codes in this email.

To Whom it May Concern:

Proceeding from our communication below, attached are additional documents respectfully submitted in the above-referenced matter prior to the close of the first open record period.

Please confirm receipt and place these documents into the official record and before the County Board of Commissioners on these proceedings.

Thank you.

Enclosures:

- Letter from Brian Varricchione responding to evidence and argument submitted at or shortly before the hearing.
- Letter from Brian Heikkila regarding rail operations.
- Letter from Brian Tino, PE, Maul Foster & Alongi, Inc., responding to comments submitted by the Beaver Drainage District.

Garrett Stephenson

Shareholder
D: (503) 796-2893
C: (503) 320-3715
gstephenson@schwabe.com

Schwabe

From: Stephenson, Garrett H.
Sent: Wednesday, January 24, 2024 2:45 PM
To: planning@ColumbiaCountyOR.gov
Cc: Hayden Richardson <Hayden.Richardson@columbiacountyor.gov>; 'Brian Varricchione

(BVarricchione@mcknze.com)' <BVarricchione@mcknze.com>; Hicks, Jane M. <JHicks@SCHWABE.com>

Subject: CU 23-11 & DR 21-03 MOD - Applicant's First Open Record Period Submittal (Email 1)

To Whom it may Concern:

This office represents NEXT Renewable Fuels, Inc., applicant in the above-references land use applications. The Applicant testified orally during the Jan 10, 2024 Columbia County Board Hearing on the applications. At the conclusion of that hearing, the Board closed the record to further oral testimony but allowed the written record to remain open for the following purposes and on the following schedule:

1. Until 5:00 PM on Jan. 24th for any party to submit any evidence or testimony.
2. Until 5:00 PM on Feb. 7th for any party to submit evidence or testimony in response to testimony submitted during the first open record period.
3. Until Feb. 21st for Applicant's final written argument.

This is the first of several emails enclosing the Applicant's testimony and evidence for the first open record period, and is timely submitted prior to 5:00 PM on January 24th. Please confirm receipt and place these documents into the official record and before the County Board of Commissioners on these proceedings.

Thank you.

Enclosures:

- Adopted County Findings on CU-21-04.
- Adopted County Findings on DR 21-03 and V 21-05.

Garrett Stephenson

Shareholder

D: (503) 796-2893

C: (503) 320-3715

gstephenson@schwabe.com

Schwabe

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MACKENZIE.

January 24, 2024

Columbia County Board of Commissioners
Attention: County Courthouse, Room 338
230 Strand Street
St. Helens, OR 97051

Re: **NEXT Renewable Fuels Conditional Use Permit (CU 23-11) and Modification of an Approved Site Design Review (DR 21-03 MOD)**
Supplemental Evidence Submittal
Project Number 2200315.00

Dear Chair Garrett, Vice Chair Smith, and Commissioner Magruder:

On behalf of NEXT Renewable Fuels, please accept this additional material regarding the Conditional Use Permit application for a rail branchline in the PA-80 zone and the modification of the Site Design Review application approved by DR 21-03 and Variance 21-05.

CONDITIONAL USE PERMIT (CU 23-11) FOR A RAIL BRANCHLINE IN PA-80 ZONE

Columbia County Zoning Ordinance (CCZO) Section 307.1 and ORS 215.296 require a farm impact analysis for the proposed rail branchline crossing through the Primary Agriculture PA-80 zone since that area is zoned for exclusive farm use.¹ Specifically, the analysis must demonstrate that the proposed rail branchline does not (a) Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or (b) Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.

The applicant's discussion of the applicable standards and related evidence is included in Mackenzie's Conditional Use Permit for a Railroad Branchline narrative, dated June 16, 2023, particularly on pages 5-8 and 10-14. Furthermore, the January 3, 2024 staff report discusses these standards in Findings 50-53. We now offer these supplemental findings for the Board's consideration in specific topic areas in response to testimony submitted during and immediately after the January 10, 2024 County Board hearing.

Access to Farm Fields Due to Rail Traffic

The proposed railroad branchline within the PA-80 zone consists of approximately 1,250 linear feet of track between the existing railroad right-of-way and the renewable diesel production facility approved by Site Design Review DR 21-03 and Variance 21-05. As depicted in Exhibit 21 (Field Access Map) of the applicant's submittal, the new branchline necessitates the extension of one existing private rail crossing (near the point where the proposed branchline diverges from the Portland & Western Railroad mainline), and also necessitates construction of one new private rail crossing. These crossings ensure that access to the nearby fields (owned by Felipe and Bobby De La Cruz and the Port of Columbia County (Port), both of whom have consented to the application) continues to be available.

¹ By contrast, CCZO Section 1550 does not require this analysis for Site Design Review applications or their subsequent modifications.



The Field Access Map in Exhibit 21 also demonstrates that no other existing field access routes will be crossed by the proposed rail branchline.

Objectors have asserted that increased rail traffic could cause negative impacts on nearby farm operations due to interruptions to farm vehicle hauling operations, particularly during harvest season. While these objections are more related to increased volume on Portland & Western Railroad's existing Kallunki Road crossing than they are to construction of the rail branchline in the PA-80 zone, the applicant has nonetheless engaged a rail consultant to analyze future rail operations to determine steps that could be utilized to minimize effects on farm practices.

As explained in the January 23, 2024 letter from Crosstown Consulting Associates, LLC (CCA), the longest trains entering and leaving the renewable diesel production facility are anticipated to take approximately eight minutes to traverse the Kallunki Road crossing, which could be separated into two four-minute crossings if trains are delivered in two installments, such as during mint harvesting periods. As some of the trains accessing the site will be even shorter, those crossing movements would be shorter than three minutes. CCA's letter outlines specific rail operation recommendations to minimize the duration of train movements at the Kallunki Road crossing.

In view of the fact that the rail facility does not cut off existing access points to Mr. Seely's fields on land zoned for industrial uses (see Exhibit 21) and because the County is requiring the applicant to fully improve Hermo Road, the Board can conclude that increases of existing rail traffic at the Kallunki Crossing (which can happen for reasons other than new development) will not force a significant change in, or significantly increase the costs of accepted farm practices, especially if crossing times are managed according to the recommendations in CCA's letter.

Stormwater Management

Objectors have asserted that there will be negative impacts of stormwater runoff. Stormwater is proposed to be managed in accordance with applicable water quality and detention standards as follows:

- Stormwater runoff from the renewable diesel production facility itself will be directed to the industrial wastewater plant, which will process the water to meet permit standards established through the Port's National Pollution Discharge Elimination System (NPDES) permit. This flow will be discharged directly to the Columbia River following treatment.
- All other stormwater will be collected and treated to meet Columbia County Stormwater and Erosion Control Ordinance standards prior to discharging to water bodies, as will be confirmed at the time of permit review.
- Furthermore, since the project is impacting wetlands regulated by the U.S. Army Corps of Engineers, the stormwater runoff is required to meet Federal Standard Local Operating Procedures for Endangered Species (SLOPES) V regulations, which have stringent stormwater management requirements.
- As explained in Maul Foster & Alongi, Inc. preliminary stormwater report (Exhibit 18 of the applicant's submittal), in instances where Columbia County and SLOPES standards differed, the design engineers utilized the more conservative stormwater management standard.
- The stormwater report in Exhibit 18 is sufficient to demonstrate the feasibility of the proposed stormwater management techniques. Consistent with standard practice, more detailed analysis may be required at the time of permit review by County, state, and federal agencies.

Conclusion

Based on this information, the Board can conclude that the proposed railroad branchline in the PA-80 zone will not force a significant change in farm or forest practices or individually or cumulatively significantly increase the cost of farm or forest practices.

MODIFICATION OF AN APPROVED SITE DESIGN REVIEW (DR 21-03 MOD) IN RIPD ZONE

Landscape Buffer Proximity to Ditches

The Beaver Drainage Improvement Company (BDIC) letter raises several points with respect to the proposed landscape buffer on the south edge of the development within the RIPD zone. Issues raised by BDIC are identified below in italicized text, while responses are provided in standard text.

- a. *Sediment fencing along waterways is to be removed following construction to ensure access to waterways for maintenance.*

Response: The sediment fences depicted in the plan set (Exhibit 4 of the applicant's submittal) are a temporary erosion control measure intended to minimize sediment transport during the course of construction. Standard practice calls for removal of these fences once permanent vegetation has been established and construction has ended.

- b. *Proposed tree buffers along waterways are on ditch banks and will contribute debris, creating blockages. Additionally, they will restrict maintenance capabilities of the BDIC and thus will not be approved by the BDIC.*

Response: The landscape buffers along the south edge of the development within the RIPD zone are proposed to satisfy the requirements of CCZO 1562. These standards require planting of trees, shrubs, and ground cover. While some fraction of the tree leaves will fall within BDIC ditches, the quantity of leaves is likely to be smaller than that associated with the long-standing tree farm previously planted with over 100 acres of trees immediately to the south of the ditches.

The landscape buffer approved by Site Design Review DR 21-03 and Variance 21-05 called for trees placed at 40 feet on center based on the proposed tree species, with 20-foot-wide grassy breaks to facilitate maintenance access between the gravel access road and the ditch (see Sheets L1.10 and L1.12 and Detail 3 on Sheet L1.11 in Exhibit 3 of the applicant's submittal). With the proposed modification, this buffer would be relocated out of the PA-80 zone and into the RIPD zone. The applicant welcomes BDIC's comments on this proposed tree spacing and maintenance access.

- c. *Proposed fencing along waterways could impact BDIC ability to maintain waterways. Additional information needed for review.*

Response: The applicant has proposed gravel access roads in the vicinity of ditches and waterways to accommodate maintenance activities (see Sheets C2.0-C2.6 of Exhibit 4 of the applicant's submittal). Many of these access roads would be located outside the proposed security fence for the renewable diesel production facility. For those segments of access road within the proposed security fence, the applicant will consider input

Columbia County Board of Commissioners
Modification of an Approved Site Design Review (DR 21-03 MOD) in ripd zone
Project Number 2200315.00
January 24, 2024
Page 4

from BDIC to identify gate locations and width and to establish maintenance protocols that do not compromise the security of the facility.

Thank you for the opportunity to submit this additional information, which together with the project narratives and exhibits demonstrate that the proposed applications are consistent with applicable approval criteria.

Sincerely,



Brian Varricchione
Land Use Planning

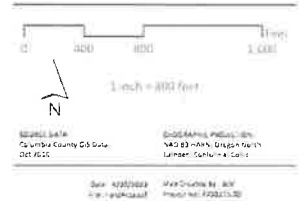
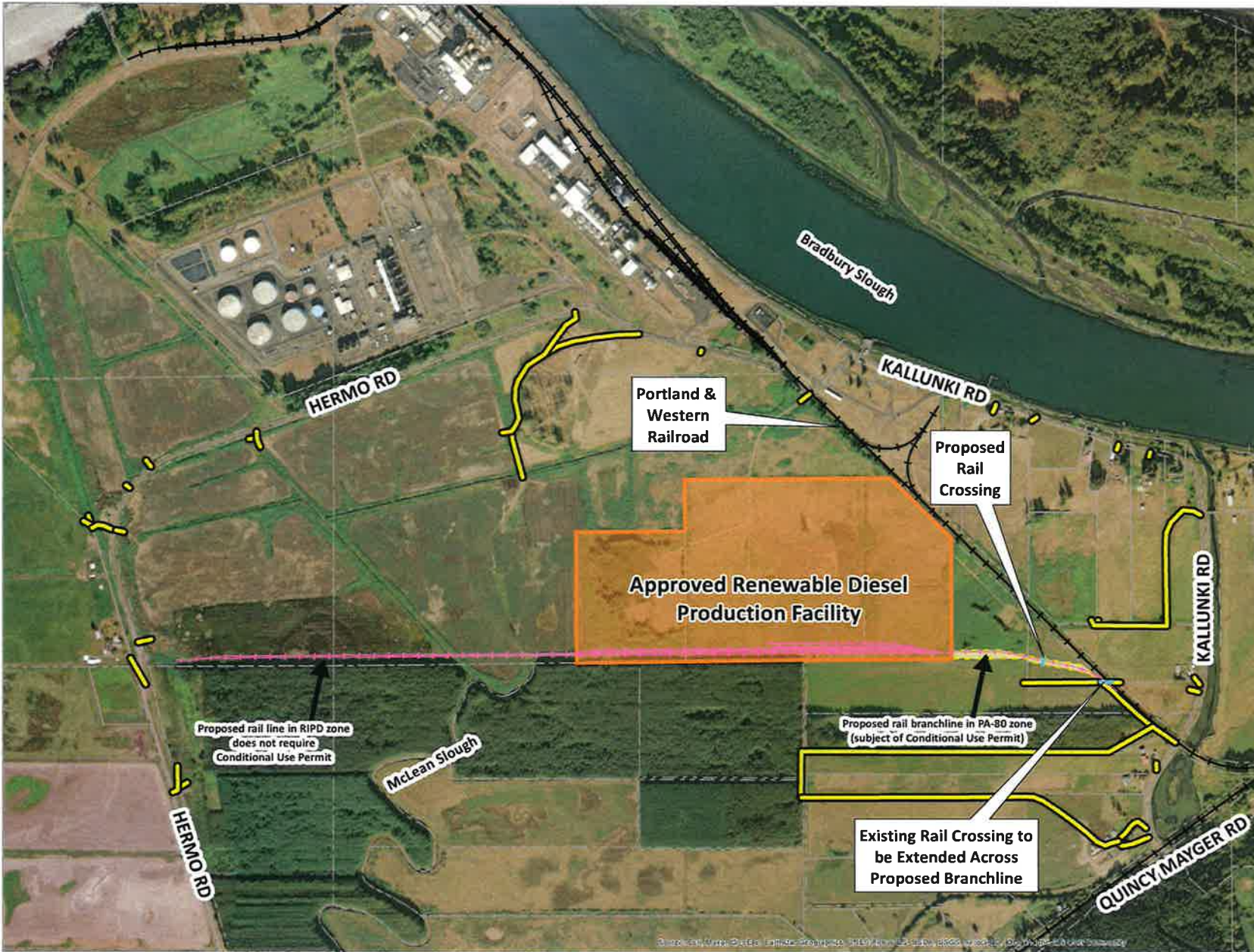
Enclosure(s): Attachment A – Field Access Map (Exhibit 21 from applicant’s Conditional Use Permit submittal)

c: Christopher Efird, Gene Cotten – NEXT Renewable Fuels
Garrett Stephenson – Schwabe, Williamson & Wyatt

NEXT RENEWABLE FUELS INC. Columbia County, Oregon Nearby Field Access

LEGEND

- Tax Lots
- Approved Renewable Diesel Production Facility
- Existing Rail Mainline
- Proposed Rail
- Proposed Rail Corridor
- Existing Field Access
- Rail Crossing Alteration



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1700 East Center Street, Suite 100, Astoria, Oregon 97103

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Crosstown Consulting Associates, LLC

RAILROAD CONSULTING

January 23, 2024

Mr. Garrett H. Stephenson, Esq.
Schwabe Williamson & Wyatt, P.C.
1211 SW Fifth Ave., Suite 1900
Portland, OR 97204

Re: Rail Mitigation Plan for the Proposed NEXT Renewable Fuels, Inc. (NEXT) Branchline in Columbia County, Oregon

Dear Mr. Stephenson:

At your request, and on behalf of NEXT, I have evaluated railroad operations planned for the renewable diesel facility in Port Westward, OR that will be served by the proposed branchline off the Portland & Western Railroad (P&W) main track just north of the Kallunki Road crossing (DOT 927277K). In conducting my evaluation, I have been asked to recommend steps that can be taken to mitigate (minimize) delays to vehicle traffic at the Kallunki Road crossing during the arrival and departure of P&W trains serving the facility, as well as farm vehicles traveling over the crossing between the fields and Seely Mint Distillery during mint harvest times that we understand usually occur in July and September. Accordingly, I have developed the findings and recommendations contained in Section 3 of this report, which I may supplement upon receipt of additional information.

1.0 – Background and Experience

I am an owner of the railroad consulting practice of Crosstown Consulting Associates, LLC, which is an Oregon company (Registry No. 150014497). I have a Bachelor of Science degree from California State University at Sacramento, CA in Business Administration, and more than 45 years of experience in the railroad industry. Over the years I have held a variety of positions including conductor, locomotive engineer, assistant trainmaster, certified designated supervisor of locomotive engineers, director of training rules and safety, director of security, assistant chief mechanical officer, chief mechanical officer, superintendent, and assistant vice president of operations planning and analysis. I am also a currently certified train service locomotive engineer in accordance with 49 C.F.R. § Part 240.

During my career I have planned, performed and supervised industrial switching operations at various facilities including grain elevators/terminals, petroleum refineries/terminals, coal plants, forest products facilities, chemical plants, rock quarries, and a steel mill, among others. As a railroad officer I have trained, supervised and qualified hundreds of railroad craft employees, supervisors, and managers. I have also developed, implemented, and managed numerous customer service plans, as well as railroad safety and rules programs, including locomotive engineer certification programs (49 C.F.R. § Part 240). In addition to currently providing railroad forensic consulting services to a variety of clients throughout the country, I have also provided operational and safety assessments that involved both existing and planned industrial switching operations. I have been qualified as an expert witness in the areas of railroad safety, training,

rules, operating practices, and mechanical matters in numerous federal and state courts including Oregon. I am also a member of several professional organizations including the Air Brake Association, The International Association of Railway Operating Officers, and the American Association of Railroad Superintendents. In addition, I am a past member of the Chicago Rail Carriers Association and have participated in several national projects including the Federal Railroad Administration (FRA) Power Brake Railroad Safety Advisory Committee (RSAC), and FRA Dynamic Brake Task Force. I am also familiar with the requirements of federal regulations governing railroad operations as contained in 49 C.F.R. § Parts 200-299.

A copy of my CV is attached.

2.0 - Materials Reviewed

In addition to conversations and meetings with associates from the Schwabe law firm, President Cotton at NEXT, representatives of the Mackenzie Engineering firm, and representatives from the Portland and Western Railroad, I visited Port Westward, OR earlier this month to observe the existing Portland & Western Railroad track serving existing customers in the Port as well as the area of the proposed branchline that will serve the NEXT facility. While doing so I inspected the subject Kallunki Road grade crossing and drove the roads used by motor vehicles and farm vehicles in the area including Kallunki Road, Quincy-Mager Road, and Hermo Road. I also attended and was present to hear all testimony that was provided at the January 10, 2024 public hearing conducted by the Columbia Board of Commissioners in St. Helens, OR. In addition, I have reviewed the following materials in developing my findings and recommendations for the NEXT rail mitigation plan:

1. Informational Website on Oregon Mint Farming hosted by Oregon Agriculture in the Classroom Foundation (<https://oregonaitc.org>)
2. Four (4) Mint Harvest YouTube Videos including two (2) featuring Seely Mint, one (1) featuring an ADM sponsored grower, and one (1) Oregon mint harvest video sponsored by the Oregon Farm Bureau as follows:
<https://www.youtube.com/watch?v=Celr4m8xcjl>
<https://www.youtube.com/watch?v=zy39SGGVf3U>
<https://www.youtube.com/watch?v=x9aWUnvL1AU>
https://www.youtube.com/watch?v=H4_cyEU9AKQ
3. Seely Mint Website (www.seelymint.com)
4. General Code of Operating Rules, Eighth Edition (Railroad), Effective 4/1/20 (GCOR)
5. Final Order No. 13-2022 In the Matter of the Application by NEXT, LLC for a Conditional Use Permit for a Rail Branchline in the Primary Agriculture (PA-80) Zone Near Port Westward (CU-21-04) Before the Board of County Commissioners for Columbia County, OR
6. Maul Foster Alongi Rail Diagrams for NEXT Branchline with Track Layout Inside NEXT Facility
7. 3/18/21 Greene Economics, LLC Report of Economic Impacts of Renewable Fuels Facility in Columbia County, OR
8. 1/17/22 Letter from G. Stephenson to Columbia County Board of Commissioners RE: Applicant's Response to Public Comments; Columbia County Board of Commissioners, App DR 21-03; V 21-05 and CU 21-04 (Next Renewable Fuels Oregon, LLC)
9. 2/2/22 NEXT Renewables Fuels Testimony for Second Open Record Period (App DR 21-03; V 21-05 and CU 21-04) Exhibit C

10. 12/9/22 Maul Foster Alongi Plans for Revised Rail Corridor Prepared for NEXT Renewable Fuels, Inc. (CO.0, C1.0, C2.0, C2.1, C2.2, C2.3, C2.4, C2.5, C2.6, C2.7, C2.8, C2.9, C3.0, C3.1, C3.2, C3.3, C3.4, C3.5, C3.6, C3.7, C3.8,)
11. 3/23/22 Board of County Commissioners for Columbia County Oregon Final Order No. 13-2022 Branchline in the Primary Agriculture (PA-80) Zone Near Port Westward (CU 21-04), With Exhibits A-D
12. 5/1/23 NEXT Renewable Fuels, Oregon Rail Loading/Unloading Design Basis
13. 6/16/23 Conditional Use Permit for NEXT Railroad Branchline prepared by Mackenzie Engineering
14. 6/16/23 NEXT Railroad Branchline Submittal Issue Notes (2200315.00 NEXT Renewables)
15. 6/16/23 Mackenzie Engineering CUP2 Exhibits 01-21
16. 12/6/23 Letter from G. Stephenson to Messrs. Mike and Warren Seely
17. 1/3/24 Columbia County Board of Commissioners Staff Report Re. Modification of an Approved Site Design Review in the RIPD Zone-Type II Conditional Use Review
18. 1/9/24 Columbia Riverkeeper 1000 Friends of Oregon Written Comments to Columbia County Board of Commissioners
19. Undated Written Comments of Beaver Drainage Improvement Company, Inc to Columbia County Commission Re: "NXT's application..."
20. 1/5/24 Email Comments and Map from James Hoffman to Columbia County Board of Commissioners
21. 1/10/24 Written Comments of Mike Seely to the Columbia County Planning Commission

3.0 - Findings and Recommendations Developed

1. All trains entering and departing the branchline serving the NEXT facility will traverse the Kallunki Road crossing (No. DOT 927277K), and the trains will be operated by P&W train crews using conventional freight locomotives. It should be noted that an "Emergency Notification System" (ENS) currently exists nationwide that features the posting of a blue sign at highway-rail grade crossings, including Kallunki Road, with a 24/7/365 telephone number to call and report emergencies to the railroad train dispatcher responsible for the territory. The switch providing access to the NEXT facility off the P&W main track will be located approximately 700 feet northwest of the crossing, and the branchline will then extend westward to its end near Hermo Road. Photos of the crossing taken during my recent site visit are shown below as Figures 1a-1c with labels added.



Figure 1a: View north of crossing

Figure 1b: View south of crossing

Figure 1c View NW from crossing

2. There are three double-ended auxiliary tracks, including an extended length run-around track and two spur tracks planned for installation north of the branchline within the NEXT facility to accommodate the loading and unloading processes as well as the in-plant switching and short-term storage of railcars associated with plant operations. In accordance with industry standards and federal regulations, the maximum speed on these tracks will be 10 mph (FRA Class 1 track per 49 C.F.R. § Part 229.3).
3. Once inbound trains are delivered by the P&W Railroad, NEXT employees or contractors will perform the necessary switching and car placement within the facility using a rail car mover such as a Trackmobile™ that is a specialized utility vehicle equipped with a coupler and train airbrake system designed to move railcars. It should be noted that none of the railcar movements conducted by NEXT crews or its contractor will be allowed to occupy the P&W main track or the Kallunki Road crossing at any time. Figure 2 below is a Google Earth satellite image with labels added showing the area of the planned NEXT facility with the approximate location of the branchline and adjacent auxiliary tracks indicated.

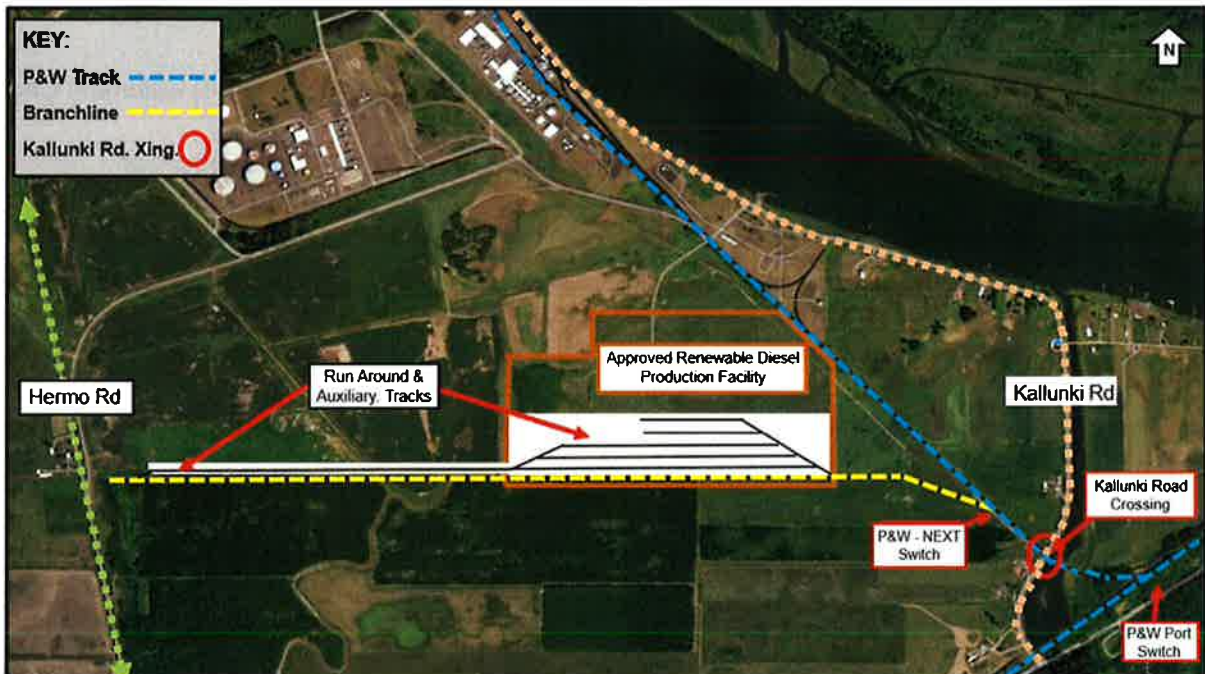


Figure 2: Area of NEXT Facility and branchline with labels added (Track placements are approximate.)

4. With current facility approval for a maximum of 318 cars per week, the 5/1/23 NEXT Rail Loading and Unloading Design Basis Document projects a slightly lower weekly and monthly railcar throughput for the facility of 311 cars in and out per week at full rail capacity, and 1245 cars per month based on the following:
 - Three (3) new 80 car dedicated feedstock trains per week (80 loads)
 - Two (2) 30 car diesel product transfers per week to be handled by currently existing manifest trains that serve other P&W customers in the area.
 - One (1) 20 car bleaching earth product transfers per week also to be handled by currently existing manifest trains that serve other P&W customers in the area.

5. The longest P&W trains entering and leaving the NEXT facility will have approximately 100 cars with a maximum length of 7000', which means continuous movement of these trains over the Kallunki Road crossing and the two private farm crossings on the branchline will require less than 10 minutes to clear on the 10 mph track as follows: (10 mph = 14.67 feet per second (fps) and $7000' / 14.67 \text{ fps} = 477 \text{ seconds} = 7.95 \text{ minutes}$).
6. Since most if not all of the transfer movements over the subject crossing handled by existing manifest trains will involve groups of 20-30 cars with an overall length of less than 2000' including locomotives, these movements in and out of the facility will result in crossing occupancies of less than 3 minutes each as follows: ($2000' / 14.67 \text{ fps} = 136.3 \text{ seconds} = 2.27 \text{ minutes}$, which is similar to the cycle time of some motor vehicle traffic signals).
7. To reduce crossing occupancy times during the mint harvest, the 100 car trains can be split in half to accomplish delivery in 2 installments of 50 cars each, with a resulting crossing occupancy of just under 4 minutes for each movement as follows: $3500' / 14.67 \text{ fps} = 238.5 \text{ seconds} = 3.97 \text{ minutes}$).
8. Every P&W crew handling inbound and outbound train movements is required by railroad rules and federal regulations to have a train manifest (consist) that contains a list of all cars in the train and their order of placement that includes car type, load/empty status, and specific information and instructions concerning any cars concerning hazardous materials that can be provided to law enforcement, fire departments and other responders in case of emergency.
9. In accordance with federal regulations and railroad rules, all inbound trains serving the Next facility must receive and pass an inspection prior to departure from their initial terminal, and all outbound trains must also be inspected to ensure all cars and locomotives are in proper condition for service prior to departure from the facility.
10. In addition to the overall goal of minimizing delays to all traffic at the Kallunki Road crossing due to train movements serving the NEXT facility, consideration is being given to the effect such delays would have on the Seely mint farming operation and their farm vehicles in the area. Accordingly, to better understand their farming practices especially during harvest season, attorney Garrett Stephenson reached out to the Seely's on behalf of NEXT in a 12/6/23 letter requesting information about harvest procedures and concerns so they could be considered and addressed in the rail mitigation plan. Since the Seelys did not respond to the letter, I reviewed the publicly available information referenced in Section 2 of this report to gain a general understanding of the mint harvest, which I understand requires dry weather, careful attention to moisture levels, and timely crop processing in order to be successful. Based on the reference material and videos, there appears to be a first harvest cycle in July, followed by a second one later in the season around September, with the actual timing subject to variables, perhaps the most notable of which is the weather. Based on the foregoing, I recommend the following measures be employed as appropriate to ensure inbound and outbound train movements serving the NEXT facility will be conducted expeditiously to minimize traffic delays at the Kallunki Road crossing.
 - Provide P&W crews and NEXT employees conducting rail operations with a standard operating procedure (SOP) for the proper handling of inbound and outbound trains with an emphasis on safety and the importance of keeping crossing occupancy times to a minimum.
 - Establish and maintain consistent communications between P&W and NEXT that include timely (24 hour) advance notice concerning inbound and outbound train movements, with estimated times of arrival and departure at the facility and train consist details via email or fax (i.e. number and types of cars, commodities and load/empty status).

- In advance of a train's arrival, NEXT should ensure all necessary tracks are clear to receive inbound traffic and all associated track switches within the facility are properly lined to allow continuous inbound movement during the delivery.
 - To expedite outbound train departures, NEXT employees should ensure outbound cars are assembled and ready for pickup with loading and unloading mechanisms disconnected and all NEXT employees safely in the clear with the P&W crew ensuring all affected switches and derails are properly aligned to facilitate a continuous outbound departure from the facility without stopping on the crossings.
 - Provide NEXT employees involved in the rail operations with a portable radio to allow communication with P&W crews servicing the facility.
 - Provide a utility vehicle or crew taxi to expedite the P&W conductor's ground duties when delivering and securing inbound trains and while preparing, inspecting, and testing outbound train prior to departure.
 - Identify a contact person(s) and/or position(s) at the P&W and NEXT for area law enforcement, emergency responders and area farmers and or other interested parties to reach with concerns, complaints or requests involving rail operations and include such information for community access through a posting on a NEXT website for the Port Westward facility.
 - P&W could post a crew member at the Kallunki Rd. crossing while servicing the NEXT facility to flag motor vehicle traffic, and communicate with the engineer should it become necessary to separate the train to clear the crossing in the event of an unforeseen delay (typically for blockages in excess of 10 minutes or in case of emergency).
 - During critical times while the mint harvest is underway, the P&W can issue a "Form B Track Bulletin" as provided for in the General Code of Operating Rules at the farmer's request, that would place a railroad foreman in charge at the Kallunki Road crossing during the dates and times of said bulletin to stop and hold trains approaching the crossing from either direction as necessary to allow harvest vehicles traveling between the field and nearby distillery to do so without delay (See GCOR Rule 15.2).
11. With the foregoing in mind, the following points are offered in response to concerns raised in Mr. Mike Seely's 1/10/24 written comments to the Columbia County Planning Commission in opposition to the NEXT branchline.
- In the 2nd paragraph of his comments, Mr. Seely states in part: "*Due to trains slowing as they approach the rail yard or gaining speed as they leave, the train will block the road for lengthy periods of time.*" In response, as outlined in paragraphs 4, 5, 6, 7, and 9 of this report, the rail operations plan will be structured for inbound train deliveries, and outbound departures serving NEXT to be made in continuous movements designed to minimize or eliminate slowing or stopping on the Kallunki Road crossing during the process.
 - Mr. Seely's expressed need to avoid delays to harvest vehicles due to train traffic during the mint harvest as expressed in the 6th and 8th paragraphs of his written comments can be easily addressed by splitting large train movements in half as described in paragraph no. 7 above or in the event that harvest conditions make any train delays to farm vehicles untenable, the issuance of a Form B track bulletin by the railroad during such critical times would provide a means to eliminate any and all delay to such vehicles as described in the last bullet point of paragraph no. 9 above.

Crosstown Consulting Associates, LLC - Railroad Consulting

These findings and recommendations are to a reasonable degree of certainty based on my background, training, and experience, as well as my site visit and review of the materials provided thus far. I reserve the right to amend or supplement this report if additional information is provided.

Submitted by,



Brian P. Heikkila

Attachment



Curriculum Vitae of Brian P. Heikkila

EXPERIENCE

May 2017 – Present **Crosstown Consulting Associates, LLC** **Medford, OR**
Railroad Consultant

Provide clients with timely and accurate analysis of railroad operational issues. Provide training in railroad safety, rules, and operating practices including engineer training. Conduct operational and safety audits. Provide locomotive event recorder and locomotive video analysis. Provide services as a consulting and/or testifying expert in railroad mechanical, operating, and engineering disciplines. Provide technical consulting support from accident/incident response through case analysis and report preparation including consulting and/or testifying expert witness services if requested.

July 2015 – May 2017 **Dennin, Heikkila, & Associates, LLC** **Peachtree City, GA**
Senior Vice President

Provide clients with timely and accurate analysis of railroad operational issues. Provide training in railroad safety, rules, and operating practices including engineer training. Conduct operational and safety audits. Provide locomotive event recorder and locomotive video analysis. Provide services as a consulting and/or testifying expert in railroad mechanical, operating, and engineering disciplines. Provide technical consulting support from accident/incident response through case analysis and report preparation including consulting and/or testifying expert witness services if requested.

April 2002 – July 2015 **Full Service Railroad Consulting, Inc.** **Peachtree City, GA**
Partner

Provide clients with timely and accurate analysis of railroad operational issues. Provide training in railroad safety, rules, and operating practices including engineer training. Conduct operational and safety audits. Provide locomotive event recorder and locomotive video analysis. Provide services as a consulting and/or testifying expert in railroad mechanical, operating, and engineering disciplines. Provide technical consulting support from accident/incident response through case analysis and report preparation including consulting and/or testifying expert witness services if requested.

June 2000 – March 2002 **Rail Sciences Inc.** **Atlanta, GA**
Assistant Vice President of Operations, Planning, and Analysis

Responsible for the use and application of advanced analytical techniques for the solution of railway operational problems. Performed accident and derailment investigations,

CROSSTOWN CONSULTING ASSOCIATES, LLC

railroad operational and safety studies, mechanical inspections, physical testing, and railroad training. Performed field investigations of crossing collisions and derailments. Analyzed locomotive event recorder data and train stopping distance. Provided consulting and testifying expert witness services in numerous railroad lawsuits involving trespasser incidents, grade crossing collisions, and employee injuries.

Dec. 1997 – I&M Rail Link, LLC Davenport, IA
June 2000 *Superintendent of Operations*

Responsible for the supervision and management of the operations department of the railroad including classification yard and over the road train operations. Initial territory included the Southern Division between Chicago, IL and Kansas City, MO. Territory was expanded to include the entire railroad after January of 2000 including 1100 miles of main line and approximately 350 employees. Certified Train Service Locomotive Engineer and Designated Supervisor of Locomotive Engineers (DSLE) in accordance with 49 CFR Part 240.

1989 - 1997 Montana Rail Link, Inc. Missoula, MT
Chief Mechanical Officer *January 1997 - December 1997*
Assistant Chief Mechanical Officer *November 1994 - January 1997*

Responsible for the supervision and management of the mechanical department which included 200 employees, 3 rail car and locomotive repair shops, approximately 125 locomotives and 1800 rail cars. Also responsible for the inspection, testing, and repair of rail cars handled in interchange across the railroad.

Director, Training, Rules & Safety Department *January 1990 – November 1994*
and Director of Security

Responsible for the training and safety of all operating crafts system wide at MRL, as well as the security needs of the railroad. Developed implemented and managed the locomotive engineer certification program, operations testing program, rules training and testing programs. Developed, implemented, and managed the drug and alcohol testing program for the railroad. Certified Train Service Locomotive Engineer and Designated Supervisor of Locomotive Engineers (DSLE) in accordance with 49 CFR Part 240. Developed and implemented airbrake and train handling rules. Developed cold weather training program for extreme operating conditions in mountain grade territories. Served as corporate manager of the FRA Safety Assurance and Compliance Program (SACP).

Director of Locomotive Engineer Training *October 1989 – January 1990*
Directed and managed the locomotive engineer training program for the MRL system.

1969 – 1989 Burlington Northern Railroad Various Locations
Asst. Manager Locomotive Engineer Training, Overland Park, KS *January 1988 – October 1989*

Trained and qualified locomotive engineers for the Burlington Northern Railroad system wide. Developed, implemented, and managed locomotive engineer training programs including General Code of Operating Rules, General Safety Rules, Airbrake and Train Handling Rules, and applicable federal regulations. Trained and tested employees using locomotive simulators, including the IITRI TS2 and TS3 models.

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Assistant Trainmaster, Spokane, WA

February 1987– January 1988

Responsible for the field supervision of train and yard crews of the Spokane Division. Provided instruction on the General Code of Operating Rules, General Safety Rules, Airbrake and Train Handling Rules, and applicable federal regulations to operating employees. Performed locomotive event recorder analysis. Conducted operations tests throughout the Division. Investigated crossing collisions, derailments, and other railroad incidents including rules infractions and employee injuries.

Railroad Operations

May 1969 – February 1987

- Locomotive Engineer, Whitefish, MT 3/85-2/87
Operated freight and passenger trains over the main line mountain grade corridor between Whitefish, MT and Havre, MT and between Whitefish, MT and Spokane, WA.
- Locomotive Engineer, Missoula, MT 11/84 -3/85
Operated freight and passenger trains over the main line mountain grade corridor and branch lines between Missoula, MT and Helena, MT, Missoula, MT and Butte, MT, and between Missoula, MT and Spokane, WA.
- Special Representative for the International President of the Brotherhood of Locomotive Engineers (BLE), Western USA 8/84-11/84
Represented the International President of the BLE on all railroad properties west of the Mississippi River. Attended Division meetings and performed liaison and membership recruitment duties on behalf of the International Office.
- Locomotive Engineer, Whitefish, MT 6/82-8/84
- Locomotive Engineer, Missoula, MT 2/78-6/82
- Switchman, Brakeman, Conductor, Missoula, MT 7/76-2/78
- Railroad leave of absence granted for enlistment in USMC 1/70-1/72
(Honorable discharge Corporal, E-4).
- Switchman, Brakeman, Missoula, MT 5/69-7/76

EDUCATION

- 1979-1980 B.S Business Administration, California State University, Sacramento, CA (Note CA college work done while on GI Bill Leave of Absence from BN)
- 1978 Graduated from the Burlington Northern Railroad Locomotive Engineer Training Program and promoted to Locomotive Engineer
- 1976-1977 Attended University of Montana, Missoula, MT
- 1975 Graduated, Sacramento City College, AA Degree

SUPPLEMENTARY TRAINING

- July 2021, Montana Rail Link, Inc., Missoula, MT: Locomotive Engineer Recertification training and testing on the General Code of Operating Rules (GCOR), Air Brake and Train Handling Rules, Safety Rules, U.S. Rail Security Awareness Guidelines, U.S. Hazardous Materials Instructions for Rail, Remote Control Locomotive Operations (RCO), Distributed Power Operations (DPU), Physical Characteristics of the Railroad, and pertinent Federal Regulations in 49 CFR Parts 200-299. Conductor Recertification Training in accordance with 49 CFR Part 242. Federally certified as a Train Service Locomotive Engineer and Instructor Engineer in accordance with 49 CFR Part 240.
- April 2018, Montana Rail Link, Inc., Missoula, MT: Locomotive Engineer Recertification training and testing on the General Code of Operating Rules (GCOR), Air Brake and Train Handling Rules, Safety Rules, U.S. Rail Security Awareness Guidelines, U.S. Hazardous Materials Instructions for Rail, Remote Control Locomotive Operations (RCO), Distributed Power Operations (DPU), Physical Characteristics of the Railroad, and pertinent Federal Regulations in 49 CFR Parts 200-299. Conductor Recertification Training in accordance with 49 CFR Part 242. Federally certified as a Train Service Locomotive Engineer and Instructor Engineer in accordance with 49 CFR Part 240.
- May 2015, Montana Rail Link, Inc., Missoula, MT: Locomotive Engineer Recertification training and testing on the General Code of Operating Rules (GCOR), Air Brake and Train Handling Rules, Safety Rules, U.S. Rail Security Awareness Guidelines, U.S. Hazardous Materials Instructions for Rail, Remote Control Locomotive Operations (RCO), Distributed Power Operations (DPU), Physical Characteristics of the Railroad, and pertinent Federal Regulations in 49 CFR Parts 200-299. Conductor Recertification Training in accordance with 49 CFR Part 242. Federally certified as a Train Service Locomotive Engineer and Instructor Engineer in accordance with 49 CFR Part 240.
- November 2012, Montana Rail Link, Inc., Missoula, MT: Locomotive Engineer Recertification Training on the General Code of Operating Rules (GCOR), Air Brake and Train Handling Rules, Safety Rules, U.S. Hazardous Materials Instructions for Rail, Remote Control Locomotive Operations (RCO), Distributed Power Operations (DPU), Physical Characteristics of the Railroad, and Pertinent Federal Regulations in 49 CFR 200-299
- October 2011, Canadian National Railway (US), Flat Rock, MI: Training class on the Operating Rules, Safety Rules, Air Brake and Train Handling Rules, and Hazardous Materials Regulations
- July 2002, Quantum Engineering, Inc., Orange Park, FL: Training class on event recorder data analysis and operation of QDP Software.

PROFESSIONAL ACTIVITIES

- 1997-2000 Member, Safety Committee, American Shortline and Regional Railroad Association
- 1997-2000 Alternate Member, Federal Railroad Administration (FRA) Railroad Safety Advisory Committee (RSAC)
- 1997-2000 Member, Chicago Rail Carriers Association
- 1996 Member, Superintendents' Association of Kansas City

CROSSTOWN CONSULTING ASSOCIATES, LLC

- 1996 Member, FRA-RSAC Power Brake Working Committee
- 1997 Member, FRA-RSAC Dynamic Brake Task Force
- 1993-1997 Member, Locomotive Maintenance Officers Association (LMOA)
- 1991-Present Member, American Association of Railroad Superintendents
- 1988-Present Member, Air Brake Association
- 1988-1997 Member, Montana Operation Lifesaver, Board member in 1990
- 1987-Present, International Association of Railway Operating Officers, Past Vice President
- 1982-1987 Brotherhood of Locomotive Engineers, Division 499, Whitefish, MT
- 1978-1982 Brotherhood of Locomotive Engineers, Division 262, Missoula, MT
- 1969-1978 United Transportation Union #978 T/C, Missoula, MT

MILITARY SERVICE

- 1970 – 1976 U.S. Marine Corps – Honorable Discharge, Corporal E-4 (2 years of active duty while on leave of absence from railroad)



Technical Memorandum

To: Columbia County Commissioners Date: January 24, 2024
From: Brian Tino, PE, Maul Foster & Alongi, Inc. Project No.: M1724.01.004
Re: Response to Beaver Drainage Improvement Company Letter to the Columbia County Planning Commission and Columbia County Commission

Maul Foster & Alongi, Inc. (MFA) has prepared this memo on behalf of NEXT Renewable Fuels, Oregon, Inc. (NEXT Renewables) in response to the comments provided by the Beaver Drainage Improvement Company (BDIC) in its January 10, 2024 letter to the Columbia County (County) Commission. Applicable excerpts from the BDIC letter are copied in italics below, and MFA's response to each comment is included following the excerpt. Excerpts from the BDIC letter that are excluded from this memo are outside the scope of MFA's involvement in the project. Any comments not included below will be addressed separately.

BDIC Comment:

Effective drainage is vitally important to farms and farmers at Port Westward. Disrupted drainage could impact people in the area, not just the site itself. NEXT states that its culverts "will be sized during final design when more information about the wetland drainage conditions becomes available." At the same time, NEXT proposes culvert sizes that will be insufficient.

- *The 36" diameter culvert in waterway D is insufficient. 48" required.*
- *The 36" diameter culvert in waterway D is insufficient. 48" required.*
- *The BDIC reserves the right to require field fit modification to ensure all culverts are placed at correct depth to prevent flow restriction.*

MFA Response:

As stated in the Post-Construction Stormwater Management Plan¹, the conveyance structures were sized using an accepted hydrologic model and available survey data. Based on the results of this modeling, the 36" diameter culverts were determined to be adequate to convey the design storm, consistent with the relevant design guidance. If, during final design, additional information indicates that these conveyance structures are insufficient, larger culverts may be proposed. NEXT Renewables will coordinate with the BDIC as needed to ensure the culverts are sized appropriately to convey expected flows; however, it is not anticipated that additional field fit modifications by the BDIC will be necessary after final design. Any field fit recommendations provided by BDIC must be reviewed and approved by NEXT Renewables, the Engineer of Record (the licensed Professional

¹ MFA. 2023. Post-Construction Stormwater Management Plan. Prepared for NEXT Renewable Fuels, Oregon, Inc. Maul Foster & Alongi, Inc.: Portland, OR. January 30.

Engineer who stamped/sealed the construction drawings), and other relevant permitting agencies before they are implemented.

BDIC Comment:

NEXT fails to address impacts to the BDIC from interference with access to the drainage systems caused by the proposed modification, the rail yard, gravel road, fencing, and buffers. The BDIC operates a public drainage system, attached to private improvements. The drainage and irrigation provided are highly important to people in the BDIC. Specifically,

- *Sediment fencing along waterways is to be removed following construction to ensure access to waterways for maintenance.*
- *Proposed tree buffers along waterways are on ditch banks and will contribute debris, creating blockages. Additionally, they will restrict maintenance capabilities of the BDIC and thus will not be approved by the BDIC.*
- *Proposed fencing along waterways could impact BDIC ability to maintain waterways. Additional information needed for review.*

MFA Response:

- Following substantial completion of construction and termination of the Construction Stormwater Discharge Permit No. 1200-C, NEXT Renewables will remove the sediment fencing, ensuring access to the waterways for maintenance.
- Installation of the proposed tree buffer is a County requirement for development of the project site. Routine maintenance of the tree buffer will reduce the likelihood of debris and blockages in the adjacent waterways. The waterways will remain accessible for maintenance from the south. NEXT Renewables will coordinate with the BDIC to ensure ongoing access to the waterways from the north, as needed.
- No development is proposed south of the tree buffer along the boundaries of waterways G and F. These waterways will remain accessible for maintenance from the south. NEXT Renewables will coordinate with the BDIC to ensure ongoing access to the waterways from the north, as needed.

BDIC Comment:

NEXT will have additional impacts to the BDIC and people within the BDIC that are not adequately addressed in the application for the modification.

- *Spill containment plans for the facility and rail yard must be approved by the BDIC prior to any County approval of this proposal.*
- *No ditch or waterway alterations have been approved by the BDIC Board. Without specific agreements with the BDIC, NEXT cannot claim to have addressed impacts to the BDIC, its resources, or its operations. Further, the BDIC's activities are a recognized land use in the area that is vital to the overall function of the Port Westward area, including the industrial areas. NEXT fails to adequately address conflicts with BDIC's use of the area, its control of the land, and the public services it provides.*
- *The application provides no provisions for existing irrigation points on waterway G. interference with irrigation from this waterway and potential pollution of the water resources will impact and harm local farming.*
- *No engineering analysis of drainage and irrigation impacts has been presented to the BDIC Board for approval. The BDIC cannot agree to major alterations of BDIC infrastructure without a more in-depth description of the proposed impacts. NEXT cannot claim to have mitigated the impacts without an agreement with the BDIC. The application is premature.*

- *No engineering impact analysis or compatibility analysis has been performed for the current proposal. Prior submissions for county and BDIC approval are inadequate as location of rail yard has changed, thus impacts have changed. NEXT cannot rely on previous analyses to make conclusions about the impacts in the area. The previous proposals and the current amendment are not the same in scope or intensity with respect to impacts on farmers within the BDIC.*
- *Finding 97 Stormwater Report NEXT claims that they do not understand the groundwater impacts and states "groundwater elevations will be further studied". However, they have already submitted their application to the USACE so it is too late for further study. NEXT should be required to produce groundwater studies prior to County Commissioner review as it will have pertinent information to assist with decision making.*
- *Stormwater ponds will impact adjacent levels as they are unlined and will alter how fast and where water enters the BDIC system. The Preliminary Stormwater Report is inadequate for determining whether these facilities will impact water relied upon for irrigation and drainage systems because the groundwater level is not fully evaluated. Additionally, the application relies on a 2001 Geotechnical Study that is outdated and suggests problems with the Stormwater Plan. Page 1 of the Preliminary Stormwater Report states, "A geotechnical report was prepared in 2001 for a prior development opportunity at the site. The subsurface investigation located the groundwater between 2 feet to 4 feet below ground surface. Based on this finding, infiltration is not expected to be a feasible discharge option for the site runoff. The geotechnical report is provided in Appendix B of this SWMP." This highly outdated study would not recognize changes in soil elevation as the land settles, which have been noted by numerous agencies and individuals including the BDIC and the USACE. The establishment of large ponds could cause changes in water conditions vital to areas just to the North of the proposed Project. Finally, the 2001 study seems to suggest that infiltration of stormwater, which is proposed with the unlined ponds, will be ineffective. This could lead to significant negative impacts if water levels are altered as a result of the development for nearby agriculture. BDIC's experience strongly suggests that the water levels will be impacted. At best, the application is premature without more study of the site conditions and opportunity for BDIC to review final plans. establishing new, large bodies of water is a drastic change to the BDIC system and must be approved by the BDIC. The BDIC reserves the right to alter any designs and require changes to minimize impacts to the BDIC system. Changes will require BDIC signoff and possible 2/3 majority landowner vote to ratify.*
- *The BDIC has broad authority for maintenance of ditches/waterways within its boundaries. Restrictions in this authority, including ability to access for maintenance and alterations to maintenance activities must be approved by a 2/3 majority shareholder vote.*

MFA Response:

- **Spill control will be provided by the berms around the tanks containing oil and containment around the equipment pads (see Figure 1). A comprehensive Spill Prevention, Control, and Countermeasure plan will be developed during final design of the facility.**
- **No alterations will be made to the existing ditches/waterways beyond the culverts through the project site that will convey waterway D to the proposed outfall to McClean Slough (see Discharge Point 002, Figure 2), the associated modifications to waterway G, and the filling of waterway E. Waterway D will be conveyed via culverts through the project site to minimize the impact to existing drainage conditions. The modifications proposed will minimize the impact to existing surface water conveyance patterns and provide conveyance capacity for expected flows consistent with all post-development water quantity and quality requirements. The remaining waterways are outside the limits of disturbance for the project.**

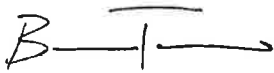
- Waterway G will remain accessible for irrigation and maintenance from the south. NEXT Renewables will coordinate with the BDIC to ensure ongoing access to this waterway, as needed. Runoff from the rail spurs, gravel laydown area, and access roads will be routed through the vegetated ponds and treated by sedimentation and biofiltration. This treatment will reduce the likelihood of potential pollution entering BDIC waterways.
- The impacts to the existing drainage conditions have been documented in the Post-Construction Stormwater Management Plan and all post-development water quantity and quality requirements will be met via the proposed stormwater best management practices.
- The current proposal does not change the overall impact categories in the west rail spur. The original design included a permanent laydown yard (permanent wetland impact) which was replaced by rail lines when the footprint of the rail spur was reduced. The rail lines are also designated as permanent wetland impact. Overall, the total permanent wetland impacts have been reduced in the current proposal.
- An initial groundwater evaluation was prepared by GSI Water Solutions, Inc. on January 25, 2022², documenting anticipated impacts to groundwater from the proposed site development. Additional groundwater evaluations may be completed prior to final design and revisions to the proposed stormwater management plan will be made as needed.
- The proposed stormwater ponds were designed to minimize the impacts to the existing drainage conditions and are not anticipated to significantly alter the available flow to the north of the project site. Culverts will be installed to convey flow from Waterways A, B, and C to minimize impacts to the existing drainage conditions from the construction of the Pipeline/Maintenance Road. The presence of high groundwater, as identified in the groundwater evaluation, is expected to limit the infiltration capacity of the site and the proposed stormwater facilities were designed with the assumption that infiltration is negligible. The proposed ponds were designed with a shallow depth to avoid the need for a liner and minimize groundwater intrusion into the ponds. If additional groundwater evaluations determine that groundwater intrusion will negatively impact the ponds or that the ponds will significantly alter the existing drainage conditions, including groundwater levels and surface water availability, modifications to the design may be made during the final design phase.
- The waterways (except for a portion of waterways D and G) are outside the limits of disturbance for the project and existing drainage pathways and conveyance capacity will be maintained. Waterway E will be filled. By segregating and treating stormwater from the NEXT site and discharging this water close to McLean Slough, conveyance demand on waterways G and F will be reduced relative to the existing condition. Waterways G and F will remain accessible for irrigation and maintenance from the south. The portion of Waterway D along the Pipeline/Maintenance Road will remain accessible from the east. NEXT Renewables will coordinate with the BDIC to ensure ongoing access to the waterways from the north via the proposed on-site gravel access road, as needed.

² GSI. 2022. Groundwater Protectiveness Measures at the NEXT Renewable Fuels Facility, Port Westward, Oregon. GSI Water Solutions, Inc.: Portland, OR. January 25.
R:\1724.01 NEXT Renewable Fuels Inc\Document\004_2024.01.24 BDIC Response Memo\Mf_NEXT BDIC Response to Commissioners.docx
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Please let us know if you have any questions or require additional information.

Sincerely,

Maul Foster & Alongi, Inc.

A handwritten signature in black ink, appearing to read "B Tino", with a horizontal line extending to the right from the end of the name.

Brian Tino, PE
Project Engineer

cc: Gene Cotten, NEXT Renewable Fuels, Inc.

Attachments

Limitations

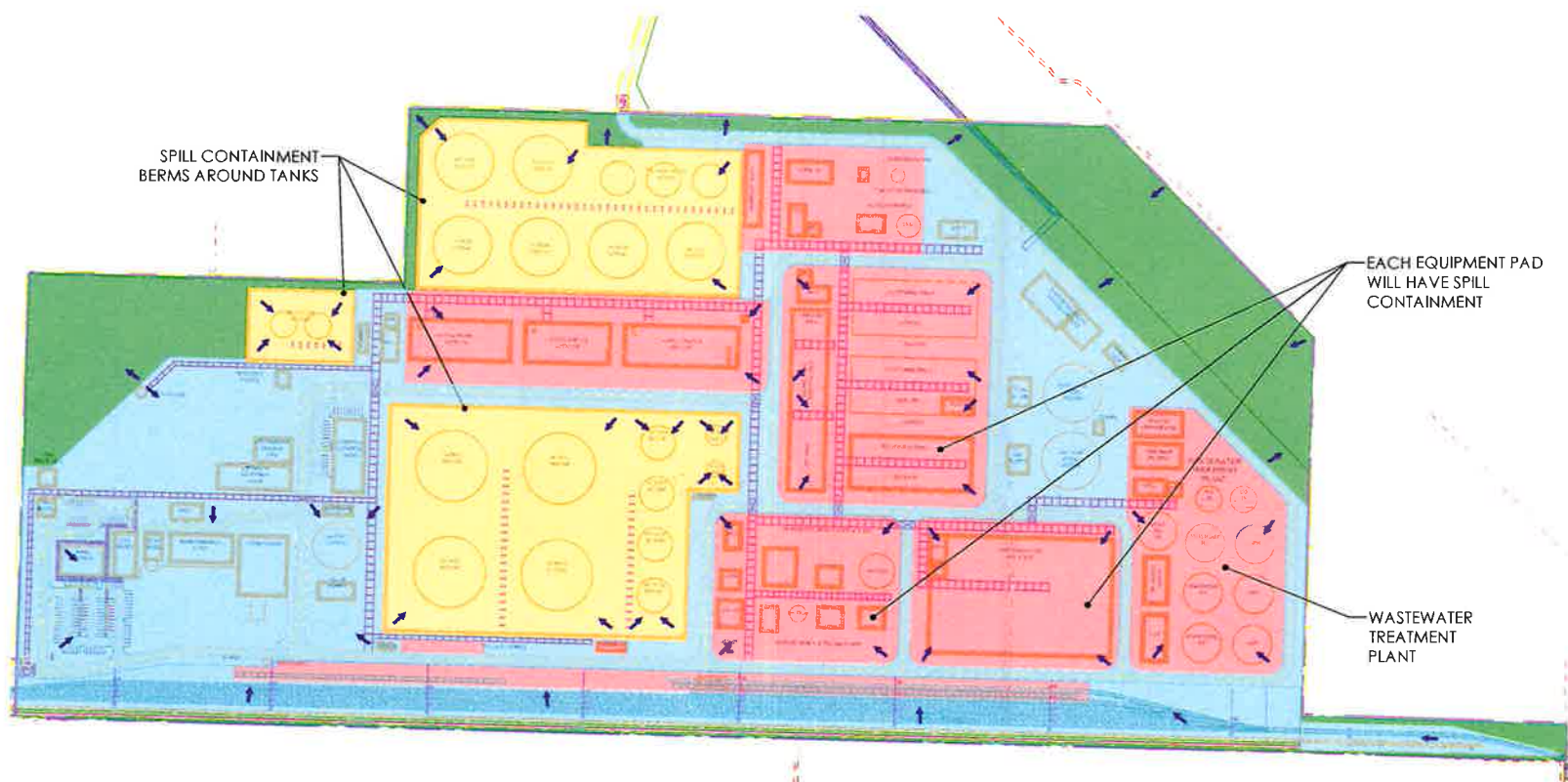
Figures

Limitations

The services undertaken in completing this technical memorandum were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This technical memorandum is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this technical memorandum apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this technical memorandum.

Figures



- LEGEND**
- PROCESS STORMWATER AREAS (33-ACRES)
 - STORMWATER AREAS (42-ACRES)
 - TANK DIKE AREAS (21-ACRES)
 - OTHER PVIOUS AREAS (14-ACRES)
 - DRAINAGE FLOW DIRECTION



PERMIT

Printed by: Sivan Top

MFA JOB #: M1724.01
 ISSUE DATE: 06/29/2023
 CHECKED: B. TINO
 DRAWN: L. DANIEL

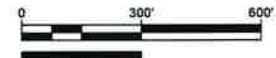
MAUL FOSTER ALONGI
 3140 NE BROADWAY STREET
 PORTLAND, OR 97232
 PHONE: 971.544.2139
 www.maulfooster.com



MAIN PLANT SPILL PREVENTION

NEXT RENEWABLE FUELS OREGON

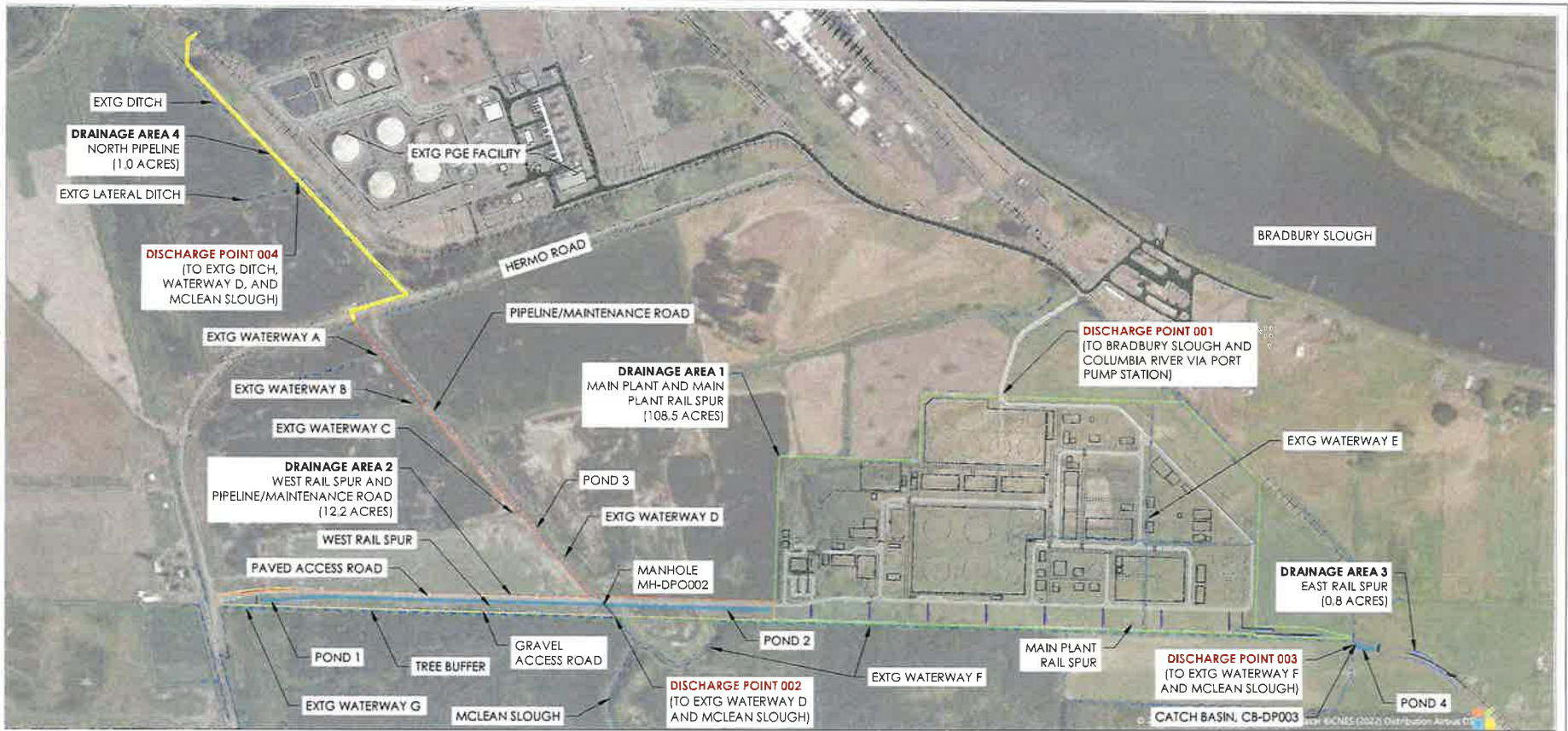
NEXT RENEWABLE FUELS, INC.
 PORT WESTWARD, OREGON



NOTE: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.

FIGURE
1

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 Printed by: Roger Tava



LEGEND			
	STORMWATER POND		RAIL SPUR
	PAVED ROAD		PIPE RACK
	GRAVEL		STORM PIPE
	TREE BUFFER		CATCH BASIN
	DRAINAGE AREA BOUNDARY		EXISTING WATERWAY/DITCH



MFA JOB #: M1724.01
 ISSUE DATE: 11/19/2023
 CHECKED: A. AGUIRRE
 DRAWN: L. DANIEL

 MAUL FOSTER ALONGI
 3140 NE BROADWAY STREET
 PORTLAND, OR 97232
 PHONE: 971.544.2139
 www.maulfooster.com



SITE LAYOUT
NEXT RENEWABLE FUELS OREGON
 NEXT RENEWABLE FUELS, INC.
 PORT WESTWARD, OREGON

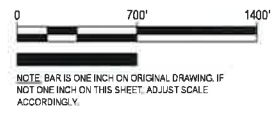


FIGURE
2

Jacyn Normine

From: Stephenson, Garrett H. <GStephenson@SCHWABE.com>
Sent: Wednesday, January 24, 2024 4:45 PM
To: Planning Department.UserGroup
Cc: Hayden Richardson; 'Brian Varricchione (BVarricchione@mcknze.com)'; Hicks, Jane M.
Subject: RE: CU 23-11 & DR 21-03 MOD - Applicant's First Open Record Period Submittal (Email 3)
Attachments: 2014_03-14_SLOPES V Regulations.pdf; 2022.01.25 GW Protection Measures at NEXT.pdf; Air Permit - Issuance Cover Letter.pdf

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Also, do NOT scan any 'QR' codes in this email.

To Whom it May Concern:

Proceeding from our communications below, attached are additional documents respectfully submitted in the above-referenced matter prior to the close of the first open record period.

Please confirm receipt and place these documents into the official record and before the County Board of Commissioners on these proceedings.

Enclosures:

- Copy of Relevant SLOPES V Regulations
- Cover Letter for Issuance of Air Permit and List of General Conditions
- Memo regarding Groundwater Protection measures for NEXT

Please also note that NEXT has received some of the testimony from project opponents submitted during the open record period. Among this testimony are new arguments regarding particulate emissions from mobile sources as well as arguments regarding DEQ's regulation of fixed sources, as stated on pages 6-7 of Columbia Riverkeeper's testimony for the first open record period, dated January 24, 2024. As this constitutes an argument and evidence submitted during the first open record period, the Applicant intends to address these arguments with responsive evidence during its second open record period.

Thank you.

Garrett Stephenson

Shareholder
D: (503) 796-2893
C: (503) 320-3715
gstephenson@schwabe.com

Schwabe

From: Stephenson, Garrett H.
Sent: Wednesday, January 24, 2024 3:13 PM
To: planning@ColumbiaCountyOR.gov

Cc: Hayden Richardson <Hayden.Richardson@columbiacountyor.gov>; 'Brian Varricchione (BVarricchione@mcknze.com)' <BVarricchione@mcknze.com>; Hicks, Jane M. <JHicks@SCHWABE.com>
Subject: RE: CU 23-11 & DR 21-03 MOD - Applicant's First Open Record Period Submittal (Email 2)

To Whom it May Concern:

Proceeding from our communication below, attached are additional documents respectfully submitted in the above-referenced matter prior to the close of the first open record period.

Please confirm receipt and place these documents into the official record and before the County Board of Commissioners on these proceedings.

Thank you.

Enclosures:

- Letter from Brian Varricchione responding to evidence and argument submitted at or shortly before the hearing.
- Letter from Brian Heikkila regarding rail operations.
- Letter from Brian Tino, PE, Maul Foster & Alongi, Inc., responding to comments submitted by the Beaver Drainage District.

Garrett Stephenson

Shareholder
D: (503) 796-2893
C: (503) 320-3715
gstephenson@schwabe.com

Schwabe

From: Stephenson, Garrett H.
Sent: Wednesday, January 24, 2024 2:45 PM
To: planning@ColumbiaCountyOR.gov
Cc: Hayden Richardson <Hayden.Richardson@columbiacountyor.gov>; 'Brian Varricchione (BVarricchione@mcknze.com)' <BVarricchione@mcknze.com>; Hicks, Jane M. <JHicks@SCHWABE.com>
Subject: CU 23-11 & DR 21-03 MOD - Applicant's First Open Record Period Submittal (Email 1)

To Whom it may Concern:

This office represents NEXT Renewable Fuels, Inc., applicant in the above-references land use applications. The Applicant testified orally during the Jan 10, 2024 Columbia County Board Hearing on the applications. At the conclusion of that hearing, the Board closed the record to further oral testimony but allowed the written record to remain open for the following purposes and on the following schedule:

1. Until 5:00 PM on Jan. 24th for any party to submit any evidence or testimony.
2. Until 5:00 PM on Feb. 7th for any party to submit evidence or testimony in response to testimony submitted during the first open record period.
3. Until Feb. 21st for Applicant's final written argument.

This is the first of several emails enclosing the Applicant's testimony and evidence for the first open record period, and is timely submitted prior to 5:00 PM on January 24th. Please confirm receipt and place these documents into the official record and before the County Board of Commissioners on these proceedings.

Thank you.

Enclosures:

- Adopted County Findings on CU-21-04.
- Adopted County Findings on DR 21-03 and V 21-05.

[Garrett Stephenson](#)

Shareholder

D: (503) 796-2893

C: (503) 320-3715

gstephenson@schwabe.com

Schwabe

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to NMFS No.:
NWR-2013-10411

March 14, 2014

Shawn H. Zinszer, Chief
Regulatory Branch
U.S. Army Corps of Engineers, Portland District
P.O. Box 2946
Portland, Oregon 97208-2946

Joyce Casey, Chief
Environmental Resources Branch
Planning, Programs and Project Management Division
U.S. Army Corps of Engineers, Portland District
P.O. Box 2946
Portland, Oregon 97208-2946

Re: Reinitiation of the Endangered Species Act Section 7 Programmatic Conference and Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Revisions to Standard Local Operating Procedures for Endangered Species to Administer Maintenance or Improvement of Stormwater, Transportation or Utility Actions Authorized or Carried Out by the U.S. Army Corps of Engineers in Oregon (SLOPES for Stormwater, Transportation or Utilities).

Dear Mr. Zinszer and Ms. Casey:

The enclosed document contains a programmatic conference and biological opinion (opinion) prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7(a)(2) of the Endangered Species Act (ESA) on the effects of implementing a proposed revised set of standard local operating procedures used by the U.S. Army Corps of Engineers, Portland District (Corps), to authorize or carry out actions to install, maintain or improve stormwater facilities, or to maintain or improve roads, culverts, bridges or utility lines in Oregon (SLOPES for Stormwater, Transportation or Utilities). This action is in accordance with the Corps' regulatory and civil works authorities under section 10 of the Rivers and Harbors Act of 1899, section 404 of the Clean Water Act of 1972, and sections 1135, 206, and 536 of the Water Resources Development Acts of 1986, 1996, and 2000, respectively. Actions covered in this opinion are modified from those analyzed in the biological opinion issued on August 13, 2008, as summarized in the consultation history section of the opinion.



During this consultation, NMFS concluded that the proposed action is not likely to adversely affect southern resident killer whales (*Orcinus orca*) and their designated critical habitat. Southern resident killer whales do not have critical habitat designated in the program action area. NMFS also concluded that the proposed program is not likely to jeopardize the continued existence of the following 17 species, or result in the destruction or adverse modification of their proposed or designated critical habitats.

1. Lower Columbia River (LCR) Chinook salmon (*Oncorhynchus tshawytscha*)
2. Upper Willamette River (UWR) Chinook salmon
3. Upper Columbia River (UCR) spring-run Chinook salmon
4. Snake River (SR) spring/summer run Chinook salmon
5. SR fall-run Chinook salmon
6. Columbia River (CR) chum salmon (*O. keta*)
7. LCR coho salmon (*O. kisutch*)
8. Oregon Coast (OC) coho salmon
9. Southern Oregon/Northern California Coasts (SONCC) coho salmon
10. SR sockeye salmon (*O. nerka*)
11. LCR steelhead (*O. mykiss*)
12. UWR steelhead
13. MCR steelhead
14. UCR steelhead
15. Snake River Basin (SRB) steelhead
16. Southern distinct population segment (DPS) green sturgeon (*Acipenser medirostris*)
17. Southern DPS eulachon (*Thaleichthys pacificus*).

As required by section 7 of the ESA, NMFS is providing an incidental take statement (ITS) with the opinion. The ITS describes reasonable and prudent measures NMFS considers necessary or appropriate to minimize the impact of incidental take associated with this program. The ITS also sets forth nondiscretionary terms and conditions, including reporting requirements, that the Federal action agency must comply with to carry out the reasonable and prudent measures. Incidental take from actions that meet these terms and conditions will be exempt from the ESA's prohibition against the take of the listed species considered in this opinion.

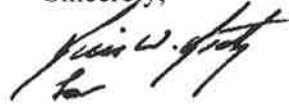
This document also includes the results of our analysis of the program's likely effects on essential fish habitat (EFH) pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), and includes three conservation recommendations to avoid, minimize, or otherwise offset potential adverse effects on EFH. Section 305(b)(4)(B) of the MSA requires Federal agencies to provide a detailed written response to NMFS within 30 days after receiving these recommendations.

If the response is inconsistent with the EFH conservation recommendations, the Corps must explain why the recommendations will not be followed, including the scientific justification for any disagreements over the effects of the program and the recommendations. In response to increased oversight of overall EFH program effectiveness by the Office of Management and Budget, NMFS established a quarterly reporting requirement to determine how many conservation recommendations are provided as part of each EFH consultation and how many are

adopted by the action agency. Therefore, we request that in your statutory reply to the EFH portion of this consultation, you clearly identify the number of conservation recommendations accepted.

If you have any questions regarding this consultation, please contact Marc Liverman of my staff at 503-231-2336, in the Washington/Oregon Coastal Area Office.

Sincerely,

A handwritten signature in black ink, appearing to read "William W. Stelle, Jr.", with a stylized flourish at the end.

William W. Stelle, Jr.
Regional Administrator

cc: Natural Resources Conservation Service
Oregon Department of Fish and Wildlife
Oregon Department of Parks and Recreation
Oregon Department of State Lands
Oregon Watershed Enhancement Board

**Endangered Species Act – Section 7 Programmatic Consultation
Conference and Biological Opinion
and
Magnuson-Stevens Fishery Conservation and
Management Act
Essential Fish Habitat Consultation
for**

Revised Standard Local Operating Procedures for Endangered Species to
Administer Maintenance or Improvement of Stormwater, Transportation, and Utility Actions
Authorized or Carried Out by the U.S. Army Corps of Engineers in Oregon
(SLOPES for Stormwater, Transportation or Utilities)

NMFS Consultation No.: NWR-2013-10411

Action Agency: U.S. Army Corps of Engineers
Portland District, Operations and Regulatory Branches

Affected Species and Determinations:

ESA-Listed Species	ESA Status	Is the action likely to adversely affect this species or its critical habitat?	Is the action likely to jeopardize this species?	Is the action likely to destroy or adversely modify critical habitat for this species?
Lower Columbia River Chinook salmon	T	Yes	No	No
Upper Willamette River Chinook salmon	T	Yes	No	No
Upper Columbia River spring-run Chinook salmon	E	Yes	No	No
Snake River spring/summer run Chinook salmon	T	Yes	No	No
Snake River fall-run Chinook salmon	T	Yes	No	No
Columbia River chum salmon	T	Yes	No	No
Lower Columbia River coho salmon	T	Yes	No	No*
Oregon Coast coho salmon	T	Yes	No	No
Southern Oregon/Northern California coasts coho salmon	T	Yes	No	No
Snake River sockeye salmon	E	Yes	No	No
Lower Columbia River steelhead	T	Yes	No	No
Upper Willamette River steelhead	T	Yes	No	No
Middle Columbia River steelhead	T	Yes	No	No
Upper Columbia River steelhead	T	Yes	No	No
Snake River Basin steelhead	T	Yes	No	No
Southern green sturgeon	T	Yes	No	No
Eulachon	T	Yes	No	No
Southern resident killer whale	T	No	No	N/A

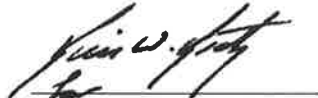
*Critical habitat has been proposed for LCR coho salmon.

Fishery Management Plan that Describes EFH in the Action Area	Would the action adversely affect EFH?	Are EFH conservation recommendations provided?
Coastal Pelagic Species	Yes	Yes
Pacific Coast Groundfish	Yes	Yes
Pacific Coast Salmon	Yes	Yes

Consultation
 Conducted By:

National Marine Fisheries Service
 West Coast Region

Issued by:



William W. Stelle, Jr.
 Regional Administrator

Date Issued:

March 14, 2014

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LIST OF ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
CFR	Code of Federal Regulations
CHART	Critical Habitat Analytical Review Team
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
DPS	distinct population segment
DQA	Data Quality Act
EFH	essential fish habitat
ELJ	engineered log jam
ESA	Endangered Species Act
FHWA	Federal Highways Administration
FR	Federal Register
HUC ₅	fifth-field hydrologic unit code
HQ	hazard quotient
IC	interior Columbia
LCR	lower Columbia River
LW	large wood
MCR	mid Columbia River
MSA	Magnuson – Stevens Act
NMFS	National Marine Fisheries Service
NWP	nationwide permit
OC	Oregon Coast
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife
ODOT	Oregon Department of Transportation
OHW	ordinary high water
OTIA	Oregon Transportation Improvement Act
PAH	polycyclic aromatic hydrocarbon
PCE	primary constituent element
PDC	project design criteria
RHA	Rivers and Harbors Act
SLOPES	standard local operating procedures for endangered species
SONCC	Southern Oregon/Northern California Coasts
SR	Snake River
SRB	Snake River Basin
TRT	technical recovery team
UCR	upper Columbia River
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UWR	upper Willamette River
VSP	viable salmonid population
WLC	Willamette/lower Columbia
WRDA	Water Resources Development Act

1. INTRODUCTION

This Introduction section provides information relevant to the other sections of this document and is incorporated by reference into Sections 2 and 3 below.

1.1 Background

The National Marine Fisheries Service (NMFS) prepared the conference and biological opinion (opinion) and incidental take statement portions of this document in accordance with section 7(b) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531, *et seq.*), and implementing regulations at 50 CFR 402.

We also completed an essential fish habitat (EFH) consultation, in accordance with section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 U.S.C. 1801, *et seq.*) and implementing regulations at 50 CFR 600.

The opinion, incidental take statement, and EFH conservation recommendations are each in compliance with Data Quality Act (44 U.S.C. 3504(d)(1) *et seq.*) and they underwent pre-dissemination review.

On August 12, 2013, the U.S. Army Corps of Engineers, Portland District (Corps), requested to reinitiate consultation on the Standard Local Operating Procedures for Endangered Species (SLOPES) for the maintenance or improvement of stormwater, transportation or utility actions in Oregon. "SLOPES" refers to the process and criteria that the Corps uses to guide the administration of activities regulated under section 10 of the Rivers and Harbors Act of 1899 (RHA) and section 404 of the Clean Water Act of 1972 (CWA) in areas occupied by ESA-listed species or their designated critical habitats.

Section 10 of the RHA requires authorization from the Secretary of the Army for the creation of any structure, excavation, or fills within the limits defined for navigable waters of the U.S, if the structure or work will affect the course, location, or condition of the waterbody. The law applies to any dredging or disposal of dredged material, excavation, filling, channelization, or any other modification of a navigable water of the U.S., and applies to all structures, from the smallest floating dock to the largest commercial undertaking. It further includes, without limitation, any wharf, dolphin, weir, boom, breakwater, jetty, groin, bank stabilization, mooring structures (such as pilings), aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent or semi-permanent obstacle or obstruction.

Section 404 of the CWA requires authorization from the Secretary of the Army, acting through the Corps, for the discharge of dredged or fill material into all waters of the U.S., including adjacent wetlands. Discharges of fill material generally include, without limitation, any placement of fill that is necessary for construction of any type of structure, development, property protection, reclamation, or other work involving the discharge of fill or dredged material. A Corps permit is required whether the work is permanent or temporary. Examples of

temporary discharges included dewatering of dredged material before final disposal, and temporary fills for access roadways, cofferdams, storage, and work areas.

Section 1135 of the Water Resources Development Act (WRDA) authorizes the Corps to modify the structure or operation of a Corps project to restore or improve environmental quality and ecosystem functions impaired by that project, provided that the modification does not conflict with the authorized project purposes. Section 206 of WRDA expands this authority to cover construction of projects for the restoration and protection of aquatic ecosystems unrelated to an existing Corps facility. Section 536 of WRDA authorizes studies and ecosystem restoration actions in the Lower Columbia River and Tillamook Bay. The Corps has environmental restoration programs in place, in Oregon, that are authorized by these authorities and are intended to restore habitat for ESA-listed salmon and steelhead.

Nearly all anadromous fish-bearing streams within the Corps' jurisdiction are occupied by ESA-listed salmon and steelhead and designated as EFH for Chinook salmon and coho salmon. Individual ESA and EFH consultation for permits within these streams results in a substantial workload for both the Corps and NMFS, often with little additional benefit to the species. Many of these activities are minor and repetitive in nature, and consultation on them has resulted in the imposition of similar conditions for regulatory approval. Thus, SLOPES provides a mechanism to describe such activities and the conditions under which they will be conducted, in order to provide a basis for an efficient and effective programmatic ESA consultation.

Applications for actions that fall within the parameters of the current SLOPES procedures, and the effects of which fall within the range of effects considered in the associated biological opinion, are issued a permit with corresponding conditions; applications that do not fall within SLOPES or are not found to be within the range of effects, are not covered by the SLOPES biological opinion but can be submitted by the Corps to NMFS for individual, site-specific ESA and EFH consultation.

1.2 Consultation History

Since March 21, 2001, the Portland District has used SLOPES, as described in a series of programmatic biological opinions,¹²³⁴⁵ to guide its review of individual permit requests under

¹ Programmatic Biological Opinion. 15 Categories of Activities Requiring Department of the Army Permits. (refer to: OSB2001-0016) (March 21, 2001); Programmatic Biological Opinion and Magnuson-Stevens Act Essential Fish Habitat Consultation for Standard Local Operating Procedures for Endangered Species (SLOPES) for Certain Activities Requiring Department of Army Permits in Oregon and the North Shore of the Columbia River (refer to OHB2001-0016-PEC) (June 14, 2002).

² Letter from D. Robert Lohn, NOAA Fisheries, to Lawrence Evans and Thomas Mueller, U.S. Army Corps of Engineers (August 14, 2002) (Amending Terms and Conditions for SLOPES, issued June 14, 2002).

³ Programmatic Biological Opinion and Magnuson-Stevens Act Essential Fish Habitat Consultation for Standard Local Operating Procedures for Endangered Species (SLOPES II) for Certain Regulatory and Operations Activities Carried Out by the Department of Army Permits in Oregon and the North Shore of the Columbia River (refer to: NWR-2003-850) (July 8, 2003).

⁴ Programmatic Biological Opinion and Conference Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Revised Standard Local Operating Procedures for Endangered Species (SLOPES III) to Administer Certain Activities Authorized or Carried Out by the Department of

section 10 of the RHA and section 404 of the CWA, including requests for authorization of activities which are similar to those that may be regulated under the following 2007 Corps nationwide permits (NWP): NWP-3 Maintenance; NWP-6 Survey Activities; NWP-7 Outfall and Associated Intake Structures; NWP-12 Utility Line Activities; NWP-14 Linear Transportation Projects; and NWP-25 Structural Discharge.

Under SLOPES, the Corps is required to provide an annual monitoring report. The report is intended to be a summary of action data and a description of program participation, the quality of supporting analyses, monitoring information, compensatory mitigation provided by applicants, and recommendations to improve the effectiveness of the program. Between 2001 and 2012, the Corps used SLOPES to issue 580 permits for maintenance or improvement of roads, culverts, bridges and utility lines, mostly in the Willamette/Lower Columbia and coastal areas (Table 1).

the Army in the State of Oregon and on the North Shore of the Columbia River (refer to: NWR-2004-1043) (November 30, 2004).

⁵ Programmatic Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Revisions to Standard Local Operating Procedures for Endangered Species to Administer Maintenance or Improvement of Road, Culvert, Bridge and Utility Line Actions Authorized or Carried Out by the U.S. Army Corps of Engineers in Oregon (SLOPES IV Roads, Culverts, Bridges, and Utility Lines) (refer to: NWR-2008-4070) (August 13, 2008).

Table 1. Number of permits for maintenance or improvement of roads, culverts, bridges and utility lines issued by the Corps using SLOPES, by recovery domain and year (n=580).

Recovery Domain	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Willamette/Lower Columbia (n=351)	21	27	36	40	47	26	20	3	25	32	20	54
Interior Columbia (n=38)	8	6	0	2	4	0	0	0	3	4	7	4
Oregon Coast (n=147)	3	4	8	4	9	6	8	9	24	19	32	21
Southern Oregon/Northern California Coasts (n=44)	1	1	2	2	1	3	1	5	5	8	6	9
TOTAL	33	38	46	48	61	35	29	17	57	63	65	88

By design, SLOPES provides a focus for discussion between NMFS, the Corps, and applicants regarding ways to reduce or remove the adverse effects of regulated actions on ESA-listed species, designated critical habitat, and EFH. The delivery of technical assistance for administration of individual actions under SLOPES, interagency training in the use of SLOPES, the SLOPES annual review process, and many individual consultations that are beyond the range of actions authorized by SLOPES, have all been informed by previous SLOPES opinions, and thus helped to ensure that SLOPES will continue to be adaptive, accountable, and credible as a conservation and regulatory tool. Over the years, the Federal Highway Administration (FHWA), Natural Resources Conservation Service, Oregon Department of Environmental Quality (ODEQ), Oregon Department of Fish and Wildlife (ODFW), Oregon Department of Transportation (ODOT), Oregon Division of State Lands, Oregon Marine Board, Oregon Watershed Enhancement Board, Oregon Public Ports Association, the City of Portland, various port authorities, and others with a substantial and recurrent stake in the Corps' regulatory program have each made major contributions to the development of SLOPES.⁶

In some cases, requests by those action agencies for a separate programmatic consultation have been collected into SLOPES. This was possible because the Corps consented to act as the lead agency for consultation, and the SLOPES opinion already encompassed analyses of effects of those actions and corresponding measures to minimize take, or could be easily expanded to do so (*e.g.*, activities related to geological drilling and surveying; maintenance of boat docks, commercial marinas, ports, and roads; regulatory streamlining; stormwater facilities, stream and wetland restoration). This helped to ensure that SLOPES is based on the highest quality scientific information and strong, collaborative partnerships, and will continue to yield the highest degree of conservation effectiveness and regulatory efficiency.

In this way, NMFS and the Corps have examined the shared characteristics of many regulatory actions with similar effects and identified those types of actions for which short-term environmental effects are likely to be low intensity, repetitive, and predictable, and for which long-term effects are likely to contribute to the recovery of listed species. These individual actions also have similar requirements for regulatory approval and, beyond confirmation that each action meets applicable constraints on design and the use of conservation practices, would not reward additional analysis or deliberation with further conservation benefits. NMFS and the Corps have used the information in SLOPES to set clear expectations and achieve consistent outcomes that, with other important regulatory initiatives, have significantly reduced conflict over listed species and regulatory actions, thus improving public relations and creating new opportunities for further advances in listed species conservation.

The broad scope of the Corps' regulatory program, the rapid pace at which interested parties have gained and shared practical experience using SLOPES, and the need to assure adequate oversight in light of evolving ESA policies often require the Corps to adjust the actions authorized by SLOPES. Moreover, many requests by the Corps and various applicants for assistance regarding the use of SLOPES for actions related to stream and wetland restoration,

⁶ See *e.g.*, Letter from Lawrence C. Evans, U.S. Army Corps of Engineers, to Michael Crouse, NMFS, (December 26, 2002) (requesting programmatic consultation for maintenance and restoration activities conducted by port authorities and commercial/industrial organizations); NMFS (2003).

streambank stabilization, transportation, and over and in-water structures, led NMFS to conclude that SLOPES can be better managed if these categories are addressed in separate opinions. This will allow these consultation documents to be more focused on specific consultation needs, rather than dependent on reissuance of the entire opinion. Accordingly, on April 5, 2012, NMFS issued a SLOPES opinion for In-water Over-water Structures) (NMFS 2012d) and on March 19, 2013, NMFS issued an updated SLOPES opinion for Stream Restoration and Fish Passage Improvement Actions (NMFS 2013d).

Additionally, on November 28, 2012, NMFS completed a programmatic biological opinion with the Federal Highways Administration on the effects of the Oregon Division of the Federal Highways Administration's proposal to use the Federal Aid Highway Program to fund, in whole or in part, capital improvements of the transportation system in the State of Oregon, including aquatic habitat restoration and fish passage projects, through a system of Federal grants that are apportioned by legislative formulas, at the discretion of the FHWA, or by Congressional earmark, as governed by Title 23 of the United State Code. The aquatic habitat restoration and fish passage projects to be funded in this way are intended to mitigate for the adverse impact of transportation projects, to meet ecological stewardship goals related to the conservation of ESA-listed species, or as an initial step toward development of a conservation or wetland mitigation bank (NMFS 2011h).

Experience with the Oregon Transportation Improvement Act (OTIA III) was developed primarily through implementation of a joint biological opinion issued by NMFS and the USFWS to the Corps and FHWA on the effects of authorizing and funding the OTIA III program (NOAA Fisheries and USFWS 2004). The program is administered by the Oregon Bridge Delivery Partners, a private-sector firm under contract with ODOT, and has earned national and regional recognition for excellence in environmental stewardship and regulatory streamlining.⁷ As of April 2013, 264 bridges have been built, and seven are under construction using OTIA III performance standards.⁸ The fluvial performance standard developed for OTIA III to allow normative physical processes within the stream-floodplain corridor was used in this consultation as a model for the project design criteria (PDC) for permanent stream crossing design.

In 2012, the Corps coordinated with NMFS to develop a revised set of SLOPES for the maintenance or improvement of stormwater, transportation or utility actions in Oregon (SLOPES for Stormwater, Transportation or Utilities) and, as indicated above, on August 12, 2013, submitted a request to NMFS to consult on these SLOPES. The Corps determined that the proposed program covered in this opinion and projects funded under that program "may affect, but are not likely to adversely affect" the eastern distinct population segment (DPS) Steller sea lions (*Eumetopias jubatus*) and southern resident killer whales (*Orcinus orca*). The Corps also concluded that the proposed program and funded projects "may affect, and are likely to

⁷ E.g., American Association of State Highway and Transportation Officials (AASHTO) Team Excellence Award (2007); AASHTO Best Program Award for Environmental Excellence (2005); FHWA Environmental Excellence Award (2004); USFWS Environmental Stewardship Excellence Award (2004).

⁸ Testimony of Tom Lauer, major projects branch manager, ODOT, before the Oregon House Committee on Transportation (February 20, 2008) (OTIA III state bridge delivery program and context sensitive and sustainable solutions).

adversely affect” 17 ESA-listed species and their designated critical habitats. Critical habitat has been proposed for LCR coho salmon; therefore, NMFS is issuing a conference opinion on this critical habitat.

In Section 2.11 of this opinion, NMFS concurred with the Corps’ finding that the proposed action is not likely to adversely southern resident killer whales. On October 23, 2013, NMFS removed Steller sea lion from ESA list effective December 4, 2013. Also, the proposed action “would adversely affect” areas designated by the Pacific Fisheries Management Council as EFH for Pacific salmon (PFMC 1999), groundfish (PFMC 2005), and coastal pelagic species (PFMC 1998), including estuarine areas designated as Habitat Areas of Particular Concern. Detailed information on the status and trends of these listed resources, and their biology and ecology, are in the listing regulations and critical habitat designations published in the Federal Register (Table 2).

Table 2. Listing status, status of critical habitat designations and protective regulations, and relevant Federal Register (FR) decision notices for ESA-listed species considered in this opinion. Listing status: ‘T’ means listed as threatened under the ESA; ‘E’ means listed as endangered; ‘P’ means proposed for listing or designation.

Species	Listing Status	Critical Habitat	Protective Regulations
Chinook salmon (<i>Oncorhynchus tshawytscha</i>)			
Lower Columbia River	T 6/28/05; 70 FR 37160	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Upper Willamette River spring-run	T 6/28/05; 70 FR 37160	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Upper Columbia River spring-run	E 6/28/05; 70 FR 37160	9/02/05; 70 FR 52630	ESA section 9 applies
Snake River spring/summer-run	T 6/28/05; 70 FR 37160	10/25/99; 64 FR 57399	6/28/05; 70 FR 37160
Snake River fall-run	T 6/28/05; 70 FR 37160	12/28/93; 58 FR 68543	6/28/05; 70 FR 37160
Chum salmon (<i>O. keta</i>)			
Columbia River	T 6/28/05; 70 FR 37160	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Coho salmon (<i>O. kisutch</i>)			
Lower Columbia River	T 6/28/05; 70 FR 37160	P 1/14/13; 78 FR 2726	6/28/05; 70 FR 37160
Oregon Coast	T 6/20/11; 76 FR 35755	2/11/08; 73 FR 7816	2/11/08; 73 FR 7816
Southern Oregon/Northern California Coasts	T 6/28/05; 70 FR 37160	5/5/99; 64 FR 24049	6/28/05; 70 FR 37160
Sockeye salmon (<i>O. nerka</i>)			
Snake River	E 8/15/11; 70 FR 37160	12/28/93; 58 FR 68543	ESA section 9 applies
Steelhead (<i>O. mykiss</i>)			
Lower Columbia River	T 1/5/06; 71 FR 834	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Upper Willamette River	T 1/5/06; 71 FR 834	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Middle Columbia River	T 1/5/06; 71 FR 834	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Upper Columbia River	T 1/5/06; 71 FR 834	9/02/05; 70 FR 52630	2/1/06; 71 FR 5178
Snake River Basin	T 1/5/06; 71 FR 834	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Green sturgeon (<i>Acipenser medirostris</i>)			
Southern DPS	T 4/07/06; 71 FR 17757	10/09/09; 74 FR 52300	6/2/10; 75 FR 30714
Eulachon (<i>Thaleichthys pacificus</i>)			
Southern DPS	T 3/18/10; 75 FR 13012	10/20/11; 76 FR 65324	None.

1.3 Proposed Action

For this consultation, the proposed action is a revised set of SLOPES that the Corps uses to guide the permitting of stormwater facilities, maintenance and improvement of roads, culverts, bridges and utility lines as regulated under section 10 of the Rivers and Harbors Act of 1899 and section 404 of the Clean Water Act, including NWP27, or that are carried out by the Corps as part of civil works programs authorized by sections 206, 536, and 1135 of the Water Resources Development Act. Use of the revised SLOPES will ensure that the Corps' regulatory oversight of these aquatic habitat actions will continue to meet requirements of the ESA and MSA with procedures that are simpler to use, more efficient, and more accountable for all parties.

The Corps is proposing to use SLOPES for Stormwater, Transportation or Utilities to authorize four categories of actions, specifically:

Natural hazard response to complete an unplanned, immediate, or short-term repair of a stormwater facility, road, culvert, bridge, or utility line without federal assistance. These include in-water repairs that must be made before the next in-water work period to resolve critical conditions that, unless corrected, are likely to cause loss of human life, unacceptable loss of property, or natural resources. Natural hazards may include, but are not limited to, a flood that causes scour erosion and significantly weakens the foundation of a road or bridge; culvert failure due to blockage by fluvial debris, overtopping, or crushing; and ground saturation that causes a debris slide, earth flow, or rock fall to cover a road. This category of actions is only included to the extent that they require Corps permits or are undertaken by the Corps, but otherwise do not require federal authorization, funding, or federal agency involvement.. The response will include an assessment of its effects to listed species and critical habitats and a plan to bring the response into conformance with all other applicable PDC in this opinion, including compensatory mitigation based on the baseline conditions prior to the natural hazard.

Streambank and channel stabilization to ensure that roads, culverts, bridges and utility lines do not become hazardous due to the long-term effects of toe erosion, scour, subsurface entrainment, or mass failure. This action includes installation and maintenance of scour protection, such as at a footing, facing, or headwall, to prevent scouring or down-cutting of an existing culvert, road foundation, or bridge support. It does not include scour protection for bridge approach fills. Proposed streambank stabilization methods include alluvium placement, vegetated riprap with large wood (LW), log or roughened rock toe, woody plantings, herbaceous cover, deformable soil reinforcement, coir logs, bank reshaping and slope grading, floodplain flow spreaders, floodplain roughness, and engineered log jams (ELJs), alone or in combination. Any action that requires additional excavation or structural changes to a road, culvert, or bridge foundation is covered under road, culvert and bridge maintenance, rehabilitation, and replacement.

Road surface, culvert and bridge maintenance, rehabilitation and replacement. Maintenance, rehabilitation, and replacement to ensure that roads, culverts and bridges remain safe and reliable for their intended use without impairing fish passage, to extend their service life, and to withdraw temporary access roads from service in a way that promotes watershed restoration when their usefulness has ended. This includes actions necessary to complete

geotechnical surveys, such as access road construction, drill pad preparation, mobilization and set up, drilling and sampling operations, demobilization, boring abandonment, and access road and drill pad reclamation. It also includes, excavation, grading, and filling necessary to maintain, rehabilitate, or replace existing roads, culverts, and bridges. This type of action does not include significant channel realignment, installation of fish passage (e.g., fish ladders, juvenile fish bypasses, culvert baffles, roughened chutes, step weirs), tidegate maintenance or replacements other than full removal, construction of new permanent roads within the riparian zone that are not a bridge approach, or construction of a new bridge where a culvert or other road stream crossing did not previously exist, or any project which will result in or contribute to other land use changes that trigger effects, including indirect effects not considered in this opinion.

Stormwater facilities and utility line stream crossings to install, maintain, rehabilitate, or replace stormwater facilities, or pipes or pipelines used to transport gas or liquids, including new or upgraded stormwater outfalls, and cables, or lines or wires used to transmit electricity or communication. Construction, maintenance or improvement of stormwater facilities include surveys, access road construction, excavation, grading, and filling necessary to maintain, rehabilitate, or replace existing stormwater treatment or flow control best management practices (BMPs). Utility line actions involve excavation, temporary side casting of excavated material, backfilling of the trench, and restoration of the work site to preconstruction contours and vegetation. This type of action does not include construction or enlargement of gas, sewer, or water lines to support a new or expanded service area for which effects, including indirect effects from interrelated or interdependent activities, have not been analyzed in this opinion. This opinion also does not include construction of any line that transits the bed of an estuary or saltwater area at depths less than -10.0 feet (mean lower low water).

1.3.1 Proposed Design Criteria (PDC)

The Corps proposed to apply the following PDC, in relevant part, to every action authorized under this opinion. Measures described under “Administration” apply to the Corps as it manages the SLOPES for Stormwater, Transportation or Utilities program. Measures described under “General Construction” apply, in relevant part, to each action that involves a construction component. Measures described under “Types of Action” apply, in relevant part, to each specific type of actions as described.

1.3.1.1 Program Administration

- 1. Initial Rollout.** The Corps will cooperate with NMFS to provide an initial rollout of this opinion for Corps staff to ensure that these conditions are considered at the onset of each project, incorporated into all phases of project design, and that any constraints, such as the need for fish passage or hydrologic engineering, are resolved early on and not under-designed as add-on features.
- 2. Corps Review and Approval.** The Corps will review and approve each project to be covered under this opinion to ensure that:
 - a. Projects are within the present or historical range of an ESA-listed salmon, steelhead, southern green sturgeon, or eulachon, or designated critical habitat.
 - b. Project effects are within the range considered in this opinion.

- c. Permits will include each of the relevant PDC as an enforceable condition of every action authorized under this opinion. The Corps will also include each applicable PDC as a final action specification of every WRDA civil works action carried out under this opinion.
- d. Activities not included in this SLOPES and therefore not covered by this opinion (but available for individual consultation) include the following actions, or result in the following conditions:
 - i. Installation, replacement or repair of a tide gate.
 - ii. Use of preservative or pesticide-treated wood (“treated wood”), except as described in PDC #29.
 - iii. Installation of stream barbs, non-porous partially spanning weirs, or full-spanning weirs.
 - iv. In-water work in the Willamette River downstream of Willamette Falls between December 1 and January 31, unless the in-water work is part of a natural hazard response.
 - v. Any action that would cause the program to exceed the amount or extent of incidental take described in the incidental take statement issued with this opinion.
 - vi. Land use changes (*i.e.*, new subdivision or other large development requiring a CWA§404 permit) that trigger effects, including indirect effects, not considered in this opinion.
 - vii. Any action that requires an environmental impact statement (EIS) under the National Environmental Policy Act (NEPA) that evaluates alternatives affecting listed species.
 - viii. Construction of a new permanent road within a riparian area⁹ that is not a stream-road crossing approach, except as necessary to restore an historical stream channel.

⁹ For this opinion only, “riparian area” means land: (1) within a distance equal to the height of one “site potential tree” (SPTH) of any natural waterbody occupied by ESA-listed salmon or steelhead during any part of the year, or designated as critical habitat; (2) within 100 feet of any “natural waterbody” within ¼ mile upstream of areas occupied by ESA-listed salmon or steelhead, or designated as critical habitat, and that is physically connected by an aboveground channel system such that water, sediment, or woody material delivered to such waters will eventually be delivered to water occupied by ESA-listed salmon or steelhead or designated as critical habitat; and (3) within 50 feet of any “natural water” more than a ¼ mile upstream of areas occupied by ESA-listed salmon or steelhead, or designated as critical habitat, and that is physically connected by an above-ground channel system such that water, sediment, or woody material delivered to such waters will eventually be delivered to water occupied by listed salmon or designated as critical habitat.

“SPTH” means the average height, at age 100, of the tallest, mature, native conifer species that is capable of growing in the soils found at that site and for which height measurements are noted in the soil survey reports published by National Resource Conservation Service (NRCS). Each local NRCS field office maintains the surveys for its area. West of the Cascade Mountains summit, the SPTH will be based on either Douglas-fir or western hemlock. East of Cascade Mountains summit, the species could be ponderosa pine, lodgepole pine, western larch, Engelmann spruce, subalpine fir, grand fir or Douglas-fir. For sites that historically supported cottonwood as the largest tree, the SPTH is the average height, at age 75, of a black cottonwood tree growing under those site conditions. For saltwater areas, the riparian area will begin at the mean higher high water (MHHW); for lakes, the riparian area begins at the high-water mark or the edge of an immediately contiguous wetland, and for wetlands the riparian area begins at the upper wetland boundary. Distances from a stream or waterbody are measured horizontally

3. **NMFS Review and Approval.** The Corps will also ensure that NMFS reviews and approves each project with any of the following elements for consistency with this opinion before the action is authorized or carried out:
 - a. Pile installation (PDC 15)
 - b. Fish screens on pump intakes for dewatering at a rate that exceeds 3 cfs (PDC 34)
 - c. Stormwater facilities (PDC 36 & 43)
 - d. New or upgraded stormwater outfalls (PDC 36 & 43)
 - e. Compensatory mitigation (PDC 39)
 - f. Alluvium placement that occupies more than 25% of the channel bed or more than 25% of the bankfull cross sectional area (PDC 41d)
 - g. LW placement that occupies greater than 25% of the bankfull cross section area (PDC 41e)
 - h. Vegetated riprap with LW (PDC 41f)
 - i. Engineered log jams (PDC 41h)
 - j. Grade stabilization (PDC 42b)
 - k. Road-stream crossing replacement or retrofit (42e)
 - l. Fish passage restoration
 - m. Restoration of a historic stream channel
 - n. Blasting
 - o. Earthwork at an EPA-designated Superfund Site, a state-designated clean-up area, or in the likely impact zone of a significant contaminant source, as identified by historical information or the Corps' best professional judgment.
 - p. Modification or variance of any requirement in a manner that does not require reinitiation of consultation (see Section 2.10).
4. **Electronic Notification.** The Corps will initiate NMFS' review by submitting an Action Implementation Form (Appendix A) with Part 1, the project notification portion, completed to the "SLOPES mailbox," at slopes.nwr@noaa.gov, at least 30-days before start of construction with sufficient detail for NMFS to ensure that the proposed action is consistent with all provisions of this opinion.¹⁰
5. **Full Implementation Required.** Failure to comply with all applicable conditions for a specific project may invalidate protective coverage of ESA section 7(o)(2) regarding

from, and perpendicular to, the bankfull elevation, the edge of the channel migration area, or the edge of any associated wetland, whichever results in the greatest riparian area width.

"Natural waterbody" means any perennial or seasonal water or wetland, except water conveyance systems that are artificially constructed and actively maintained for irrigation.

"Channel" means the channel migration zone, (*i.e.*, the area where the active channel of a stream is prone to movement over time) (Rapp and Abbe 2003). Streams, regardless of size, that are tributary to a main channel have the same width riparian area as the main channel. All side channels that have flowing water when the main channel is at bankfull stage have a riparian area along each bank that is similar in size and plant composition to the riparian area along the main channel. A riparian area that follows the bankfull line of a watercourse continues around the upland edge of contiguous wetlands. Wetlands that are within the active floodplain, (*i.e.*, the floodprone area) but are not contiguous to a channel, will have a riparian area as described above for waterbodies.

For discussions of the ability of a riparian area to protect aquatic habitats against the adverse effects of upland disturbance. See Johnson and Ryba (1992), FEMAT (1993), Castelle *et al.* (1994), Spence *et al.* (1996), and USDA-Natural Resources Conservation Service (1999).

¹⁰ NMFS will notify the Corps within 30 calendar days if the action is approved or disqualified.

“take” of listed species, and may lead NMFS to a different conclusion regarding the effects of that project.

6. **Site Access.** The Corps will retain the right of reasonable access to each project site to monitor the use and effectiveness of these conditions.
7. **Project Completion Report.** The Corps will submit, or ensure that the permittee submits, the Action Implementation Form (Appendix A, PDC 4) with the completion report portion completed (Parts 1 and 2) to the SLOPES mailbox within 60 days of the end of construction for any project authorized or carried out by the Corps.
8. **Natural Hazard Response Report.** The Corps will submit the Action Implementation Form (Appendix A, PDC 4) with the natural hazard response report (Parts 1 and 2) to the SLOPES mailbox within 30 days of the initial reaction to any natural hazard that is authorized or carried out by the Corps.
9. **Site Restoration or Compensatory Mitigation Report.** The Corps will submit a site restoration or compensatory mitigation report (Appendix A, with Parts 1-4 completed) to the SLOPES mailbox by December 31 of the year that the Corps approves that the site restoration or compensatory mitigation is complete.
10. **Annual Program Report.** The Corps’ Regulatory and Civil Works Branches will each submit a monitoring report to the SLOPES mailbox by February 15 each year that describes the Corps’ efforts to carry out this opinion, including an assessment of overall program activity, a map showing the location and type of each action authorized or carried out under this opinion, and any other data or analyses the Corps deems necessary or helpful to assess habitat trends as a result of actions authorized under this opinion.
11. **Annual Coordination Meeting.** The Corps’ Regulatory and Civil Works branches will attend an annual coordination meeting with NMFS by March 31 each year to discuss the annual report and any actions that can improve conservation under this opinion, or make the program more efficient or accountable.
12. **Failure to Report May Trigger Reinitiation.** NMFS may recommend reinitiation of this consultation if the Corps, or the permittee if applicable, fails to provide all applicable notification, completion, fish salvage, site restoration/compensatory mitigation reports or annual program reports, or attend the annual coordination meeting.

1.3.1.2 Project Design Criteria - General Construction Measures

13. **Project Design**
 - a. Use the best available scientific information regarding the likely impacts of climate change on resources in the project area to design the project so that it will be resilient to those impacts, including projections of local stream flow, water temperature, and extreme events.
 - b. Assess whether the project area is contaminated by chemical substances that may cause harm if released by the project. The assessment will be commensurate with site history and may include the following:
 - i. Review available records, *e.g.*, the history of existing structures and contamination events.
 - ii. If the project area was used for industrial processes, inspect to determine the environmental condition of the property.
 - iii. Interview people who are knowledgeable about the site, *e.g.*, site owners,

- operators, and occupants, neighbors, or local government officials.
 - iv. If contamination is found or suspected, consult with a suitably qualified and experienced contamination professional and NMFS before carrying out ground disturbing activities.
 - c. Obtain all applicable regulatory permits and authorizations before starting construction.
 - d. Minimize the extent and duration of earthwork, *e.g.*, compacting, dredging, drilling, excavation, and filling.
- 14. **In-Water Work Timing**
 - a. Unless the in-water work is part of a natural hazard response, complete all work within the wetted channel during dates listed in the most recent version of Oregon In-water Work Guidelines (ODFW 2008), except that that in-water work in the Willamette River below Willamette Falls is not approved between December 1 and January 31.
 - b. Hydraulic and topographic measurements and placement of LW or gravel may be completed anytime, provided the affected area is not occupied by adult fish congregating for spawning, or redds containing eggs or pre-emergent alevins.
- 15. **Pile Installation.** Pile may be concrete, or steel round pile 24 inches in diameter or smaller, steel H-pile designated as HP24 or smaller, or wood that has not been treated with preservatives or pesticides. Any proposal to use treated wood pilings is not covered by this consultation and will require individual consultation.
 - a. NMFS will review and approve pile installation plans.
 - b. When practical, use a vibratory hammer for in-water pile installation. In the lower Columbia River only a vibratory hammer may be used in October.
 - c. Jetting may be used to install pile in areas with coarse, uncontaminated sediments that meet criteria for unconfined in-water disposal (USACE Northwest Division 2009).
 - d. When using an impact hammer to drive or proof a steel pile, one of the following sound attenuation methods will be used:
 - i. Completely isolate the pile from flowing water by dewatering the area around the pile.
 - ii. If water velocity is 1.6 feet per second or less, surround the pile being driven by a confined or unconfined bubble curtain that will distribute small air bubbles around 100% of the pile perimeter for the full depth of the water column. See, *e.g.*, NMFS and USFWS (2006), Wursig *et al.* (2000), and Longmuir and Lively (2001).
 - iii. If water velocity is greater than 1.6 feet per second, surround the pile being driven with a confined bubble curtain (*e.g.*, surrounded by a fabric or non-metallic sleeve) that will distribute air bubbles around 100% of the pile perimeter for the full depth of the water column.
 - iv. Provide NMFS information regarding the timing of in-water work, the number of impact hammer strikes per pile and the estimated time required to drive piles, hours per day pile driving will occur, depth of water, and type of substrate, hydroacoustic assumptions, and the pile type, diameter, and spacing of the piles.
- 16. **Pile Removal.** The following steps will be used to minimize creosote release, sediment

disturbance and total suspended solids:

- a. Install a floating surface boom to capture floating surface debris.
- b. Keep all equipment (*e.g.*, bucket, steel cable, vibratory hammer) out of the water, grip piles above the waterline, and complete all work during low water and low current conditions.
- c. Dislodge the pile with a vibratory hammer, when possible; never intentionally break a pile by twisting or bending.
- d. Slowly lift the pile from the sediment and through the water column.
- e. Place the pile in a containment basin on a barge deck, pier, or shoreline without attempting to clean or remove any adhering sediment. A containment basin for the removed piles and any adhering sediment may be constructed of durable plastic sheeting with sidewalls supported by hay bales or another support structure to contain all sediment and return flow which may otherwise be directed back to the waterway.
- f. Fill the hole left by each pile with clean, native sediments immediately after removal
- g. Dispose of all removed piles, floating surface debris, any sediment spilled on work surfaces, and all containment supplies at a permitted upland disposal site.

17. Broken or Intractable Pile

- a. If a pile breaks above the surface of uncontaminated sediment, or less than 2 feet below the surface, make every attempt short of excavation to remove it entirely. If the pile cannot be removed without excavation, drive the pile deeper if possible.
- b. If a pile in contaminated sediment is intractable or breaks above the surface, cut the pile or stump off at the sediment line.
- c. If a pile breaks within contaminated sediment, make no further effort to remove it and cover the hole with a cap of clean substrate appropriate for the site.
- d. If dredging is likely where broken piles are buried, use a global positioning system (GPS) device to note the location of all broken piles for future use in site debris characterization.

18. Fish Capture and Release

- a. If practicable, allow listed fish species to migrate out of the work area or remove fish before dewatering; otherwise remove fish from an exclusion area as it is slowly dewatered with methods such as hand or dip-nets, seining, or trapping with minnow traps (or gee-minnow traps).
- b. Fish capture will be supervised by a qualified fisheries biologist, with experience in work area isolation and competent to ensure the safe handling of all fish.
- c. Conduct fish capture activities during periods of the day with the coolest air and water temperatures possible, normally early in the morning to minimize stress and injury of species present.
- d. Monitor the nets frequently enough to ensure they stay secured to the banks and free of organic accumulation.
- e. Electrofishing will be used during the coolest time of day, only after other means of fish capture are determined to be not feasible or ineffective.
 - i. Do not electrofish when the water appears turbid, *e.g.*, when objects are not visible at depth of 12 inches.
 - ii. Do not intentionally contact fish with the anode.

- iii. Follow NMFS (2000) electrofishing guidelines, including use of only direct current (DC) or pulsed direct current within the following ranges:¹¹
 - 1. If conductivity is less than 100 μ s, use 900 to 1100 volts.
 - 2. If conductivity is between 100 and 300 μ s, use 500 to 800 volts.
 - 3. If conductivity greater than 300 μ s, use less than 400 volts.
- iv. Begin electrofishing with a minimum pulse width and recommended voltage, then gradually increase to the point where fish are immobilized.
- v. Immediately discontinue electrofishing if fish are killed or injured, *i.e.*, dark bands visible on the body, spinal deformations, significant de-scaling, torpid or inability to maintain upright attitude after sufficient recovery time. Recheck machine settings, water temperature and conductivity, and adjust or postpone procedures as necessary to reduce injuries.
- f. If buckets are used to transport fish:
 - i. Minimize the time fish are in a transport bucket.
 - ii. Keep buckets in shaded areas or, if no shade is available, covered by a canopy.
 - iii. Limit the number of fish within a bucket; fish will be of relatively comparable size to minimize predation.
 - iv. Use aerators or replace the water in the buckets at least every 15 minutes with cold clear water.
 - v. Release fish in an area upstream with adequate cover and flow refuge; downstream is acceptable provided the release site is below the influence of construction.
 - vi. Be careful to avoid mortality counting errors.
- g. Monitor and record fish presence, handling, and injury during all phases of fish capture and submit a fish salvage report (Appendix A, Part 1 with Part 3 completed) to the Corps and the SLOPES mailbox (slopes.nwr@noaa.gov) within 60 days.

19. Fish Passage

- a. Provide fish passage for any adult or juvenile ESA-listed fish likely to be present in the action area during construction, unless passage did not exist before construction or the stream is naturally impassable at the time of construction.
- b. After construction, provide fish passage for any adult or juvenile ESA-listed fish that meets NMFS's fish passage criteria (NMFS 2011a) for the life of the action.

20. Fish Screens

- a. Submit to NMFS for review and approval fish screen designs for surface water diverted by gravity or by pumping at a rate that exceeds 3 cubic feet per second (cfs).
- b. All other diversions will have a fish screen that meets the following specifications:

¹¹ National Marine Fisheries Service. 2000. Guidelines for electrofishing waters containing salmonids listed under the Endangered Species Act. Portland, Oregon and Santa Rosa, California.
http://swr.nmfs.noaa.gov/sr/Electrofishing_Guidelines.pdf

- i. An automated cleaning device with a minimum effective surface area of 2.5 square feet per cubic foot per second, and a nominal maximum approach velocity of 0.4 feet per second, or no automated cleaning device, a minimum effective surface area of 1 square foot per cubic foot per second, and a nominal maximum approach rate of 0.2 foot per second; and
 - ii. A round or square screen mesh that is no larger than 2.38 millimeters (mm) (0.094”) in the narrow dimension, or any other shape that is no larger than 1.75 mm (0.069”) in the narrow dimension.
 - c. Each fish screen will be installed, operated, and maintained according to NMFS’s fish screen criteria.
- 21. **Surface Water Withdrawal**
 - a. Surface water may be diverted to meet construction needs, including dust abatement, only if water from developed sources (*e.g.*, municipal supplies, small ponds, reservoirs, or tank trucks) are unavailable or inadequate; and
 - b. Diversions may not exceed 10% of the available flow and will have a juvenile fish exclusion device that is consistent with NMFS’s criteria (NMFS 2011a).¹²
- 22. **Construction Discharge Water.** Treat all discharge water using best management practices to remove debris, sediment, petroleum products, and any other pollutants likely to be present (*e.g.*, green concrete, contaminated water, silt, welding slag, sandblasting abrasive, grout cured less than 24 hours, drilling fluids), to avoid or minimize pollutants discharged to any perennial or intermittent water body. Pump seepage water from the de-watered work area to a temporary storage and treatment site or into upland areas and allow water to filter through vegetation prior to reentering the stream channel. Treat water used to cure concrete until pH stabilizes to background levels.
- 23. **Temporary Access Roads and Paths**
 - a. Whenever reasonable, use existing access roads and paths preferentially.
 - b. Minimize the number and length of temporary access roads and paths through riparian areas and floodplains.
 - c. Minimize removal of riparian vegetation.
 - d. When it is necessary to remove vegetation, cut at ground level (no grubbing).
 - e. Do not build temporary access roads or paths where grade, soil, or other features suggest slope instability.
 - f. Any road on a slope steeper than 30% will be designed by a civil engineer with experience in steep road design.
 - g. After construction is complete, obliterate all temporary access roads and paths, stabilize the soil, and revegetate the area.
 - h. Temporary roads and paths in wet areas or areas prone to flooding will be obliterated by the end of the in-water work window. Decompact road surfaces and drainage areas, pull fill material onto the running surface, and reshape to match the original contours.
- 24. **Temporary Stream Crossings**
 - a. No stream crossing may occur at active spawning sites, when holding adult listed fish are present, or when eggs or alevins are in the gravel.

¹² National Marine Fisheries Service. 2011. Anadromous salmonid passage facility design. Northwest Region. <http://www.nwr.noaa.gov/publications/hydropower/ferc/fish-passage-design.pdf>

- b. Do not place temporary crossings in areas that may increase the risk of channel re-routing or avulsion, or in potential spawning habitat, *e.g.*, pools and pool tailouts.
- c. Minimize the number of temporary stream crossings; use existing stream crossings whenever reasonable.
- d. Install temporary bridges and culverts to allow for equipment and vehicle crossing over perennial streams during construction.
- e. Wherever possible, vehicles and machinery will cross streams at right angles to the main channel.
- f. Equipment and vehicles may cross the stream in the wet only where the streambed is bedrock, or where mats or off-site logs are placed in the stream and used as a crossing.
- g. Obliterate all temporary stream crossings as soon as they are no longer needed, and restore any damage to affected stream banks or channel.

25. Equipment, Vehicles and Power Tools

- a. Select, operate and maintain all heavy equipment, vehicles, and power tools to minimize adverse effects on the environment, *e.g.*, low pressure tires, minimal hard-turn paths for track vehicles, use of temporary mats or plates to protect wet soils.
- b. Before entering wetlands or working within 150 feet of a water body:
 - i. Power wash all heavy equipment, vehicles and power tools, allow them to fully dry, and inspect them for fluid leaks, and to make certain no plants, soil, or other organic material are adhering to the surface.
 - ii. Replace petroleum-based hydraulic fluids with biodegradable products¹³ in hydraulic equipment, vehicles, and power tools.
- c. Repeat cleaning as often as necessary during operation to keep all equipment, vehicles, and power tools free of external fluids and grease, and to prevent a leak or spill from entering the water.
- d. Avoid use of heavy equipment, vehicles or power tools below ordinary high water (OHW) unless project specialists determine such work is necessary, or would result in less risk of sedimentation or other ecological damage than work above that elevation.
- e. Before entering the water, inspect any watercraft, waders, boots, or other gear to be used in or near water and remove any plants, soil, or other organic material adhering to the surface.
- f. Ensure that any generator, crane or other stationary heavy equipment that is operated, maintained, or stored within 150 feet of any water body is also protected as necessary to prevent any leak or spill from entering the water.

¹³ For additional information and suppliers of biodegradable hydraulic fluids, motor oil, lubricant, or grease, see, Environmentally Acceptable Lubricants by the U.S. EPA (2011a); *e.g.*, mineral oil, polyglycol, vegetable oil, synthetic ester; Mobil® biodegradable hydraulic oils, Total® hydraulic fluid, Terresolve Technologies Ltd.® bio-based biodegradable lubricants, Cougar Lubrication® 2XT Bio engine oil, Series 4300 Synthetic Bio-degradable Hydraulic Oil, 8060-2 Synthetic Bio-Degradable Grease No. 2, *etc.* The use of trade, firm, or corporation names in this opinion is for the information and convenience of the action agency and applicants and does not constitute an official endorsement or approval by the U.S. Department of Commerce or NMFS of any product or service to the exclusion of others that may be suitable.

26. Site Layout and Flagging

- a. Before any significant ground disturbance or entry of mechanized equipment or vehicles into the construction area, clearly mark with flagging or survey marking paint the following areas:
 - i. Sensitive areas, *e.g.*, wetlands, water bodies, OHW, spawning areas.
 - ii. Equipment entry and exit points.
 - iii. Road and stream crossing alignments.
 - iv. Staging, storage, and stockpile areas.
- b. Before the use of herbicides, clearly flag no-application buffer zones.

27. Staging, Storage, and Stockpile Areas

- a. Designate and use staging areas to store hazardous materials, or to store, fuel, or service heavy equipment, vehicles and other power equipment with tanks larger than 5 gallons, that are at least 150 feet from any natural water body or wetland, or on an established paved area, such that sediment and other contaminants from the staging area cannot be deposited in the floodplain or stream.
- b. Natural materials that are displaced by construction and reserved for restoration, *e.g.*, LW, gravel, and boulders, may be stockpiled within the 100-year floodplain.
- c. Dispose of any material not used in restoration and not native to the floodplain outside of the functional floodplain.
- d. After construction is complete, obliterate all staging, storage, or stockpile areas, stabilize the soil, and revegetate the area.¹⁴

28. Drilling and Boring

- a. If drilling or boring are used, isolate drilling operations in wetted stream channels using a steel casing or other appropriate isolation method to prevent drilling fluids from contacting water.
- b. If drilling through a bridge deck is necessary, use containment measures to prevent drilling debris from entering the channel.
- c. Sampling and directional drill recovery/recycling pits, and any associated waste or spoils will be completely isolated from surface waters, off-channel habitats and wetlands.
- d. All waste or spoils will be covered if precipitation is falling or imminent.
- e. All drilling fluids and waste will be recovered and recycled or disposed to prevent entry into flowing water.
- f. If a drill boring case breaks and drilling fluid or waste is visible in water or a wetland, make all possible efforts to contain the waste and contact NMFS within 48 hours.
- g. Waste containment
 - i. All drilling equipment, drill recovery and recycling pits, and any waste or spoil produced, will be contained and then completely recovered and recycled or disposed of as necessary to prevent entry into any waterway. Use a tank to recycle drilling fluids.
 - ii. When drilling is completed, remove as much of the remaining drilling

¹⁴ Road and path obliteration refers to the most comprehensive degree of decommissioning and involves decompacting the surface and ditch, pulling the fill material onto the running surface, and reshaping to match the original contour.

fluid as possible from the casing (*e.g.*, by pumping) to reduce turbidity when the casing is removed.

29. Pesticide and Preservative-Treated Wood¹⁵

- a. Treated wood may not be used in a structure that will be in or over water or permanently or seasonally flooded wetlands, *except to maintain or repair an existing wood bridge*. The following criteria in b, c, and d below apply to the use of treated wood for maintenance or repair of existing wood bridges.
- b. No part of the treated wood may be exposed to leaching by precipitation, overtopping waves, or submersion (*e.g.*, no treated wood piles (per PDC#10, and stringers or decking of a timber bridge can be made from treated wood only if they will be covered by a non-treated wood wearing surface that covers the entire roadway width), and all elements of the structure using the treated wood are designed to avoid or minimize impacts or abrasion that could create treated wood debris or dust.
- c. Installation of treated wood
 - i. Treated wood shipped to the project area will be stored out of contact with standing water and wet soil, and protected from precipitation.
 - ii. Each load and piece of treated wood will be visually inspected and rejected for use in or above aquatic environments if visible residue, bleeding of preservative, preservative-saturated sawdust, contaminated soil, or other matter is present.
 - iii. Prefabrication will be used whenever possible to minimize cutting, drilling and field preservative treatment.
 - iv. When field fabrication is necessary, all cutting, drilling, and field preservative treatment of exposed treated wood will be done above OHW to minimize discharge of sawdust, drill shavings, excess preservative and other debris.
 - v. Tarps, plastic tubs or similar devices will be used to contain the bulk of any fabrication debris, and any excess field preservative will be removed from the treated wood by wiping and proper disposal.
- d. Removal of treated wood
 - i. Evaluate all wood construction debris removed during a project, including pile, to ensure proper disposal of treated wood.
 - ii. Ensure that no treated wood debris falls into the water or, if debris does fall into the water, remove it immediately.
 - iii. After removal, place treated wood debris in an appropriate dry storage site until it can be removed from the project area.
 - iv. Do not leave any treated wood debris in the water or stacked on the streambank at or below OHW.

30. Erosion Control

- a. Use site planning and site erosion control measures commensurate with the scope

¹⁵ Treated woods may contain chromated copper arsenate (CCA), ammoniacal copper zinc arsenate (ACZA), alkaline copper quat (ACQ-B and ACQ-D), ammoniacal copper citrate (CC), copper azole (CBA-A), copper dimethyldithiocarbamate (CDDC), borate preservatives, and oil-type wood preservatives, such as creosote, pentachlorophenol, and copper naphthenate.

- of the project to prevent erosion and sediment discharge from the project site.
- b. Before significant earthwork begins, install appropriate, temporary erosion controls downslope to prevent sediment deposition in the riparian area, wetlands, or water body.
 - c. During construction,
 - i. Complete earthwork in wetlands, riparian areas, and stream channels as quickly as possible.
 - ii. Cease project operations when high flows may inundate the project area, except for efforts to avoid or minimize resource damage.
 - iii. If eroded sediment appears likely to be deposited in the stream during construction, install additional sediment barriers as necessary.
 - iv. Temporary erosion control measures may include fiber wattles, silt fences, jute matting, wood fiber mulch and soil binder, or geotextiles and geosynthetic fabric.
 - v. Soil stabilization using wood fiber mulch and tackifier (hydro-applied) may be used to reduce erosion of bare soil, if the materials are free of noxious weeds and nontoxic to aquatic and terrestrial animals, soil microorganisms, and vegetation.
 - vi. Remove sediment from erosion controls if it reaches 1/3 of the exposed height of the control.
 - vii. Whenever surface water is present, maintain a supply of sediment control materials and an oil-absorbing floating boom at the project site.
 - viii. Stabilize all disturbed soils following any break in work unless construction will resume within four days.
 - d. Remove temporary erosion controls after construction is complete and the site is fully stabilized.

31. Hazardous Material Safety

- a. At the project site:
 - i. Post written procedures for notifying environmental response agencies, including an inventory and description of all hazardous materials present, and the storage and handling procedures for their use.
 - ii. Maintain a spill containment kit, with supplies and instructions for cleanup and disposal, adequate for the types and quantity of hazardous materials present.
 - iii. Train workers in spill containment procedures, including the location and use of the spill containment kits.
 - iv. Temporarily contain any waste liquids generated under an impervious cover, such as a tarpaulin, in the staging area until the wastes can be properly transported to, and disposed of, at an approved receiving facility.

32. Barge Use. Any barge used as a work platform to support construction will be:

- a. Large enough to remain stable under foreseeable loads and adverse conditions.
- b. Inspected before arrival to ensure vessel and ballast are free of invasive species.
- c. Secured, stabilized and maintained as necessary to ensure no loss of balance, stability, anchorage, or other condition that can result in the release of contaminants or construction debris.

33. Dust Abatement

- a. Use dust abatement measures commensurate with soil type, equipment use, wind conditions, and the effects of other erosion control measures.
- b. Sequence and schedule work to reduce the exposure of bare soil to wind erosion.
- c. Maintain spill containment supplies on-site whenever dust abatement chemicals are applied.
- d. Do not use petroleum-based products.
- e. Do not apply dust-abatement chemicals, *e.g.*, magnesium chloride, calcium chloride salts, ligninsulfonate, within 25 feet of a water body, or in other areas where they may runoff into a wetland or water body.
- f. Do not apply ligninsulfonate at rates exceeding 0.5 gallons per square yard of road surface, assuming a 50:50 solution of ligninsulfonate to water.

34. Work Area Isolation

- a. Isolate any work area within the wetted channel from the active stream whenever ESA-listed fish are reasonably certain to be present, or if the work area is less than 300 feet upstream from known spawning habitats.
- b. Engineering design plans for work area isolation will include all isolation elements and fish release areas.
- c. Dewater the shortest linear extent of work area practicable, unless wetted in-stream work is deemed to be minimally harmful to fish, and is beneficial to other aquatic species.¹⁶
 - i. Use a coffer dam and a by-pass culvert or pipe, or a lined, non-erodible diversion ditch to divert flow around the dewatered area. Dissipate flow energy to prevent damage to riparian vegetation or stream channel and provide for safe downstream reentry of fish, preferably into pool habitat with cover.
 - ii. Where gravity feed is not possible, pump water from the work site to avoid rewatering. Maintain a fish screen on the pump intake to avoid juvenile fish entrainment.
 - iii. Pump seepage water to a temporary storage and treatment site, or into upland areas, to allow water to percolate through soil or to filter through vegetation before reentering the stream channel with a treatment system comprised of either a hay bale basin or other sediment control device.
 - iv. Monitor below the construction site to prevent stranding of aquatic organisms.
 - v. When construction is complete, re-water the construction site slowly to prevent loss of surface flow downstream, and to prevent a sudden increase in stream turbidity.
- d. Whenever a pump is used to dewater the isolation area and ESA-listed fish may be present, a fish screen will be used that meets the most current version of NMFS's fish screen criteria (NMFS 2011a). NMFS approval is required for pumping at a rate that exceeds 3 cfs.

¹⁶ For instructions on how to dewater areas occupied by lamprey, see *Best management practices to minimize adverse effects to Pacific lamprey (Entosphenus tridentatus)* (USFWS 2010).

35. Invasive and Non-Native Plant Control

- a. **Non-herbicide methods.** Limit vegetation removal and soil disturbance within the riparian zone by limiting the number of workers there to the minimum necessary to complete manual, mechanical, or hydro-mechanical plant control (e.g., hand pulling, bending¹⁷, clipping, stabbing, digging, brush-cutting, mulching, radiant heat, portable flame burner, super-heated steam, pressurized hot water, or hot foam (Arsenault *et al.* 2008; Donohoe *et al.* 2010))¹⁸. Do not allow cut, mowed, or pulled vegetation to enter waterways.
- b. **Herbicide Label.** Herbicide applicators will comply with all label instructions.
- c. **Power equipment.** Refuel gas-powered equipment with tanks larger than 5 gallons in a vehicle staging area placed 150 feet or more from any natural water body, or in an isolated hazard zone such as a paved parking lot.
- d. **Maximum herbicide treatment area.** Do not exceed treating 1.0% of the acres of riparian habitat within a 6th-field HUC with herbicides per year.
- e. **Herbicide applicator qualifications.** Herbicides may only be applied by an appropriately licensed applicator using an herbicide specifically targeted for a particular plant species that will cause the least impact. The applicator will be responsible for preparing and carrying out the herbicide transportation and safety plan, as follows.
- f. **Herbicide transportation and safety plan.** The applicator will prepare and carry out an herbicide safety/spill response plan to reduce the likelihood of spills or misapplication, to take remedial actions in the event of spills, and to fully report the event.
- g. **Herbicides.** The only herbicides proposed for use under this opinion are (some common trade names are shown in parentheses):¹⁹
 - i. aquatic imazapyr (e.g., Habitat)
 - ii. aquatic glyphosate (e.g., AquaMaster, AquaPro, Rodeo)
 - iii. aquatic triclopyr-TEA (e.g., Renovate 3)
 - iv. chlorsulfuron (e.g., Telar, Glean, Corsair)
 - v. clopyralid (e.g., Transline)
 - vi. imazapic (e.g., Plateau)
 - vii. imazapyr (e.g., Arsenal, Chopper)
 - viii. metsulfuron-methyl (e.g., Escort)
 - ix. picloram (e.g., Tordon)
 - x. sethoxydim (e.g., Poast, Vantage)
 - xi. sulfometuron-methyl (e.g., Oust, Oust XP)
- h. **Herbicide adjuvants.** When recommended by the label, an approved aquatic surfactant or drift retardant can be used to improve herbicidal activity or application characteristics. Adjuvants that contain alky amine ethoxylates, *i.e.*, polyethoxylated tallow amine (POEA), alkylphenol ethoxylates (including alkyl

¹⁷ Knotweed treatment pre-treatment; See Nickelson (2013).

¹⁸ See <http://ahmct.ucdavis.edu/limtask/equipmentdetails.html>

¹⁹ The use of trade, firm, or corporation names in this opinion is for the information and convenience of the action agency and applicants and does not constitute an official endorsement or approval by the U.S. Department of Commerce or NMFS of any product or service to the exclusion of others that may be suitable.

phenol ethoxylate phosphate esters), or herbicides that contain these compounds are **not** covered by this opinion. The following product names are covered by this opinion:

- | | |
|-----------------------|------------------|
| i. Agri-Dex | ii. AquaSurf |
| iii. Bond | iv. Bronc Max |
| v. Bronc Plus Dry-EDT | vi. Class Act NG |
| vii. Competitor | viii. Cut Rate |
| ix. Cygnet Plus | x. Destiny HC |
| xi. Exciter | xii. Fraction |
| xiii. InterLock | xiv. Kinetic |
| xv. Level 7 | xvi. Liberate |
| xvii. Magnify | xviii. One-AP XL |
| xix. Pro AMS Plus | xx. Spray-Rite |
| xxi. Superb HC | xxii. Tactic |
| xxiii. Tronic | |

- i. **Herbicide carriers.** Herbicide carriers (solvents) are limited to water or specifically labeled vegetable oil. Use of diesel oil as an herbicide carrier is not covered by this opinion.
- j. **Dyes.** Use a non-hazardous indicator dye (*e.g.*, Hi-Light or Dynamark™) with herbicides within 100 feet of water. The presence of dye makes it easier to see where the herbicide has been applied and where or whether it has dripped, spilled, or leaked. Dye also makes it easier to detect missed spots, avoid spraying a plant or area more than once, and minimize over-spraying (SERA 1997).
- k. **Herbicide mixing.** Mix herbicides and adjuvants, carriers, and/or dyes more than 150 feet from any perennial or intermittent water body to minimize the risk of an accidental discharge.
- l. **Tank Mixtures.** The potential interactive relationships that exist among most active ingredient combinations have not been defined and are uncertain. Therefore, combinations of herbicides in a tank mix are not covered by this opinion.
- m. **Spill Cleanup Kit.** Provide a spill cleanup kit whenever herbicides are used, transported, or stored. At a minimum, cleanup kits will include material safety data sheets, the herbicide label, emergency phone numbers, and absorbent material such as cat litter to contain spills.
- n. **Herbicide application rates.** Apply herbicides at the lowest effective label rates.
- o. **Herbicide application methods.** Apply liquid or granular forms of herbicides as follows:
 - i. Broadcast spraying – hand held nozzles attached to back pack tanks or vehicles, or by using vehicle mounted booms.
 - ii. Spot spraying – hand held nozzles attached to back pack tanks or vehicles, hand-pumped spray, or squirt bottles to spray herbicide directly onto small patches or individual plants.
 - iii. Hand/selective – wicking and wiping, basal bark, fill (“hack and squirt”), stem injection, cut-stump.

- iv. Triclopyr – will not be applied by broadcast spraying.
- v. Keep the spray nozzle within four feet of the ground when applying herbicide. If spot or patch spraying tall vegetation more than 15 feet away from the high water mark (HWM), keep the spray nozzle within 6 feet of the ground.
- vi. Apply spray in swaths parallel towards the project area, away from the creek and desirable vegetation, *i.e.*, the person applying the spray will generally have their back to the creek or other sensitive resource.
- vii. Avoid unnecessary run off during cut surface, basal bark, and hack-squirt/injection applications.
- p. ***Washing spray tanks.*** Wash spray tanks 300 feet or more away from any surface water.
- q. ***Minimization of herbicide drift and leaching.*** Minimize herbicide drift and leaching as follows:
 - i. Do not spray when wind speeds exceed 10 miles per hour, or are less than 2 miles per hour.
 - ii. Be aware of wind directions and potential for herbicides to affect aquatic habitat area downwind.
 - iii. Keep boom or spray as low as possible to reduce wind effects.
 - iv. Increase spray droplet size whenever possible by decreasing spray pressure, using high flow rate nozzles, using water diluents instead of oil, and adding thickening agents.
 - v. Do not apply herbicides during temperature inversions, or when air temperature exceeds 80 degrees Fahrenheit.
 - vi. Wind and other weather data will be monitored and reported for all broadcast applications.
- r. ***Rain.*** Do not apply herbicides when the soil is saturated or when a precipitation event likely to produce direct runoff to salmon bearing waters from the treated area is forecasted by the NOAA National Weather Service or other similar forecasting service within 48 hours following application. Soil-activated herbicides may follow label instructions. Do not conduct hack-squirt/injection applications during periods of heavy rainfall.
- s. ***Herbicide buffer distances.*** Observe the following no-application buffer-widths, measured in feet, as map distance perpendicular to the bankfull elevation for streams, the upland boundary for wetlands, or the upper bank for roadside ditches. Widths are based on herbicide formula, stream type, and application method, during herbicide applications (Table 3). Before herbicide application begins, flag or mark the upland boundary of each applicable herbicide buffer to ensure that all buffers are in place and functional during treatment.

Table 3. Herbicide buffer distances by herbicide formula, stream type, and application method.

Herbicide	No Application Buffer Width (feet)					
	Streams and Roadside Ditches with flowing or standing water present and Wetlands			Dry Streams, Roadside Ditches, and Wetlands		
	Broadcast Spraying	Spot Spraying	Hand Selective	Broadcast Spraying	Spot Spraying	Hand Selective
Labeled for Aquatic Use						
Aquatic Glyphosate	100	waterline	waterline	50	None	none
Aquatic Imazapyr	100	15	waterline	50	None	none
Aquatic Triclopyr-TEA	Not Allowed	15	waterline	Not Allowed	None	none
Low Risk to Aquatic Organisms						
Imazapic	100	15	bankfull elevation	50	None	none
Clopyralid	100	15	bankfull elevation	50	None	none
Metsulfuron-methyl	100	15	bankfull elevation	50	None	none
Moderate Risk to Aquatic Organisms						
Imazapyr	100	50	bankfull elevation	50	15	bankfull elevation
Sulfometuron-methyl	100	50	5	50	15	bankfull elevation
Chlorsulfuron	100	50	bankfull elevation	50	15	bankfull elevation
High Risk to Aquatic Organisms						
Picloram	100	50	50	100	50	50
Sethoxydim	100	50	50	100	50	50

36. Actions Requiring Stormwater Management²⁰

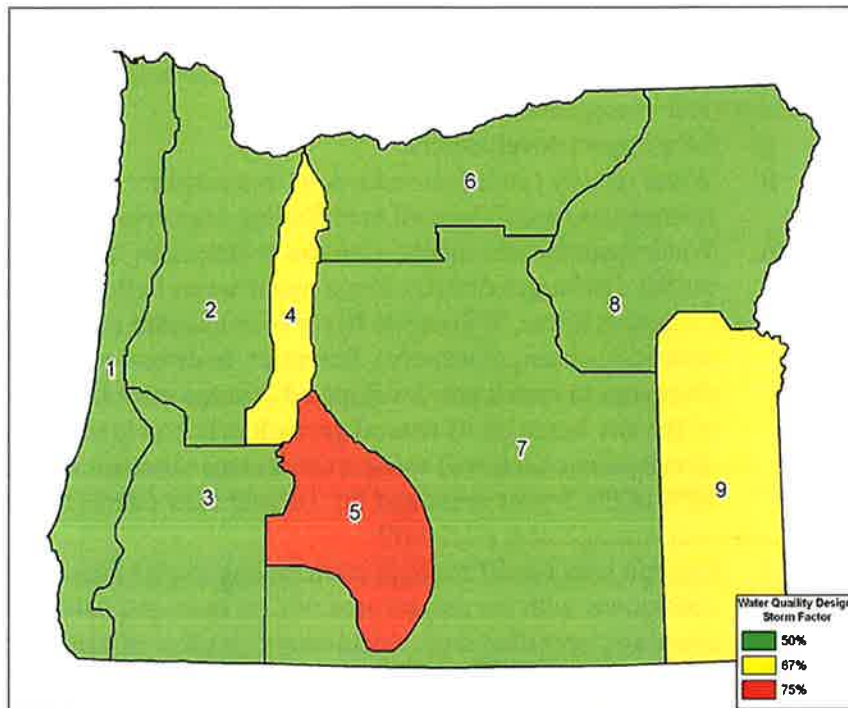
- a. Provide stormwater management for any project that will:
 - i. Increase the contributing impervious area within the project area.
 - ii. Construct new pavement that increases capacity or widens the road prism.
 - iii. Reconstructs pavement down to subgrade.

²⁰ The most efficient way for an applicant or the Corps to prepare and submit a stormwater management plan for NMFS' review is to attach a completed *Checklist for Submission of a Stormwater Management Plan* (the *Checklist*, ODEQ updated 2012, or the most recent version) with the electronic notification when it is sent to the SLOPES mailbox. However, stormwater conveyance to a DEQ permitted Municipal Separate Storm Sewer System (MS4) or consistency with any other program acknowledged by DEQ as adequate for stormwater management will not meet the requirements of this opinion unless NMFS determines that the facility accepting the stormwater will provide a level of treatment that is equivalent to that called for in this opinion. The *Checklist* and guidelines for its use are available from NMFS or the ODEQ in Portland Oregon. The latest version of the *Checklist* is also available online in a portable document format (pdf) through the ODEQ Water Quality Section 401 certification webpage (ODEQ 2014) at <http://www.deq.state.or.us/wq/sec401cert/process.htm#add> (see "Post Construction Stormwater Management Plan").

- iv. Rehabilitate or restore a bridge to repair structural or functional deficiencies that are too complicated to be corrected through normal maintenance, except for seismic retrofits that make a bridge more resistant to earthquake damage (*e.g.*, external post-tensioning, supplementary dampening) but do not affect the bridge deck or drainage.
- v. Replace a stream crossing
- vi. Change stormwater conveyance
- b. Stormwater management is not required for the following pavement actions: minor repairs, patching, chip seal, grind/inlay, overlay or resurfacing (*i.e.*, nonstructural pavement preservation, a single lift or inlay).
- c. Stormwater management plans will consist of:
 - i. Low impact development.
 - ii. Water quality (pollution reduction) treatment for post-construction stormwater runoff from all contributing impervious area.
 - iii. Water quantity treatment (retention or detention facilities), unless the outfall discharges directly into a major water body (*e.g.*, mainstem Columbia River, Willamette River (downstream of Eugene), large lakes, reservoir, ocean, or estuary). Retention or detention facilities must limit discharge to match pre-developed discharge rates (*i.e.*, the discharge rate of the site based on its natural groundcover and grade before any development occurred) using a continuous simulation for flows between 50% of the 2-year event and the 10-year flow event (annual series).
- d. Stormwater management plans will:
 - i. Explain how runoff from all contributing impervious area that is within or contiguous with the project area will be managed using site sketches, drawings, specifications, calculations, or other information commensurate with the scope of the action.
 - ii. Identify the pollutants of concern.
 - iii. Identify all contributing and non-contributing impervious areas that are within and contiguous with the project area.
 - iv. Describe the BMPs that will be used to treat the identified pollutants of concern, and the proposed maintenance activities and schedule for the treatment facilities.
 - v. Provide a justification for the capacity of the facilities provided based on the expected runoff volume, including, *e.g.*, the design storm, BMP geometry, analyses of residence time, as appropriate.
 - vi. Include the name, email address, and telephone number of the person responsible for designing the stormwater management facilities that NMFS may contact if additional information is necessary to complete the effects analysis.
 - vii. The proposed action will include a maintenance, repair, and component replacement plan that details what needs to be done, when, and by whom for each facility.
- e. All stormwater quality treatment practices and facilities will be designed to accept and fully treat the volume of water equal to 50% of the cumulative rainfall from the 2-year, 24-hour storm for that site, except as follows: climate zone 4 – 67%;

climate zone 5 – 75%; and climate zone 9 – 67% (Figure 1). (ESA-listed species considered in this opinion are unlikely to occur in Zones 5 or 9.) A continuous rainfall/runoff model may be used instead of runoff depths to calculate water quality treatment depth.

Figure 1. Water Quality Design Storm Factor – Oregon Climate Regions (Oregon Department of Transportation 2008)



- f. Use low impact development practices to infiltrate or evaporate runoff to the maximum extent feasible. For runoff that cannot be infiltrated or evaporated and therefore will discharge into surface or subsurface waters, apply one or more of the following specific primary treatment practices, supplemented with appropriate soil amendments:
 - i. Bioretention cell
 - ii. Bioslope, also known as an “ecology embankment”
 - iii. Bioswale
 - iv. Constructed wetlands
 - v. Infiltration pond
 - vi. Media filter devices with demonstrated effectiveness. Propriety devices should be on a list of “Approved Proprietary Stormwater Treatment Technologies” *i.e.*, City of Portland (2008) Stormwater Management Manual. Bureau of Environmental Services.
 - vii. Porous pavement, with no soil amendments and appropriate maintenance

- viii. All stormwater flow control treatment practices and facilities will be designed to maintain the frequency and duration of instream flows generated by storms within the following end-points:
 - 1. Lower discharge endpoint, by U.S. Geological Survey (USGS) flood frequency zone:
 - a. Western Region = 42% of 2-year event
 - b. Eastern Region
 - i. Southeast, Northeast, North Central = 48% of 2-year event
 - ii. Eastern Cascade = 56% of 2-year event
 - 2. Upper discharge endpoint
 - a. Entrenchment ratio <2.2 = 10-year event, 24-hour storm
 - b. Entrenchment ratio >2.2 = bank overtopping event
- g. When conveyance is necessary to discharge treated stormwater directly into surface water or a wetland, the following requirements apply:
 - i. Maintain natural drainage patterns.
 - ii. To the maximum extent feasible, ensure that water quality treatment for contributing impervious area runoff is completed before commingling with offsite runoff for conveyance.
 - iii. Prevent erosion of the flow path from the project to the receiving water and, if necessary, provide a discharge facility made entirely of manufactured elements (*e.g.*, pipes, ditches, discharge facility protection) that extends at least to OHW.
- h. **NMFS review and approval.** NMFS will review proposed stormwater treatment and new or upgraded stormwater outfalls plans.

37. Site Restoration

- a. Restore any significant disturbance of riparian vegetation, soils, stream banks or stream channel.
- b. Remove all project related waste; *e.g.*, pick up trash, sweep roadways in the project area to avoid runoff-containing sediment, *etc.*
- c. Obliterate all temporary access roads, crossings, and staging areas.
- d. Loosen compacted areas of soil when necessary for revegetation or infiltration.
- e. Although no single criterion is sufficient to measure restoration success, the intent is that the following features should be present in the upland parts of the project area, within reasonable limits of natural and management variation:
 - i. Human and livestock disturbance, if any, are confined to small areas necessary for access or other special management situations.
 - ii. Areas with signs of significant past erosion are completely stabilized and healed, bare soil spaces are small and well-dispersed.
 - iii. Soil movement, such as active rills and soil deposition around plants or in small basins, is absent or slight and local.
 - iv. Native woody and herbaceous vegetation, and germination microsites, are present and well distributed across the site; invasive plants are absent.
 - v. Plants have normal, vigorous growth form, and a high probability of remaining vigorous, healthy and dominant over undesired competing vegetation.

- vi. Plant litter is well distributed and effective in protecting the soil with little or no litter accumulated against vegetation as a result of active sheet erosion (“litter dams”).
- vii. A continuous corridor of shrubs and trees appropriate to the site are present to provide shade and other habitat functions for the entire streambank.

38. Revegetation

- a. Plant and seed disturbed areas before or at the beginning of the first growing season after construction.
- b. Use a diverse assemblage of vegetation species native to the action area or region, including trees, shrubs, and herbaceous species. Vegetation, such as willow, sedge and rush mats, may be gathered from abandoned floodplains, stream channels, *etc.* When feasible, use vegetation salvaged from local areas scheduled for clearing due to development.
- c. Use species native to the project area or region that will achieve shade and erosion control objectives, including forb, grass, shrub, or tree species that are appropriate for the site.
- d. Short-term stabilization measures may include use of non-native sterile seed mix if native seeds are not available, weed-free certified straw, jute matting, and similar methods.
- e. Do not apply surface fertilizer within 50 feet of any wetland or water body.
- f. Install fencing as necessary to prevent access to revegetated sites by livestock or unauthorized persons.
- g. Do not use invasive or non-native species for site restoration.
- h. Conduct post-construction monitoring and treatment to remove or control invasive plants until native plant species are well-established.

39. Actions That Require Compensatory Mitigation

- a. The Corps will rely on 33 CFR 332.3 when considering appropriate mitigation. The first option for an applicant is to purchase credits from an appropriate mitigation bank. The second option is to purchase credits from an approved in-lieu-fee sponsor. The third option is permittee-responsible mitigation. The fourth option is a combination of some or all of the above options that collectively satisfies the mitigation requirements.
- b. NMFS will review and approve compensatory mitigation plans.
- c. The following actions require compensatory mitigation:
 - i. Any stormwater management facility that requires a new or enlarged structure within the riparian zone; or that has insufficient capacity to infiltrate and retain the volume of stormwater called for by this opinion.
 - ii. Any riprap revetment that extends rock above the streambank toe, extends the use of riprap laterally into an area that was not previously revetted, or revetment that does not include adequate vegetation and LW.
 - iii. Any bridge rehabilitation or replacement that does not span the functional floodplain, or causes a net increase in fill within the functional floodplain.
- d. The electronic notification (Appendix A, Part 1 with Part 4 completed) for an action that requires compensatory mitigation will explain how the Corps or applicant will complete the mitigation, including site sketches, drawings,

specifications, calculations, or other information commensurate with the scope of the action.

- e. Include the name, address, and telephone number of a person responsible for designing this part of the action that NMFS may contact if additional information is necessary to complete the effects analysis.
- f. Describe practices that will be used to ensure:
 - i. No net loss of habitat function
 - ii. Completion before, or concurrent with, construction whenever possible
 - iii. Achieve a mitigation ratio that is greater than one-to-one and larger (*e.g.*, 1.5 to 1.0 when necessary to compensate for time lags between the loss of conservation value in the project area and replacement of conservation value in the mitigation area, uncertainty of conservation value replacement in the mitigation area, or when the affected area has demonstrably higher conservation value than the mitigation area.²¹
 - iv. When practicable and environmentally sound, mitigation should be near the project impact site, or within the same local watershed and area occupied by the affected population(s) and age classes. Mitigation should be completed prior to or concurrent with the adverse impacts, or have an increased ratio as noted above.
 - v. To minimize delays and objections during the review process, applicants are encouraged to seek the advice of NMFS during the planning and design of mitigation plans. For complex mitigation projects, such consultation may improve the likelihood of mitigation success and reduce permit-processing time.
- g. For stormwater management:
 - i. The primary habitat functions of concern are related to the physical and biological features essential to the long-term conservation of listed species, *i.e.*, water quality, water quantity, channel substrate, floodplain connectivity, forage, natural cover (such as submerged and overhanging LW, aquatic vegetation, large rocks and boulders, side channels and undercut banks), space, and free passage.
 - ii. Acceptable mitigation for riparian habitat displaced by a stormwater treatment facility is restoration of shallow-water or off-channel habitat
 - iii. Acceptable mitigation for inadequate stormwater treatment includes providing adequate stormwater treatment where it did not exist before, and retrofitting an existing but substandard stormwater facility to provide capacity necessary to infiltrate and retain the proper volume of stormwater. Such mitigation can be measured in terms of deficit stormwater treatment capacity.

²¹ For additional information on compensatory mitigation, see *Compensatory Mitigation for Losses of Aquatic Resources (33CFR332)* at www.poa.usace.army.mil/Portals/34/docs/regulatory/33cfr332.pdf. More information is available from the U.S. Army Corps of Engineers, Portland District, Portland, Oregon. See: <http://www.nwp.usace.army.mil/Missions/Regulatory/Mitigation.aspx>

- h. For riprap:
 - i. The primary habitat functions of concern are related to floodplain connectivity, forage, natural cover, and free passage.
 - ii. Acceptable mitigation for those losses include removal of existing riprap; retrofit existing riprap with vegetated riprap and LW, or one or more other streambank stabilization methods described in this opinion, and restoration of shallow water or off-channel habitats.
- i. For a bridge replacement:
 - i. The primary habitat functions of concern are floodplain connectivity, forage, natural cover, and free passage.
 - ii. Acceptable mitigation is removing fill from elsewhere in the floodplain – native channel material, soil and vegetation may not be counted as fill.
- j. Mitigation actions will meet general construction criteria and other appropriate minimization measures (dependent on the type of proposed mitigation).

1.3.1.3 Project Design Criteria - Types of Actions

40. Natural Hazard Response

- a. A manager of a state, regional, county, or municipal stormwater facility, public transportation feature, or utility must initiate a natural hazard response by notifying the Corps.²² The Corps will encourage the applicant to:
 - i. Act as necessary to resolve the initial natural hazard.
 - ii. Without endangering human life or contributing to further loss of property or natural resources, apply all proposed design criteria from this opinion which are applicable to the response to the maximum extent possible.
- b. The Corps will also contact NMFS as part of the natural hazard response.
 - i. As soon as possible after the onset of the natural hazard, the Corps will require the applicant to contact the Corps and NMFS to describe the nature and location of the natural hazard, review design criteria from this opinion that are applicable to the situation, and determine whether additional steps may be taken to further minimize the effects of the initial response action on listed species or their critical habitat.
 - ii. For the Oregon Coast contact Ken Phippen (541-957-3385), for the Willamette Basin contact Marc Liverman (503-231-2336), and Lower Columbia River up to and including Oregon tributaries contact Jeff Fisher (360-534-9342), and for eastern Oregon contact Dale Bambrick (509-962-8911x221).

41. Streambank and Channel Stabilization

- a. The following streambank stabilization methods may be used individually or in combination:
 - i. Alluvium placement

²² Natural hazard response actions do not include federal assistance following a gubernatorial, county or local declaration of emergency or disaster with a request for federal assistance; a federal declaration of emergency or disaster; or any response to an emergency or disaster that takes place on federal property or to a federal asset because those actions are subject to emergency consultation provisions of 50 CFR 402.05

- ii. Large wood placement
 - iii. Vegetated riprap with large wood
 - iv. Roughened toe
 - v. Woody plantings
 - vi. Herbaceous cover, in areas where the native vegetation does not include trees or shrubs
 - vii. Bank reshaping and slope grading
 - viii. Coir logs
 - ix. Deformable soil reinforcement
 - x. Engineered log jams (ELJ)
 - xi. Floodplain flow spreaders
 - xii. Floodplain roughness
- b. For more information on the above methods see Federal Emergency Management Agency (2009)²³ or Cramer *et al.* (2003).²⁴ Other than those methods relying solely upon woody and herbaceous plantings, streambank stabilization projects should be designed by a qualified engineer that is appropriately registered in the state where the work is performed.
- c. Stream barbs and full-spanning weirs are not allowed for stream bank stabilization under this opinion.
- d. Alluvium Placement can be used as a method for providing bank stabilization using imported gravel/cobble/boulder-sized material of the same composition and size as that in the channel bed and banks, to halt or attenuate streambank erosion, and stabilize riffles. This method is predominantly for use in small to moderately sized channels and is not appropriate for application in mainstem systems. These structures are designed to provide roughness, redirect flow, and provide stability to adjacent streambed and banks or downstream reaches, while providing valuable fish and wildlife habitat.
- i. **NMFS fish passage review and approval.** NMFS will review alluvium placement projects that would occupy more than 25% of the channel bed or more than 25% of the bankfull cross sectional area.
 - ii. This design method is only approved in those areas where the natural sediment supply has been eliminated, significantly reduced through anthropogenic disruptions, or used to initiate or simulate sediment accumulations in conjunction with other structures, such as LW placements and ELJs.
 - iii. Material used to construct the toe should be placed in a manner that mimics attached longitudinal bars or point bars.
 - iv. Size distribution of toe material will be diverse and predominately comprised of D_{84} to D_{max} size class material.
 - v. Spawning gravels will constitute at least one-third of the total alluvial material used in the design.
 - vi. Spawning gravels are to be placed at or below an elevation consistent with the water surface elevation of a bankfull event.

²³ http://www.fema.gov/pdf/about/regions/regionx/Engineering_With_Nature_Web.pdf

²⁴ <http://wdfw.wa.gov/publications/00046/wdfw00046.pdf>

- vii. Spawning size gravel can be used to fill the voids within toe and bank material and placed directly onto stream banks in a manner that mimics natural debris flows and erosion.
 - viii. All material will be clean alluvium with similar angularity as the natural bed material. When possible use material of the same lithology as found in the watershed. Reference *Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings* (USDA-Forest Service 2008) to determine gravel sizes appropriate for the stream.
 - ix. Material can be mined from the floodplain at elevations above bankfull, but not in a manner that will cause stranding during future flood events.
 - x. Crushed rock is not permitted.
 - xi. After placement in areas accessible to higher stream flow, allow the stream to naturally sort and distribute the material.
 - xii. Do not place material directly on bars and riffles that are known spawning areas, which may cause fish to spawn on the unsorted and unstable gravel, thus potentially resulting in redd destruction.
 - xiii. Imported material will be free of invasive species and non-native seeds. If necessary, wash prior to placement.
- e. **Large Wood Placements** are defined as structures composed of LW that do not use mechanical methods as the means of providing structure stability (*i.e.*, large rock, rebar, rope, cable, *etc.*). The use of native soil, alluvium with similar angularity as the natural bed material, large wood, or buttressing with adjacent trees as methods for providing structure stability are authorized. This method is predominantly for use in small to moderately sized channels and is not appropriate for application in mainstem systems. These structures are designed to provide roughness, redirect flow, and provide stability to adjacent streambed and banks or downstream reaches, while providing valuable fish and wildlife habitat.
- i. **NMFS fish passage review and approval.** NMFS will review LW placement projects that would occupy greater than 25% of the bankfull cross section area.
 - ii. Structure shall simulate disturbance events to the greatest degree possible and include, but not be limited to, log jams, debris flows, wind-throw, and tree breakage.
 - iii. Structures may partially or completely span stream channels or be positioned along stream banks.
 - iv. Where structures partially or completely span the stream channel LW should be comprised of whole conifer and hardwood trees, logs, and rootwads. LW size (diameter and length) should account for bankfull width and stream discharge rates.
 - v. Structures will incorporate a diverse size (diameter and length) distribution of rootwad or non-rootwad, trimmed or untrimmed, whole trees, logs, snags, slash, *etc.*
 - vi. For individual logs that are completely exposed, or embedded less than half their length, logs with rootwads should be a minimum of 1.5 times

bankfull channel width, while logs without rootwads should be a minimum of 2.0 times bankfull width.

- vii. Consider orienting key pieces such that the hydraulic forces upon the LW increase stability.
- f. Vegetated riprap with large wood (LW)
 - i. NMFS will review and approve bank stabilization projects that use vegetated riprap with LW.
 - ii. When this method is necessary, limit installation to the areas identified as most highly erodible, with highest shear stress, or at greatest risk of mass-failure, and provide compensatory mitigation. The greatest risk of mass-failure will usually be at the toe of the slope and will not extend above OHW elevation except in incised streams.
 - iii. Do not use invasive or non-native species for site restoration.
 - iv. Remove or control invasive plants until native plant species are well-established.
 - v. Do not apply surface fertilizer within 50-feet of any stream channel.
 - vi. Install fencing as necessary to prevent access to revegetated sites by livestock or unauthorized persons.
 - vii. Vegetated riprap with LW will be installed as follows:
 1. When present, use natural hard points, such as large, stable trees or rock outcrops, to begin or end the toe of the revetment.
 2. Develop rock size gradations for elevation zones on the bank, especially if the rock will extend above OHW – the largest rock should be placed at the toe of the slope, while small rock can be used higher in the bank where the shear stress is generally lower. Most upper bank areas will not require the use of any rock but can depend on the vegetation for erosion protection.
 3. For bank areas above OHW where rock is still deemed necessary, mix rock with soil to provide a better growing medium for plants.
 4. Minimum amount of wood incorporated into the treated area, for mitigation of riprap, is equal to the number of whole trees whose cumulative summation of rootwad diameters is equal to 80% of linear-feet of treated streambank or 20% of the treated area (square feet) of streambank, whichever is greater.
 5. Where whole trees are not used (*i.e.*, snags, logs, and partial trees) designers are required to estimate the dimensions of parent material based on rootwad diameter, and calculating a cumulative equivalency of whole trees.
 6. LW should be distributed throughout the structure (not just concentrated at the toe) to engage flows up to the bankfull flow. LW placed above the toe may be in the form of rootwad or non-rootwad, trimmed or untrimmed, whole trees, logs, snags, slash, *etc.* Maximize the exposure of wood to water by placing and orienting wood to project into the water column up to the bankfull elevation.

7. Develop an irregular toe and bank line to increase roughness and habitat value.
 8. Use LW and irregular rock to create large interstitial spaces and small alcoves to create planting spaces and habitat to mitigate for flood-refuge impacts – do not use geotextile fabrics as filter behind the riprap whenever possible, if a filter is necessary to prevent sapping, use a graduated gravel filter.
 9. Structure toe will incorporate LW with intact rootwads. Minimum spacing between rootwads placed at the toe will be no greater than an average rootwad diameter.
 10. Minimum rootwad diameter for LW placed at the toe of the structure shall be 1.0 times the bankfull depth, unless LW availability constrains the project to a smaller rootwad size. Where rootwad size is constrained due to availability, the largest diameter rootwads available should be used.
 11. LW placed at the toe will be sturdy material, intact, hard, and undecayed and should be sized or embedded sufficiently to withstand the design flood.
 12. Space between root wads may be filled with large boulders, trimmed or untrimmed, whole trees, logs, snags, slash, *etc.* When used, diameter of boulders placed between toe logs with rootwads should be 1.5 to 2.0 times log diameter at breast height (dbh) of adjacent toe logs. A reasonable maximum rock size is 5-6 feet in diameter.
 13. Plant woody vegetation in the joints between the rocks to enhance streambank vegetation.
 14. Where possible, use terracing, or other bank shaping, to increase habitat diversity.
 15. When possible, create or enhance a vegetated riparian buffer.
- viii. Monitor vegetated riprap each year following installation by visual inspection during low flows to examine transitions between undisturbed and treated banks to ensure that native soils above and behind the riprap are not collapsing, sinking, or showing other evidence of piping loss or movement of rock materials; and the overall integrity of the riprap treatment, including:
1. Loss of rock materials
 2. Survival rate of vegetation
 3. Anchoring success of LW placed in the treatment.
 4. Any channel changes since construction.
- g. Roughened toe
- i. Where designs use any of the approved streambank stabilization methods outlined in this section, in lieu of lining the bank with riprap above the toe, the design of any rock-filled toe will adhere to project criteria outlined in (f) Vegetated riprap with large wood (7-15, from above).
 - ii. Minimum amount of wood incorporated into the treated area, for mitigation of riprap, is equal to the number of whole trees whose

cumulative summation of rootwad diameters is equal to 80% of linear-feet of treated streambank.

- h. **Engineered log jams (ELJ).** ELJs are structures composed of LW with at least three key members and incorporating the use of any mechanical anchoring system (*i.e.*, rebar, rope, angular or large rock, *etc.*). Native soil, simulated streambed and bank materials, wood, or buttressing with adjacent trees, are not mechanical anchoring systems. ELJs are designed to redirect flow, provide roughness, and provide stability to adjacent streambed and banks or downstream reaches, while providing valuable fish and wildlife habitat.
 - i. **NMFS fish passage review and approval.** NMFS will review proposed ELJ projects.
 - ii. ELJs will be patterned, to the greatest degree possible, after stable natural log jams.
 - iii. Stabilizing or key pieces of LW will be intact and solid (little decay). If possible, acquire LW with untrimmed rootwads to provide functional refugia habitat for fish.
- i. If LW mechanical anchoring is required, a variety of methods may be used. These include large angular rock, buttressing the wood between adjacent trees, the use of manila, sisal or other biodegradable ropes for lashing connections. If hydraulic conditions warrant use of structural connections, rebar pinning or bolted connections, may be used. Use of cable is not covered by this opinion.
- j. When a hole in the channel bed caused by local scour will be filled with rock to prevent damage to a culvert, road, or bridge foundation, the amount of rock will be limited to the minimum necessary to protect the integrity of the structure.
- k. When a footing, facing, head wall, or other protection will be constructed with rock to prevent scouring or down-cutting of, or fill slope erosion or failure at, an existing culvert or bridge, the amount of rock used will be limited to the minimum necessary to protect the integrity of the structure. Whenever feasible, include soil and woody vegetation as a covering and throughout the structure.

42. Road Maintenance, Rehabilitation and Replacement

- a. All maintenance and rehabilitation actions shall observe applicable criteria detailed in the most recent version of NMFS fish passage criteria
 - i. Projects affecting fish passage shall adhere to industry design standards found in the most recent version of any of the following:
 1. *Water Crossings Design Guidelines* (Barnard *et al.* 2013)²⁵
 2. *Part XII, Fish Passage Design and Implementation, Salmonid Stream Habitat Restoration Manual* (California Department of Fish and Game 2009)²⁶
 3. *Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream* (USDA-Forest Service 2008)²⁷
 4. Or other design references approved by NMFS.

²⁵ <http://wdfw.wa.gov/publications/01501/>

²⁶ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=12512>

²⁷ http://stream.fs.fed.us/fishxing/aop_pdfs.html

- ii. Routine road surface, culvert and bridge maintenance activity will be completed in accordance with the *ODOT Routine Road Maintenance: Water Quality and Habitat Guide Best Management Practices* (ODOT 2009) or the most recent version approved by NMFS, unless maintenance activities and practices in that manual conflict with PDC in this opinion.
 - 1. Any conflict between ODOT (2009) and this opinion (*e.g.*, stormwater management for maintenance yards, erosion repair related to use of riprap, dust abatement, and use of pesticides) will be resolved in favor of PDC in this opinion.
- b. Grade stabilization
 - i. Grade control materials may include both rock and LW. Material shall not in any part consist of gabion baskets, sheet piles, concrete, articulated concrete blocks, or cable anchors.
 - ii. Grade control shall be provided using morphologically-appropriate constructed riffles for riffle-pool morphologies, rough constructed riffles/ramps for plane bed morphologies, wood/debris jams, rock bands, and boulder weirs for step-pool morphologies, and roughened channels for cascade morphologies.
 - iii. LW placements and ELJs may be used to control grade individually or together with other grade control methods by simulating natural log jams and debris accumulation that traps sediment and creates forced, riffle-pool, step-pool, or cascade-pool morphologies.
 - iv. Stream banks and bed shall be designed to be immobile at the design event to reduce undermining and flanking.
 - v. The crest of channel spanning structures will be slightly sloped on either side, with the low point in the center, to direct flows to the middle of channel and away from streambanks. Install these structures low in relation to channel dimensions so that they are completely overtopped during channel-forming flow events (approximately a 1.0- to 1.5-year flow event).
 - vi. Construct boulder weir structures in a ‘V’ or ‘U’ shape, oriented with the apex upstream.
 - vii. Key all structures into the streambed at a depth which minimizes structure undermining due to scour, at least 2.5 times their exposure height, or the Lower Vertical Adjustment Potential (LVAP) line with an offset of 2 times D_{90} , whichever is deeper.
 - 1. LVAP, and 2 times D_{90} offset, as calculated in *Stream Simulation: An ecological approach to providing passage for aquatic organisms at road crossings* (USDA-Forest Service 2008).
 - viii. Structures should be keyed into both banks—if feasible greater than 8 feet.
 - ix. If several drop structures will be used in series, space them at the appropriate distances to promote fish passage of target species and life histories. Incorporate NMFS (2011a) fish passage criteria (jump height, pool depth, *etc.*) in the design of drop structures.
 - x. Recommended spacing for boulder weirs should be no closer than the net drop divided by the channel slope (for example, a one-foot high step

structure designed with a project slope of two-percent gradient will have a minimum spacing of 50-feet [1/0.02]). Maximum project slope for boulder weir designs is 5%.

- xi. A series of short steep rough ramps/chutes, cascades, or roughened channel type structures, broken up by energy dissipating pools, are required where project slope is greater than 5%.

c. Rock Structures

- i. Rock structures will be constructed out of a mix of well-graded boulder, cobble, and gravel, including the appropriate level of fines, to allow for compaction and sealing to ensure minimal loss of surface flow through the newly placed material.
- ii. Rock sizing depends on the size of the stream, maximum depth of flow, plan form, entrenchment, and ice and debris loading.
- iii. The project designer or an inspector experienced in these structures should be present during installation.
- iv. To ensure that the structure is adequately sealed, no sub-surface flow will be present before equipment leaves the site.
- v. Rock shall be durable and of suitable quality to assure long-term stability in the climate in which it is to be used.
- i. Where feasible, channel spanning structures should be coupled with LW to improve habitat complexity of riparian areas.

d. Structure Stabilization

- i. When a footing, facing, head wall, or other protection will be constructed with rock to prevent scouring or down-cutting of, or fill slope erosion or failure at, an existing culvert or bridge, the amount of rock used is limited to the minimum necessary to protect the integrity of the structure. Include soil, vegetation, and wood throughout the structure to the level possible.

e. Road-stream crossing replacement or retrofit

- i. Projects shall adhere to industry design standards found in the most recent version any of the following:
 - 1. *Water Crossings Design Guidelines* (Barnard et al. 2013)²⁸
 - 2. *Part XII, Fish Passage Design and Implementation, Salmonid Stream Habitat Restoration Manual* (California Department of Fish and Game 2009)²⁹
 - 3. *Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream* (USDA-Forest Service 2008)³⁰
 - 4. Or other design references approved by NMFS.
- ii. General road-stream crossing criteria
 - 1. Span
 - a. Span is determined by the crossing width at the proposed streambed grade.

²⁸ <http://wdfw.wa.gov/publications/01501/>

²⁹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=12512>

³⁰ http://stream.fs.fed.us/fishxing/aop_pdfs.html

- b. Single span structures will maintain a clear, unobstructed opening above the general scour elevation that is at least as wide as 1.5 times the active channel width.³¹
 - c. Multi-span structures will maintain clear, unobstructed openings above the general scour elevation (except for piers or interior bents) that are at least as wide as 2.2 times the active channel width.
 - d. Entrenched streams: If a stream is entrenched (entrenchment ratio of less than 1.4), the crossing width will accommodate the flood prone width. Flood prone width is the channel width measured at twice the maximum bankfull depth (Rosgen 1996).
 - e. Minimum structure span is 6 feet.
2. Bed Material
- a. Install clean alluvium with similar angularity as the natural bed material, no crushed rock.
 - b. Bed material shall be designed based on the native particle size distribution of the adjacent channel or reference reach, as quantified by a pebble count.
 - c. Rock band designs as detailed in *Water Crossings Design Guidelines* (Barnard *et al.* 2013) are authorized.
 - d. Bed material in systems where stream gradient exceeds 3% may be conservatively sized to resist movement.
3. Scour Prism
- a. Designs shall maintain the general scour prism, as a clear, unobstructed opening (*i.e.*, free of any fill, embankment, scour countermeasure, or structural material to include abutments, footings, and culvert inverts). No scour or stream stability countermeasure may be applied above the general scour elevation.³²
 - a. The lateral delineation of the scour prism is defined by the criteria span.
 - b. The vertical delineation of the scour prism is defined by the Lower Vertical Adjustment Potential (LVAP) with an additional offset of 2 times D_{90} , as calculated in *Stream Simulation: An ecological approach to providing passage for aquatic organisms at road crossings* (USDA-Forest Service 2008).

³¹ Active channel width means the stream width measured perpendicular to stream flow between the OHW lines, or at the channel bankfull elevation if the OHW lines are indeterminate. This width includes the cumulative active channel width of all individual side- and off-channel components of channels with braided and meandering forms, and measure outside the area influence of any existing stream crossing, *e.g.*, five to seven channel widths upstream and downstream.

³² For guidance on how to complete bridge scour and stream stability analysis, see Lagasse *et al.* (2012) (HEC-20), Lagasse *et al.* (2001) (HEC-23), Richardson and Davis (2001) (HEC-18), ODOT (2011), and AASHTO (2013).

- b. When bridge abutments or culvert footings are set back beyond the applicable criteria span they are outside the scour prism.

4. Embedment

- a. All abutments, footings, and inverts shall be placed below the thalweg a depth of 3 feet, or the LVAP line with an offset of 2 times D_{90} , whichever is deeper.
 - i. LVAP, and 2 times D_{90} offset, as calculated in *Stream Simulation: An ecological approach to providing passage for aquatic organisms at road crossings* (USDA-Forest Service 2008).
- b. In addition to embedment depth, embedment of closed bottom culverts shall be between 30% and 50% of the culvert rise.

5. Bridges

- a. Primary bridge structural elements will be concrete, metal, fiberglass, or untreated timber. The use of treated wood for bridge construction or replacement is not part of this proposed action. The use of treated wood for maintenance and repair of existing wooden bridges is part of the proposed action if in conformance with project design criterion 29.
- b. All concrete will be poured in the dry, or within confined waters not connected to surface waters, and will be allowed to cure a minimum of 7 days before contact with surface water as recommended by Washington State Department of Transportation (2010).
- c. Riprap may only be placed below bankfull height of the stream when necessary for protection of abutments and pilings. The amount and placement of riprap will not constrict the bankfull flow.
- d. Temporary work bridges will also meet the latest version of NMFS (2011a) criteria.

iii. The electronic notification for each permanent stream crossing replacement will contain the following:

1. Site sketches, drawings, aerial photographs, or other supporting specifications, calculations, or information that is commensurate with the scope of the action, that show the active channel, the 100-year floodplain, the functional floodplain, any artificial fill within the project area, the existing crossing to be replaced, and the proposed crossing.
2. A completed scour and stream stability analysis for any crossing that includes scour or stream stability countermeasures within the crossing opening that shows the general scour elevation and the local scour elevation for any pier or interior bent.

3. The name, address, and telephone number of a person responsible for designing this part of the action that NMFS may contact if additional information is necessary to complete the effects analysis.
 - f. **NMFS fish passage review and approval.** The Corps will not issue a permit to install, replace, or improve a road-stream crossing, step structure, fish ladder, or projects containing grade control, stream stability, or headcut countermeasures, until the action has been reviewed and approved by NMFS for consistency with NMFS's fish passage criteria (NMFS 2011a).
- 43. Utility Line Stream Crossings**
- a. Design utility line stream crossings in the following priority:
 - i. Aerial lines, including lines hung from existing bridges.
 - ii. Directional drilling, boring and jacking that spans the channel migration zone and any associated wetland.
 - iii. Trenching – this method is restricted to intermittent streams and may only be used when the stream is naturally dry, all trenches will be backfilled below the OHW line with native material and capped with clean gravel suitable for fish use in the project area.
 - b. Align each crossing as perpendicular to the watercourse as possible. Ensure that the drilled, bored or jacked crossings are below the total scour prism.
 - c. Any large wood displaced by trenching or plowing will be returned as nearly as possible to its original position, or otherwise arranged to restore habitat functions.
 - d. Any action involving a stormwater outfall will meet the stormwater management criteria.³³
 - e. NMFS will review new or upgraded stormwater outfalls.

The NMFS relied on the foregoing description of the proposed action, including all PDCs, to complete this consultation.

1.4 Action Area

“Action area” means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02). For this consultation, the overall program action area consists of the combined action areas for each action to be authorized or carried out under this opinion within the range of ESA-listed salmon, steelhead, green sturgeon, eulachon, designated critical habitat, or designated EFH in Oregon. This includes

³³ The most efficient way for an applicant or the Corps to prepare and submit a stormwater management plan for NMFS' review is to attach a completed *Checklist for Submission of a Stormwater Management Plan* (the *Checklist*, ODEQ updated 2012, or the most recent version) with the electronic notification when it is sent to the SLOPES mailbox. However, stormwater conveyance to a DEQ permitted Municipal Separate Storm Sewer System (MS4) or consistency with any other program acknowledged by DEQ as adequate for stormwater management will not meet the requirements of this opinion unless NMFS determines that the facility accepting the stormwater will provide a level of treatment that is equivalent to that called for in this opinion. The *Checklist* and guidelines for its use are available from NMFS or the ODEQ in Portland Oregon. The latest version of the *Checklist* is also available online in a portable document format (pdf) through the ODEQ Water Quality Section 401 certification webpage (ODEQ 2014) at <http://www.deq.state.or.us/wq/sec401cert/process.htm#add> (see “Post Construction Stormwater Management Plan”).



MEMORANDUM

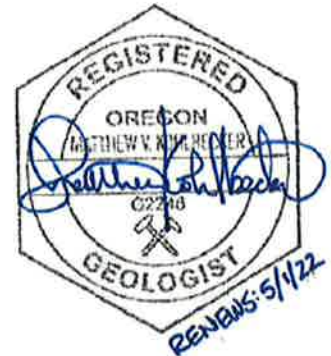
Groundwater Protectiveness Measures at the NEXT Renewable Fuels Facility, Port Westward, Oregon

To: Jeffrey Brittain / Oregon Department of Environmental Quality

From: Matt Kohlbecker, RG / GSI Water Solutions, Inc.

CC: Gene Cotten / NEXT Renewable Fuels, Inc.
Laurie Parry / Stewardship Solutions
Chas Hutchins, PE / Anderson Perry, Inc.
Brien Flanagan / Schwabe Williamson & Wyatt

Date: January 25, 2022



Executive Summary

NEXT Renewable Fuels, LLC (NEXT) plans to construct a renewable diesel facility in Port Westward, Oregon (Figure 1). Renewable diesel is sourced from cellulosic biomass materials (for example, crop residues, animal tallow) using a process that creates fewer overall emissions relative to production of conventional hydrocarbon fuels (U.S. Department of Energy, 2021). The Oregon Department of Environmental Quality (DEQ), which is one of the public agencies permitting the project, requested that NEXT develop a memorandum summarizing the practices that will be implemented to protect groundwater quality during facility construction and operation. This memorandum meets DEQ's request by: (1) summarizing background information about facility operations and permitting, (2) providing an overview of DEQ's groundwater protection rules, and (3) discussing the permits that NEXT will obtain and DEQ rules that NEXT will operate in compliance with to meet the overall goal of DEQ's groundwater protection rules. As requested by DEQ, the memo also summarizes an evaluation of potential groundwater quality and flow impacts from installing concrete piling using Soilcrete, which is a soil treatment method that will be used to strengthen site soils and mitigate against liquefaction under large structures due to ground motion caused by seismic events. In summary, through compliance with DEQ permits and rule sets, the NEXT facility will be using the best practicable methods to protect groundwater quality during construction and operations, in compliance with DEQ's rules covering protection of shallow groundwater.

1. Background

The NEXT renewable diesel facility is designed to produce about 50,000 barrels per day (BPD) of renewable diesel from a range of sustainable feedstocks, including soybean oil, corn oil, used cooking oil, and animal fats. The produced diesel will be a drop-in fuel, meaning that it is a synthetic and completely interchangeable substitute for conventional petroleum-derived hydrocarbons (NEXT, 2021a). As shown in Figure 1, the facility will be located on a floodplain of the Columbia River in a topographically level area. The shallow soils at the site are fine-grained alluvium deposited by the Columbia River (i.e., overbank deposits) and are host to a shallow groundwater system (Squier Associates, 2001).

In January 2021, NEXT submitted a Joint Permit Application (JPA) for the project to the U.S. Army Corps of Engineers, Oregon Department of State Lands, and DEQ's 401 Certification Program (NEXT, 2021b). As part application review, DEQ requested that NEXT demonstrate that construction and operation of the facility would be protective of shallow groundwater quality.

The purpose of this memorandum is to demonstrate protection of groundwater at NEXT by describing the groundwater protection elements of: (1) the DEQ permits that NEXT will obtain and (2) DEQ rules that NEXT will operate in compliance with, thereby protecting shallow groundwater in accordance with DEQ rules¹. The objectives of this memorandum are:

- Summarize the DEQ permits that NEXT will obtain for the facility (i.e., the 1200-C general permit for stormwater management during facility construction and the 1200-Z general permit for stormwater management during facility operation) and the conditions in the permits that directly or indirectly protect shallow groundwater quality (e.g., spill prevention and response plans, BMPs, etc.).
- Summarize the Oregon spill rules, which will apply during the construction phase and operational phase of the facility, and provide requirements for spill reporting, response, and cleanup.
- Provide an overview of the Soilcrete method that will be used to stabilize site soils, in the context of potential groundwater impairment.

The following sections of this memorandum provide an overview of DEQ's groundwater protection rules that protect groundwater quality in Oregon (Section 2) and the permits and rules that NEXT will implement to meet DEQ's groundwater protection rules and, therefore, protect shallow groundwater quality (Section 3). An overview of the Soilcrete method to install pilings and strengthen site soils and its potential groundwater impacts is discussed in Section 4.

2. DEQ's Groundwater Protection Rules (OAR 340-040)

DEQ's groundwater protection rules describe Oregon's policies that aim to protect groundwater from pollution that could impair its beneficial use². The rules are designed to minimize or eliminate groundwater quality degradation by requiring point sources to employ the best practicable methods to prevent the movement of pollutants to groundwater³ and employ strategies for prevention, abatement, and control of point and nonpoint sources of groundwater pollution⁴. DEQ implements the groundwater protection rules by requiring appropriate water quality permits for development projects and adopting rules that govern commercial and industrial activities in Oregon (e.g., the Oregon spill rules)⁵.

Typically, DEQ uses Water Pollution Control Facility (WPCF) permits, which are required for discharges to ground, to implement the groundwater protection rules⁶. However, no WPCF permits will be issued to the NEXT facility because the facility will not discharge wastewater or stormwater to the ground. Instead, the DEQ permits that regulate construction of the NEXT facility (i.e. the 1200-C general permit) and operation of the NEXT facility (i.e., the 1200-Z general permit and Port Westward's discharge permit) are stormwater or wastewater permits issued under the National Pollution Discharge Elimination System (NPDES), which is a framework for discharges to surface water. The NPDES permits also protect groundwater quality, either directly by stipulating requirements to prevent uncontrolled discharges of wastewater and stormwater, or indirectly by requiring that the permittee adopt BMPs and technologies that eliminate or reduce pollutants

¹ The format of this demonstration was developed during meetings between DEQ and the NEXT on May 28 and July 1, 2021.

² Oregon Administrative Rules (OAR) 340-040-0020(3).

³ OAR 340-040-0020(11)

⁴ OAR 340-040-0020(6)

⁵ OAR 340-040-0020(12)

⁶ The WPCF rules are found in OAR 340-045

that could impact groundwater. Therefore, DEQ's groundwater protection rules are implemented through the 1200-C and 1200-Z permits, both indirectly and directly.

In summary, through compliance with DEQ permits and, including the implementation of operational controls and related BMPs, the NEXT facility will meet DEQ's groundwater protection rules and be protective of groundwater quality.

3. Groundwater Protection at the NEXT Facility

The NEXT facility will meet DEQ's groundwater protection rules through compliance with multiple DEQ permits and DEQ rule sets. Section 3.1 summarizes groundwater protectiveness measures during construction, and Section 3.2 summarizes groundwater protectiveness measures during operation.

3.1 Protectiveness Measures During Facility Construction

During construction, shallow groundwater quality will be protected through compliance with DEQ's 1200-C general stormwater permit (Section 3.1.1) and compliance with Oregon's spill rules (Section 3.1.2).

3.1.1 Compliance with DEQ Permits (1200-C permit for facility construction)

DEQ requires that any construction project disturbing more than one acre register for coverage under the 1200-C construction stormwater general permit. NEXT will require coverage under the 1200-C permit to construct the project. The 1200-C permit mandates controls of construction process and sediment and erosion controls that protect waters. These controls and permit conditions directly and indirectly protect shallow groundwater, including:

- The permit prohibits discharges of construction stormwater to underground injection control (UIC) systems, which are devices that infiltrate stormwater beneath the ground surface⁷. Using UICs to manage stormwater during the construction phase may not be protective due to the shallow groundwater at the site.
- The permit requires that if contamination of any type is encountered (including groundwater contamination) during construction phase, NEXT must develop an Environmental Management Plan (EMP) before proceeding with construction to ensure that appropriate pollution prevention and/or treatment BMPs are implemented to properly manage the contamination⁸.
- The permit contains requirements for concrete washout to ensure that shallow groundwater is not adversely affected⁹. For example, permit conditions specifically require that concrete washout activities will occur in a designated area, and wash water shall be directed to an impermeable-lined pit or leak-proof container that is adequately sized to prevent overflows. The permit explicitly prohibits discharge of concrete wash water to the ground or ditches, where it may seep into shallow groundwater.
- The permit also contains requirements for disposal and treatment of dewatering water that are protective of groundwater. For example, the permit specifies disposal sites to the extent feasible (i.e., vegetated, upland areas to infiltrate the water generated during construction and utilize the natural filtering/treatment capacity of unsaturated soils) and treatment devices (i.e., oil-water separators, cartridge filters) to remove oil or grease if dewatering water is found to contain these materials¹⁰.
- The permit requires that the registrant: (1) implement pollution prevention controls to prevent the discharge of pollutants to stormwater and to prevent spills and leaks, (2) develop a spill prevention

⁷ See Section 1.0, second paragraph, of the 1200-C General Permit

⁸ See Section 1.2.9 of the 1200-C General Permit

⁹ See Section 2.2.14, item (a) and item (b) of the 1200-C General Permit

¹⁰ See Section 2.4, item (a) and item (d) of the 1200-C General Permit

and response plan, and (3) train employees on the plan¹¹. Collectively, these plans and BMPs help protect shallow groundwater at the site.

NEXT's current spill prevention and response measures, which may be modified during the permit application process, have been documented in the Project Design Basis report (NEXT 2021a). As discussed in the report, all construction equipment will be maintained in good working order to minimize the risk of fuel and fluid leaks or spills, spill containment materials will be on-site prior to and during construction, and spill prevention measures and fuel containment systems designed to completely contain a potential spill will be implemented. Select elements of spill prevention and response will be carried forward to the operational phase of the project (see section 3.2).

In summary, the NEXT facility will protect shallow groundwater quality during construction, both directly and indirectly, through compliance with the conditions of DEQ's 1200-C permit (BMPs, non-use of UICs, and adoption of a spill prevention and response plan).

3.1.2 Compliance with DEQ's Spill Rules

Oregon's spill rules (called the Oil and Hazardous Materials Emergency Response Requirements) are codified in OAR 340-142, and were developed to identify emergency response actions, reporting obligations, and follow-up actions in response to a spill or release of oil or hazardous materials. During construction, contractors at the NEXT facility will be required to adhere to the reporting and response actions in these rules should a spill occur. Spill notifications are forwarded to DEQ, which has oversight authority to ensure the cleanup of certain spills is completed in a way that ensures the environment is protected. A fact sheet summarizing the spill rules is provided in Attachment A.

In summary, potential spills that occur during construction of the facility will be responded to and cleaned up in accordance with the Oregon Spill Rules, which will protect shallow groundwater quality.

3.2 Protectiveness Measures During Facility Operation

During facility operation, shallow groundwater quality will be protected through compliance with DEQ's 1200-Z general stormwater permit and compliance with Oregon's spill rules. Because Oregon's spill rules have already been discussed (see Section 3.1.2), this section focuses on the elements of the 1200-Z permit that directly and indirectly protect shallow groundwater.

The site is currently comprised of agricultural and open land, and precipitation infiltrates into subsurface soils or runs off into surface water drainage features. Upon completion, the NEXT facility will be comprised of roadways, equipment pads, rail spurs, storage tanks, and employee parking to support the renewable diesel production systems, as shown in Figure 2 (Mackenzie, 2021). Because groundwater at the site is shallow, the strategy for stormwater management at the Site is implementation of pollution elimination and reduction control measures and discharge to surface water as opposed to infiltration (Mackenzie, 2021), and the facility will apply for coverage under DEQ's 1200-Z general stormwater permit (DEQ, 2021). The 1200-Z permit contains several conditions that either directly or indirectly protect shallow groundwater, including requirements for:

- A Stormwater Pollution Control Plan (SWPCP) for the facility that contains control measures and BMPs for managing stormwater,
- Spill prevention and response measures¹²,
- Preventative maintenance procedures including equipment inspection, cleaning, and repair¹³,

¹¹ See Section 2.3 of the 1200-C General Permit

¹² Schedule A, condition 1.h

¹³ Schedule A, condition 1.i

- An employee education program on the SWPCP for the facility, which includes spill response, good housekeeping, inspection requirements, etc.¹⁴

Note that several of the preventative maintenance procedures have been documented in the Preliminary Storm Report for the NEXT facility (e.g., periodic inspections, vegetation pruning and replanting, regrading of channelized areas, debris and sediment removal, etc.) (Mackenzie, 2021). The following sections discuss the specific stormwater management strategy at the facility that will protect surface water and shallow groundwater resources using the best practicable methods within the different stormwater basins at the site.

3.2.1 Main Facility Access Road, Maintenance Road, and Rail Spurs

Stormwater runoff will be treated using several best management practices that are generally consistent with DEQ's *Industrial Stormwater Best Management Practices Manual* (Jurries and Ratliff, 2013).

- Stormwater runoff from the paved main facility access road will be routed to a vegetated swale that provides water quality treatment prior to discharge to existing channels and ultimately McLean Slough. Swales provide treatment for sediment, metals, polycyclic aromatic hydrocarbons (PAHs), hydrocarbons, biological oxygen demand (BOD), and phosphorus (Jurries and Ratliff, 2013).
- Stormwater runoff from the pipeline maintenance road and rail spur, which are gravel-surfaced roadways, will be collected and routed through filter strips that run the length of the roadways/spurs for treatment and then to an existing drainage ditch. Filter strips are typically used to treat for sediment, metals, PAHs, BOD, hydrocarbons, and phosphorus (Jurries and Ratliff, 2013).

Some stormwater infiltration may occur in the course of using these BMPs for stormwater treatment. However, this infiltration is not expected to adversely affect shallow groundwater quality because it is expected to be minor in terms of quantity due to the low permeability site soils (Columbia River overbank deposits) and hydrology (Mackenzie, 2021; Squier Associates, 2001). In addition, pollutants in stormwater runoff from areas that experience vehicular traffic (e.g., copper and zinc from wear of brake pads) are characterized by low concentrations, will be treated by the BMPs described in the bullets above, and are generally not mobile in subsurface soils based on research work completed by Oregon's DEQ (see DEQ, 2017).

3.2.2 Renewable Diesel Facility Footprint

Stormwater within the footprint of the renewable diesel facility will be managed to protect both surface water and shallow groundwater quality:

- Stormwater within some areas of the facility may accumulate oils in the runoff due to contact with oil-handling equipment. In these areas, stormwater will be collected and routed to a wastewater treatment plant to remove oils, suspended solids, and to cool the water prior to discharge to Port Westward's conveyance system, which discharges to the Columbia River [see Appendix E of Mackenzie (2021) for a detailed discussion of wastewater treatment system].
- In areas of the facility where stormwater is not expected to accumulate oils (e.g., building roofs, parking areas, laydown yards, roadways, etc.), stormwater will be collected and routed to a stormwater treatment facility that consists of a surge storage tank, filtration system, and pump station and then discharged to Port Westward's conveyance system, which discharges to the Columbia River (Mackenzie, 2021).

In summary, the NEXT facility will protect shallow groundwater quality during operation, both directly and indirectly, through compliance with the conditions of DEQ's 1200-Z permit (BMPs, non-use of UICs, and adoption of a spill prevention and response plan) and the Oregon spill rules.

¹⁴ Schedule A, condition 1.j

4. Potential Impacts of Soilcrete on Groundwater

To protect the facility against the potential of seismic activity, NEXT is required to install piles beneath the building foundations and large above ground storage tanks. NEXT contractors will use the Soilcrete method to install concrete piles, which is common in the Pacific Northwest and involves mechanically mixing wet soils with a dry cement binder using a drill that is equipped with a mixing tool. Neat cement will be used as the binder (Pers. Comm., 2021). Using neat cement to stabilize the soils at the site is not anticipated to adversely affect shallow groundwater quality because neat cement has no additives to modify its setting time or rheological properties (Schlumberger, 2021) and is comprised only of Portland Cement (calcium silicates, aluminates and aluminoferrites¹⁵) (Britannica, 2021). Note that the Oregon Water Resources Department (OWRD) approves neat cement use for decommissioning and sealing of water wells in saturated soils (see OAR 690-210). Although the concrete pilings are impermeable, they are not anticipated to significantly affect groundwater flow because areas with pilings are separated by areas with undisturbed native soils. Groundwater levels will rise slightly around the pilings, which will have the effect of diverting groundwater flow horizontally around the pilings through the areas of undisturbed native soils. Therefore, effects of Soilcrete pilings on groundwater flow will be localized.

5. Conclusions

The proposed NEXT facility in Port Westward will be regulated under multiple DEQ permits and rule sets during facility construction and facility operation. These permits and rule sets meet DEQ's groundwater protection rules, either directly or indirectly, by requiring multiple BMPs, including development of spill prevention and response procedures, methods for managing waste (e.g., concrete washout), capture and treatment of stormwater and wastewater, preventative maintenance of facility equipment, and employee education. Through compliance with these permits, the NEXT facility will be protective of shallow groundwater quality at the site using the best practicable methods. In addition to these permits and rule sets, review of the Soilcrete soil stabilization method for installing pilings are consistent with the materials other agencies have approved for similar subsurface emplacements (i.e., well abandonments and well sealing). In summary, through compliance with DEQ permits and rule sets, and implementation of BMPs, the NEXT facility will be using the best practicable methods to protect groundwater quality, in compliance with DEQ's rules covering protection of shallow groundwater.

¹⁵ $3\text{CaOSiO}_2, 2\text{CaOSiO}_2, 3\text{CaOAl}_2\text{O}_3, 4\text{CaOAl}_2\text{O}_3\text{Fe}_2\text{O}_3$

6. References

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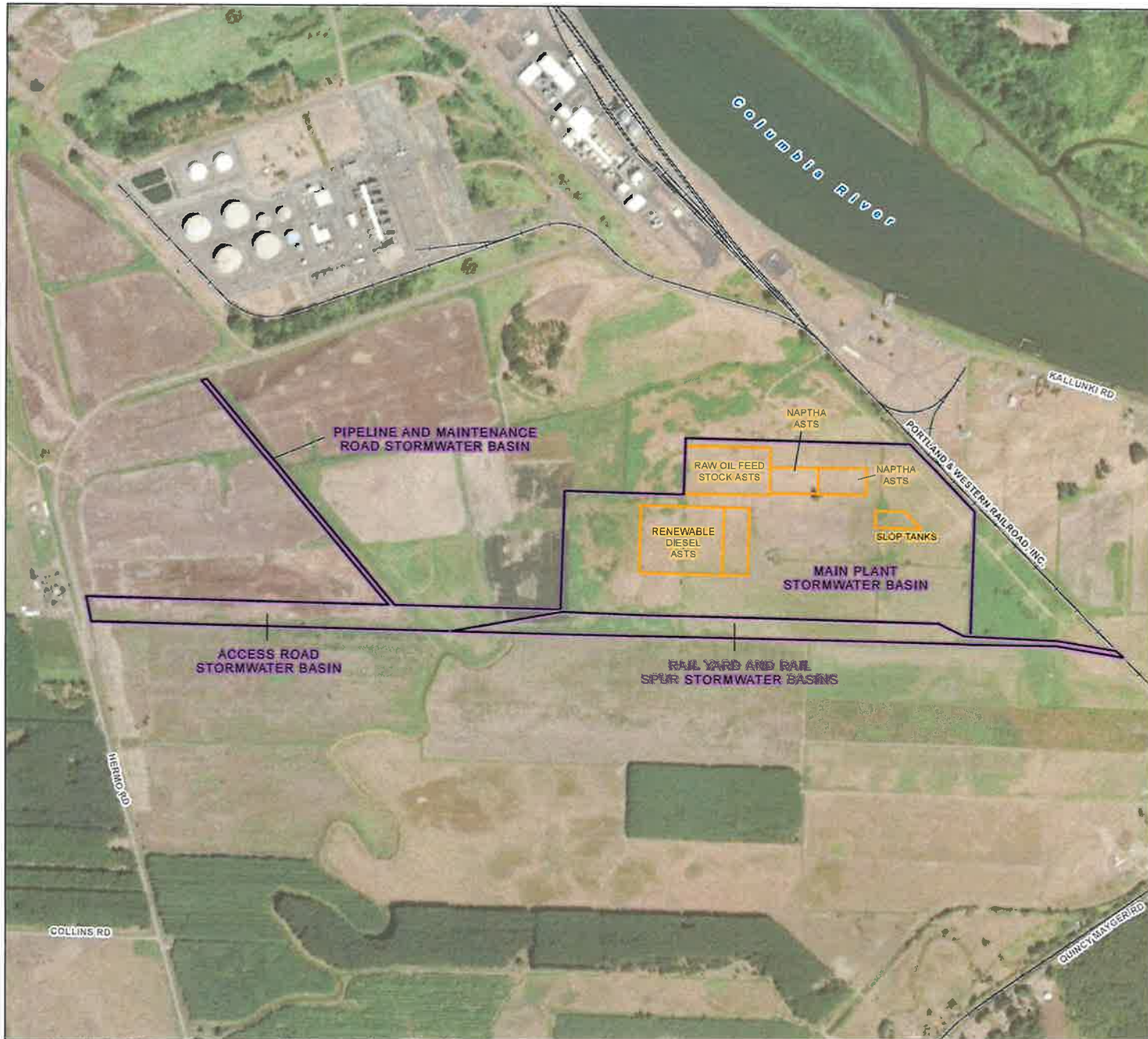
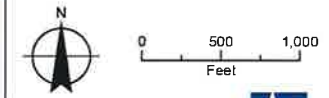


FIGURE 2
NEXT Renewable Fuels Site
Plan
Groundwater Protectiveness
Measures

LEGEND

-  Containment Berm
-  Site Location
-  City Boundary
-  Railroad

NOTE
 Stormwater Basins and Site Boundary are from Mackenzie (2021).



Date: September 27, 2021
 Data Sources: BLM, ESRI, ODOT,
 USGS, Mackenzie (2021),
 Maxar imagery (2017)



ATTACHMENT A

Oregon Department of Environmental Quality Spill Response
Fact Sheet

What to do when you've had a spill

Contact local emergency services

Call 911 for medical emergency and public safety assistance from the local fire, police and medical services.

Report the spill immediately

Immediately report the spill or threatened spill to the Oregon Emergency Response System, 1-800-452-0311, when the spill or threat of a spill includes:

- Any amount of oil to waters of the state;
- Oil spills on land in excess of 42 gallons;
- Hazardous materials and reportable quantities that are equal to the Code of Federal Regulations, [40 CFR Part 302](#).

Provide information

When you report the spill to OERS, you will need to provide basic spill information:

- Contact names and phone numbers
- Type of oil or hazardous material
- Estimated quantity
- Location descriptions (land or water)

U.S. Environmental Protection Agency Notification

Some oil or hazardous material spills will require a separate notification to the National Response Center, 1-800-424-8802. Visit [EPA's Emergency Response](#) website for information necessary to determine if you need to report to the federal system.

Other actions to take

- Move away or upwind from the spill if you detect an odor and are unsure if it is safe.
- Avoid contact with liquids or fumes.
- Keep non-emergency people out of the area.
- Control and contain the spill.
- Clean up what you can immediately.
- Remove cleanup materials to an approved facility (such as a solid or hazardous waste landfill or recycling facility.) Save your receipts for documentation.
- Continue with long-term cleanup measures.
- File a completed [Spill Release Report Form](#) with DEQ

Your role

You are responsible for the immediate cleanup of your spill, regardless of the quantity involved. The responsibility lies with the person who spills the product, as well as the person owning or having authority over the oil or hazardous material. You may need to hire a qualified

contractor or properly trained and equipped personnel to respond immediately to the spill. If you fail to clean up your spill, DEQ may clean it up for you and, as allowed by law, fine you up to three times the cost of the cleanup, in addition to the actual cost of the cleanup ([Oregon Administrative Rules 340-142](#)).



Contractors can work to control, contain and mitigate difficult spills like this truck crash on the North Umpqua Highway that caused diesel to leak into the river.

DEQ's role

DEQ is responsible for ensuring that the cleanup is completed in a way that protects human health and the environment. Oregon law also requires DEQ to recover its costs in carrying out this responsibility.

Depending on the type and quantity of material spilled, and the potential threat to people or the environment, DEQ may choose to oversee the cleanup. This oversight may take the form of DEQ staff at the scene, phone contact, document review or a combination of these actions. You are responsible for these oversight costs and will normally be billed within 45 days.

For more information

Regional Emergency Response coordinators are listed in the margin. You may also visit the [DEQ Emergency Response webpage](#).

Alternative formats

Documents can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request a document in another format or language, call DEQ in Portland at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696; or email deqinfo@deq.state.or.us.



State of Oregon
Department of
Environmental
Quality

Emergency Response

700 NE Multnomah
Portland, OR 97292
Phone: 503-229-6931
Fax: 503-229-5408
Contact: Mike Zollitsch
zollitsch,michael@deq.state.or.us

Contact the State On-Scene Coordinator in your area:

Northwest Region

Portland-Metro and
North Coast
Michael Greenburg
503-229-5153
greenburg,michael@deq.state.or.us

Western Region

Willamette Valley, Cascades,
Central and South Coast
Geoff Brown
541-686-7819
brown,geoff@deq.state.or.us

Eastern Region

East of Cascades
Jamie Collins
541-633-2010
collins,jamie@deq.state.or.us



OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
STANDARD
AIR CONTAMINANT DISCHARGE PERMIT

Northwest Region
 700 NE Multnomah St., Suite 600
 Portland, OR 97232

This permit is being issued in accordance with the provisions of ORS 468A.040 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

NEXT Renewable Fuels Oregon, LLC
 11767 Katy Freeway, Suite 705
 Houston, TX 77079

INFORMATION RELIED UPON:

Application No.: 32808
 Date Received: 12/24/2020

PLANT SITE LOCATION:

Port Westward Industrial Park
 Township 8N, Range 4W, Sections 22 & 23
 (-Site address - TBD)
 Clatskanie, OR 97016

LAND USE COMPATIBILITY FINDING:

Approving Authority: Columbia County
 Approval Date: 03/23/2022

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Melissa Hovey

Melissa Hovey (Aug 30, 2022 08:12 PDT)

Aug 30, 2022

Melissa Hovey, Northwest Region Air Quality Manager

Date

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-8010):

Table 1 Code	Source Description	SIC/NAICS
Part B, 57	Organic or inorganic industrial chemical manufacturing	2869/325199

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1.0 DEVICE, PROCESS AND POLLUTION CONTROL DEVICE (PCD) IDENTIFICATION

The devices, processes, and pollution control devices regulated by this permit are the following:

Devices and Processes Description	Device ID	Pollution Control Device Description	PCD ID	Emission Point ID
77.5 MMBtu/hr NG fired Boiler	Boiler 1	SCR and Oxidation Catalyst	SCR-BLR	BOILER
77.5 MMBtu/hr NG fired Boiler	Boiler 2			
35.2 MMBtu/hr NG Fired Ecofining Unit Trains-Feed Heater 1	ECO1F	SCR and Oxidation Catalyst	SCR-ECO1	ECO1
5.3 MMBtu/hr NG Fired Ecofining Unit Trains-Isomerization Heater 1	ECO1I			
35.2 MMBtu/hr NG Fired Ecofining Unit Trains-Feed Heater 2	ECO2F	SCR and Oxidation Catalyst	SCR-ECO2	ECO2
5.3 MMBtu/hr NG Fired Ecofining Unit Trains-Isomerization Heater 2	ECO2I			
35.2 MMBtu/hr NG Fired Ecofining Unit Trains-Feed Heater 3	ECO3F	SCR and Oxidation Catalyst	SCR-ECO3	ECO3
5.3 MMBtu/hr NG Fired Ecofining Unit Trains-Isomerization Heater 3	ECO3I			
700 MMBtu/hr NG and PSA Tail Gas Fired Hydrogen Plant	H2HTR	SCR and Oxidation Catalyst	SCR-H2HTR	H2HTR
125 MMBtu/hr NG Fired Jet Fractionator	JETFRAC	SCR and Oxidation Catalyst	SCR-JF	JETFRAC
Pretreatment Train 1-BE Day Tank	1BEDAY1	High-Efficiency Filter Bag	FB-1BEDAY1	FB-1BEDAY1
Pretreatment Train 1-BE Day Tank	1BEDAY2	High-Efficiency Filter Bag	FB-1BEDAY2	FB-1BEDAY2

Devices and Processes Description	Device ID	Pollution Control Device Description	PCD ID	Emission Point ID
Pretreatment Train 1-Bleaching Earth Silo	1BESV1	High-Efficiency Filter Bag	FB-1BESV1	FB-1BESV1
Pretreatment Train 1-Bleaching Earth Silo	1BESV2	High-Efficiency Filter Bag	FB-1BESV2	FB-1BESV2
Pretreatment Train 1-Bleaching Earth Silo	1BESV3	High-Efficiency Filter Bag	FB-1BESV3	FB-1BESV3
Pretreatment Train 1-Filter Aid Day Tank	1FADT	High-Efficiency Filter Bag	FB-1FADT	FB-1FADT
Pretreatment Train 1-Filter Aid Dry Silo	1FASV1	High-Efficiency Filter Bag	FB-1FASV1	FB-1FASV1
Pretreatment Train 2-BE Day Tank	2BEDAY1	High-Efficiency Filter Bag	FB-2BEDAY1	FB-2BEDAY1
Pretreatment Train 2-BE Day Tank	2BEDAY2	High-Efficiency Filter Bag	FB-2BEDAY2	FB-2BEDAY2
Pretreatment Train 2-Bleaching Earth Silo	2BESV1	High-Efficiency Filter Bag	FB-2BESV1	FB-2BESV1
Pretreatment Train 2-Bleaching Earth Silo	2BESV2	High-Efficiency Filter Bag	FB-2BESV2	FB-2BESV2
Pretreatment Train 2-Bleaching Earth Silo	2BESV3	High-Efficiency Filter Bag	FB-2BESV3	FB-2BESV3
Pretreatment Train 2-Filter Aid Day Tank	2FADT	High-Efficiency Filter Bag	FB-2FADT	FB-2FADT
Pretreatment Train 2-Filter Aid Dry Silo	2FASV1	High-Efficiency Filter Bag	FB-2FASV1	FB-2FASV1
Pretreatment Train 3-BE Day Tank	3BEDAY1	High-Efficiency Filter Bag	FB-3BEDAY1	FB-3BEDAY1
Pretreatment Train 3-BE Day Tank	3BEDAY2	High-Efficiency Filter Bag	FB-3BEDAY2	FB-3BEDAY2
Pretreatment Train 3-Bleaching Earth Silo	3BESV1	High-Efficiency Filter Bag	FB-3BESV1	FB-3BESV1
Pretreatment Train 3-Bleaching Earth Silo	3BESV2	High-Efficiency Filter Bag	FB-3BESV2	FB-3BESV2
Pretreatment Train 3-Bleaching Earth Silo	3BESV3	High-Efficiency Filter Bag	FB-3BESV3	FB-3BESV3
Pretreatment Train 3-Filter Aid Day Tank	3FADT1	High-Efficiency Filter Bag	FB-3FADT1	FB-3FADT1

Devices and Processes Description	Device ID	Pollution Control Device Description	PCD ID	Emission Point ID
Pretreatment Train 3-Filter Aid Day Tank	3FADT2	High-Efficiency Filter Bag	FB-3FADT2	FB-3FADT2
Pretreatment Train 3-Filter Aid Day Tank	3FADT3	High-Efficiency Filter Bag	FB-3FADT3	FB-3FADT3
Pretreatment Train 3-Filter Aid Dry Silo	3FASV1	High-Efficiency Filter Bag	FB-3FASV1	FB-3FASV1
Pretreatment Train 3-Filter Aid Dry Silo	3FASV2	High-Efficiency Filter Bag	FB-3FASV2	FB-3FASV2
Pretreatment Train 3-Filter Aid Dry Silo	3FASV3	High-Efficiency Filter Bag	FB-3FASV3	FB-3FASV3
5.25 MMGal Animal Fats Storage Tank	ANIFATS1	None		ANIFATS1
5.25 MMGal Animal Fats Storage Tank	ANIFATS2	None		ANIFATS2
5.25 MMGal Animal Fats Storage Tank	ANIFATS3	None		ANIFATS3
16,000 Gal Citric Acid Storage Tank	CACID1	None		CACID1
16,000 Gal Citric Acid Storage Tank	CACID2	None		CACID2
Cooling Tower	CT01	Ultra-high Efficiency Drift Eliminator		CT01
Cooling Tower	CT02	Ultra-high Efficiency Drift Eliminator		CT02
2,000 hp Compression Ignition Emergency Engine	EGEN1	Tier IV Certified		EGEN1
2,000 hp Compression Ignition Emergency Engine	EGEN2	Tier IV Certified		EGEN2
410 hp Compression Ignition Fire Water Pump Engine	EPUMP	Tier IV Certified		EPUMP
Flare with 1.4 MMBtu/hr pilot	FLARE	None		FLARE

Devices and Processes Description	Device ID	Pollution Control Device Description	PCD ID	Emission Point ID
630,000 Gal Hydrocarbon Slop Storage Tank	HCS	Internal Floating Roof		HCS
Acid Gas Regenerator Unit and Sour Water Stripper	AGRU & SWS	18 MMBtu/hr NG Fired Thermal Oxidizer, Baghouse with Dry Sorbent Injection, SCR and Oxidation Catalyst (in series)	TO-INCIN, SBH-INCIN, and SCR-INCIN	INCIN
Fugitive Equipment Leaks	LEAK	Leak Detection and Repair		LEAK
Renewable Diesel Product Loadout (Rail & Truck)	LOAD	1.7 MMBtu/hr NG Fired Vapor Combustion Unit	VCU1	VCU1
420,000 Gal Oil Water Separator Slop Tank	OWS	Internal Floating Roof		OWS
9.45 MMGal Swing RD/RJ Storage Tank	RD/RJ1	Internal Floating Roof		RD/RJ1
9.45 MMGal RD Product Storage Tank	RD1	None		RD1
9.45 MMGal RD Product Storage Tank	RD2	None		RD2
9.45 MMGal RD Product Storage Tank	RD3	None		RD3
2.1 MMGal Swing RJ/RN Storage Tank	RN/RJ1	Internal Floating Roof		RN/RJ1
2.1 MMGal Swing RJ/RN Storage Tank	RN/RJ2	Internal Floating Roof		RN/RJ2
2.1 MMGal Swing RJ/RN Storage Tank	RN/RJ3	Internal Floating Roof		RN/RJ3
5.25 MMGal Vegetable Oils Storage Tank	VEGOIL1	None		VEGOIL1
5.25 MMGal Vegetable Oils Storage Tank	VEGOIL2	None		VEGOIL2

Devices and Processes Description	Device ID	Pollution Control Device Description	PCD ID	Emission Point ID
5.25 MMGal Vegetable Oils Storage Tank	VEGOIL3	None		VEGOIL3
Wastewater Treatment System	WWT	None		WWT

2.0 GENERAL EMISSION STANDARDS AND LIMITS

2.1. Visible Emissions

The permittee must comply with the following visible emission limits from air contaminant sources other than fugitive emission sources, as applicable. Opacity must be measured as a six-minute block average using EPA Method 9.

- a. Emissions Points BOILER, ECO1, ECO2, ECO3, H2HTR, JETFRAC, 1BEDAY1, 1BEDAY2, 1BESV1, 1BESV2, 1BESV3, 1FADT, 1FASV1, 2BEDAY1, 2BEDAY2, 2BESV1, 2BESV2, 2BESV3, 2FADT, 2FASV1, 3BEDAY1, 3BEDAY2, 3BESV1, 3BESV2, 3BESV3, 3FADT, 3FADT2, 3FADT3, 3FASV1, 3FASV2, 3FASV3, CT01, CT02, EGEN1, EGEN2, EPUMP, FLARE, INCIN, and WWT must not equal or exceed 20% opacity; and [OAR 340-208-0110(3)(b) and (4)]
- b. Any devices or processes installed, constructed, or modified on or after April 16, 2015, must not equal or exceed 20% opacity. [OAR 340-208-0110(3)(b) and (4)]

2.2. Fugitive Emissions

- a. In no case may the permittee allow fugitive dust emissions to leave the property of a source for a period or periods totaling more than 18 seconds in a six-minute period. Fugitive emissions must be measured by EPA method 22 with the minimum observation time of six minutes;
- b. At least monthly, the permittee must conduct a six (6) minute visible emission survey of the property boundary downwind from the fugitive emissions sources using EPA Method 22. The person conducting this survey does not have to be EPA Method 9 certified. However, the individual should be trained and knowledgeable with respect to the general procedures for determining the presence of visible emissions. For purposes of this survey, excessive fugitive emissions are considered to be any visible emissions that leave the plant site boundaries. No monitoring is required if the entire facility is shut down; and [OAR 340-208-0210]
 - i. If visible fugitive emissions are detected at the property boundary for more than 5% (18 seconds) of the survey time, the permittee must take corrective action which includes the following:

- A. Using, where possible, water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
 - B. Applying water or other suitable chemicals on unpaved roads, materials stockpiles, and other surfaces which can create airborne dusts;
 - C. Enclosing (full or partial) materials stockpiles in cases where application of water or other suitable chemicals are not sufficient to prevent particulate matter, including dust, from becoming airborne;
 - D. Installing and using hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;
 - E. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne; and
 - F. Promptly removing earth or other material that does or may become airborne from paved streets.
- ii. If no visible fugitive emissions are detected at the property boundary or visible fugitive emissions are detected for less than or equal to 5% (18 seconds) of the survey time for three consecutive months, the permittee may conduct visible emission surveys quarterly rather than monthly. If visible fugitive emissions are detected at the property boundary during the quarterly surveys, the surveys must be conducted monthly; and
 - iii. The permittee must record the results of the EPA Method 22 tests and the corrective action taken in a log.
- c. If requested by DEQ, the permittee must:
 - i. Prepare and submit a fugitive emission control plan within 60 days of the request;
 - ii. Implement the DEQ approved plan whenever fugitive emissions leave the property for more than 18 seconds in a six-minute period; and
 - iii. Keep the plan on site and make the plan available upon request. [OAR 340-208-0210]

2.3. Particulate Matter Emissions

The permittee must comply with the following particulate matter emission limits. For fuel burning equipment that burns fuels other than wood, emission results are corrected to 50% excess air.

- a. Particulate matter emissions from Boiler 1, Boiler 2, ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, ECO3I, H2HTR, and JETFRAC must not exceed 0.10 grains per dry standard cubic foot. [OAR 340-228-0210(2)(c)].
- b. Particulate matter emissions from 1BEDAY1, 1BEDAY2, 1BESV1, 1BESV2, 1BESV3, 1FADT, 1FASV1, 2BEDAY1, 2BEDAY2, 2BESV1, 2BESV2, 2BESV3, 2FADT, 2FASV1, 3BEDAY1, 3BEDAY2, 3BESV1, 3BESV2, 3BESV3, 3FADT, 3FADT2, 3FADT3, 3FASV1, 3FASV2, 3FASV3, CT01, CT02, EGEN1, EGEN2, EPUMP, FLARE, INCIN, SBH-INCIN, WWT, AGRU, and SWS must not exceed 0.10 grains per standard cubic foot. [OAR 340-226-0210(2)(c)]

- c. Non-fugitive particulate matter emissions from processes listed in OAR 340-226-0300 must not exceed the process weight emission standards shown in Table 1 of OAR 340-226-0310.
- d. Particulate matter emissions from any fuel burning equipment (except solid fuel burning devices that have been certified under OAR 340-262-0500) that is installed, constructed or modified on or after April 16, 2015, must not exceed 0.10 grains per dry standard cubic foot, corrected to 50% excess air. [OAR 340-228-0210(2)(c)]
- e. Particulate matter emissions from any device or process (other than fugitive emissions sources and fuel burning equipment) that is installed, constructed or modified after April 16, 2015, must not exceed 0.10 grains per dry standard cubic foot. [OAR 340-226-0210(2)(c)]

2.4. Particulate Matter Fallout

The permittee must not cause or permit the deposition of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. [OAR 340-208-0450]

2.5. Nuisance and Odors

The permittee must not cause or allow the emission of odorous or other fugitive emissions so as to create nuisance conditions off the permittee's property. Nuisance conditions will be verified by DEQ personnel. [OAR 340-208-0300]

2.6. Complaint Log

The permittee must maintain a log of all complaints received by the permittee in person, in writing, by telephone or through other means that specifically refer to air pollution, odor, or nuisance concerns associated with the permitted facility. Documentation must include: [OAR 340-214-0114]

- a. The date the complaint was received;
- b. The date and time the complaint states the condition was present;
- c. A description of the pollution or odor condition;
- d. The location of the complainant/receptor relative to the plant site;
- e. The status of plant operation or activities during the complaint's stated time of pollution or odor condition; and
- f. A record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.

2.7. Fuels and Fuel Sulfur Content

- a. The permittee must not use any fuels other than natural gas, propane, butane, process off gas, Pressure-swing Absorption (PSA) Tail Gas, or any of the ASTM grade fuel oils listed below. The sulfur content cannot exceed:

- i. 0.0015% sulfur by weight for ultra-low sulfur diesel;
- ii. 0.3% sulfur by weight for ASTM Grade 1 distillate oil; [OAR 340-228-0110]
- iii. 0.5% sulfur by weight for ASTM Grade 2 distillate oil; [OAR 340-228-0110]
- b. The permittee is allowed to use renewable diesel which is registered as a motor vehicle fuel or fuel additive under 40 Part 79 and meets the requirements of the ASTM D975 or D396. [OAR 340-228-0130(2)]

3.0 SPECIFIC PERFORMANCE AND EMISSION STANDARDS

3.1. NSPS Subpart A - General Provision Requirements

The permittee must comply with all provisions of 40 CFR 60 Subpart A – NSPS General Provisions, as applicable, adopted herein by reference.

3.2. Flare Operational Requirements - NSPS Subpart A

The permittee must comply with 40 CFR 60.18: General control device requirements (FLARE) [OAR 340-226-0120(1)]

- a. FLARE must be designed for and operated with no visible emissions as determined by EPA Method 22, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours;
- b. FLARE must be operated with a pilot flame present at all times, as determined by using a thermocouple or other equivalent device to detect the presence of a flame;
- c. FLARE must be operated at all times when emissions may be vented to it;
- d. FLARE must be operated only with the net heating value of the gas being combusted being 11.2 MJ/scum (300 Btu/scf) or greater. The net heating value is determined as follows:

$$H_T = K \sum_{i=1}^n C_i H_i$$

where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of off gas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$$K = \text{Constant, } 1.740 \times 10^{-7} \left(\frac{1}{\text{ppm}} \right) \left(\frac{\text{g mole}}{\text{scm}} \right) \left(\frac{\text{MJ}}{\text{kcal}} \right)$$

where the standard temperature for $\left(\frac{\text{g mole}}{\text{scm}} \right)$ is 20°C;

C_i = Concentration of sample component “i” in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946–77 or 90; and

H_i = Net heat of combustion of sample component "i", kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 if published values are not available or cannot be calculated.

- e. FLARE must be designed and operated with an exit velocity less than the velocity as determined by the following method:

$$V_{\max} = 8.706 + 0.7084 (H_T)$$

V_{\max} = Maximum permitted velocity, m/sec

8.706 = Constant

0.7084 = Constant

H_T = The net heating value as determined in paragraph 3.2.d above.

3.3. NSPS Subpart Dc – Small Industrial-Commercial-Institutional Steam Generating Units Requirements

The permittee must comply with all applicable provisions and standards of 40 CFR Part 60, Subpart Dc. All affected Steam Generating Units associated with this permit action, Boiler 1 and Boiler 2, are fired exclusively with natural gas and as such, there are no applicable emission standards for which these Steam Generating Units fall subject under this Subpart.

3.4. NSPS Subpart Kb - Standards of Performance for Volatile Organic Liquid (VOL) Storage Vessels for Which Construction, Reconstruction or Modification Commenced after July 23, 1984

The permittee must comply with all applicable provisions of 40 CFR 60 Subpart Kb, including but not limited to the following, for each affected storage vessel (RN/RJ1, RN/RJ2, and RN/RJ3) (Note – refer to 40 CFR 60 Subpart Kb and Subpart A for definitions of terminology stated in this condition). The following summarizes the applicable requirements of Subpart Kb, but is not intended to supersede the Subpart:

- a. 40 CFR 60.112b Standard for volatile organic compounds (VOC)
- i. The permittee must equip each fixed-roof storage vessel that is subject to this standard (vessels $\geq 39,890$ gallons that contain a VOL with maximum true vapor pressure of at least 5.2 kPa (0.75 psia) but <76.6 kPa (11.12 psia) or vessels ≥ 75 m³ (19,813 gallons) but <151 m³ (39,890 gallons) and containing a VOL with maximum true vapor pressure of at least 27.6 kPa (4.0 psia) but <76.6 kPa (11.12 psia) as follows:
 - A. Each storage vessel must have a fixed roof in combination with an internal floating roof meeting the following specifications:
 1. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or

refilling shall be continuous and shall be accomplished as rapidly as possible;

2. Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:
 - a. A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal).
A liquid-mounted seal means a foam or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank;
 - b. Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous; or
 - c. A mechanical shoe seal.
A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.
3. Each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface;
4. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use;
5. Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports;
6. Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting;
7. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening;
8. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover; and

9. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

3.5. NSPS Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

The permittee must comply with all applicable provisions of 40 CFR 60 Subpart IIII, including but not limited to the following, for each affected compression ignition reciprocating internal combustion engine (Note – refer to 40 CFR 60 Subpart IIII and Subpart A for definitions of terminology stated in this condition. The following summarizes the applicable requirements of Subpart IIII, but is not intended to supersede the Subpart):

- a. **Emission Limitations:** The permittee must not allow emissions from EGEN1 or EGEN2 to equal or exceed the following: [40 CFR 60.4205(b)]
 - i. 6.4 g/kW-hr of non-methane hydrocarbons (NMHC) + nitrogen oxides (NO_x);
 - ii. 3.5 g/kW-hr of carbon monoxide (CO); and
 - iii. 0.20 g/kW-hr of particulate matter (PM).
- b. **Emission Limitations:** The permittee must not allow emissions from EPUMP to equal or exceed the following: [40 CFR 60.4205(c) and 40 CFR 60 Subpart IIII Table 4]
 - i. 4.0 g/kW-hr of non-methane hydrocarbons (NMHC) + nitrogen oxides (NO_x); and
 - ii. 0.20 g/kW-hr of particulate matter (PM).
- c. The permittee must demonstrate compliance with Conditions 3.5.a and b by purchasing engines certified by the manufacturer to meet the emissions standards. [40 CFR 60.4211(c)]
- d. **Fuel Sulfur Content:** When using diesel fuel in EGEN1, EGEN2, or EPUMP, the permittee must use only diesel fuel with no more than 0.0015% sulfur by weight and must contain a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. [40 CFR 60.4207(b)]
- e. **Metering:** The permittee must install a non-resettable hour meter on EGEN1, EGEN2, and EPUMP prior to startup of each. [40 CFR 60.4209(a)]
- f. **Labeling:** Each stationary emergency engine must have a permanent label stating that the engine is for stationary emergency use only. [40 CFR 60.4210(f) and Table 5 of Subpart IIII]
- g. **Operation Limits:** The permittee must operate EGEN1, EGEN2, and EPUMP in accordance with the following operational limitations:
 - i. The permittee must operate and EGEN1, EGEN2, and EPUMP such that they achieve the emission standards as required in Conditions 3.5.a and 3.5.b over the entire life of the engines; [40 CFR 60.4206]
 - ii. The permittee must operate and maintain EGEN1, EGEN2, and EPUMP according to the manufacturer's emission-related written instructions; [40 CFR 60.4211(a)(1)]
 - iii. The permittee must change only those emission-related settings that are permitted by the manufacturer; [40 CFR 60.4211(a)(2)]
 - iv. There is no time limit on the use of EGEN1, EGEN2, and EPUMP in emergency situations; [40 CFR 60.4211(f)(1)]

- v. EGEN1, EGEN2, and EPUMP may be operated for the purpose of maintenance checks and readiness testing for a maximum of 100 hours per calendar year, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. The permittee must maintain documentation of the recommendation; [40 CFR 60.4211(f)(2)]
- vi. EGEN1, EGEN2, and EPUMP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in Condition 3.5.g.v. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity; and [40 CFR 60.4211(f)(3)]
- vii. Except as provided in Condition 3.5.g.vi and for maintenance checks and readiness testing, the permittee is prohibited from using EGEN1, EGEN2, and EPUMP for any non-emergency use including but not limited to peak shaving, emergency demand response, and/or generation of income from the sale of power. To perform such activity the permittee must first obtain a modified permit in accordance with Condition 11.2 or a separate permit for power generation that appropriately addresses and allows this activity.
- h. **Recordkeeping:** The permittee must keep records of the hours of operation of EGEN1, EGEN2, and EPUMP that is recorded through a non-resettable hour meter. The permittee must document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation used for maintenance checks and readiness testing. [40 CFR 60.4214(b)]

3.6. NESHAP (40 CFR 61) Subpart A - General Provision Requirements

The permittee must comply with all provisions of 40 CFR 61 Subpart A – NESHAP General Provisions, as applicable, adopted herein by reference.

3.7. NESHAP (40 CFR 61) Subpart FF – Benzene Waste Operations

The permittee must comply with all applicable provisions of 40 CFR 61 Subpart FF, including but not limited to the following (Note – refer to 40 CFR 61 Subpart FF and Subpart A for definitions of terminology stated in this condition). The following summarizes the applicable requirements of Subpart FF, but is not intended to supersede the Subpart:

- a. The total annual benzene quantity from facility waste is the sum of the annual benzene quantity for each waste stream at the facility that has a flow-weighted annual average water content greater than 10 percent or that is mixed with water, or other wastes, at any time and the mixture has an annual average water content greater than 10 percent. The benzene quantity in a waste stream is to be counted only once without multiple counting if other waste streams are mixed with or generated from the original waste stream. Other specific requirements for calculating the total annual benzene waste quantity are as follows: [40 CFR 61.342(a)]
 - i. Wastes must be included in the calculation of the total annual benzene quantity if they have an annual average water content greater than 10 percent, or if they are

- mixed with water or other wastes at any time and the mixture has an annual average water content greater than 10 percent; [40 CFR 61.342(a)(1)]
- ii. The benzene in a material subject to this subpart that is sold is included in the calculation of the total annual benzene quantity if the material has an annual average water content greater than 10 percent; [40 CFR 61.342(a)(2)]
 - iii. Benzene in wastes generated by remediation activities conducted at the facility, such as the excavation of contaminated soil, pumping and treatment of groundwater, and the recovery of product from soil or groundwater, are not included in the calculation of total annual benzene quantity for that facility; and [40 CFR 61.342(a)(3)]
 - iv. The total annual benzene quantity is determined based upon the quantity of benzene in the waste before any waste treatment occurs to remove the benzene except as specified in Conditions 3.7.c.i and ii; [40 CFR 61.342(a)(4)]
- b. The permittee shall determine the total annual benzene quantity from facility waste by the following procedure: [40 CFR 61.355(a)]
- i. For each waste stream subject to this subpart having a flow-weighted annual average water content greater than 10 percent water, on a volume basis as total water, or is mixed with water or other wastes at any time and the resulting mixture has an annual average water content greater than 10 percent as specified in Condition 3.7.a, the permittee shall:
 - A. Determine the annual waste quantity for each waste stream using the procedures specified in Condition 3.7.c;
 - B. Determine the flow-weighted annual average benzene concentration for each waste stream using the procedures specified in 3.7.d; and
 - C. Calculate the annual benzene quantity for each waste stream by multiplying the annual waste quantity of the waste stream times the flow-weighted annual average benzene concentration.
 - ii. Total annual benzene quantity from facility waste is calculated by adding together the annual benzene quantity for each waste stream generated during the year and the annual benzene quantity for each process unit turnaround waste annualized according to 3.7.c.iii.
- c. For purposes of the calculation required by Condition 3.7.b, the permittee shall determine the annual waste quantity at the point of waste generation, unless otherwise provided in Conditions 3.7.c.i through iii, by one of the methods given in Conditions 3.7.c.iv through vi. [40 CFR 61.355(b)]
- i. The determination of annual waste quantity for sour water streams that are processed in sour water strippers shall be made at the point that the water exits the sour water stripper;
 - ii. The determination of annual waste quantity for wastes that are received at hazardous waste treatment, storage, or disposal facilities from offsite shall be made at the point where the waste enters the hazardous waste treatment, storage, or disposal facility;
 - iii. The determination of annual waste quantity for each process unit turnaround waste generated only at 2 year or greater intervals, may be made by dividing the total quantity of waste generated during the most recent process unit turnaround by the time period (in the nearest tenth of a year) between the turnaround resulting

- in generation of the waste and the most recent preceding process turnaround for the unit. The resulting annual waste quantity shall be included in the calculation of the annual benzene quantity as provided in Condition 3.7.b.i.C for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process turnaround. For estimates of total annual benzene quantity as specified in the initial startup report, required under Condition 10.4.a, the permittee shall estimate the waste quantity generated during the most recent turnaround, and the time period between turnarounds in accordance with good engineering practices. If the owner or operator chooses not to annualize process unit turnaround waste, as specified in this paragraph, then the process unit turnaround waste quantity shall be included in the calculation of the annual benzene quantity for the year in which the turnaround occurs;
- iv. Select the highest annual quantity of waste managed from historical records representing the most recent 5 years of operation or, if the facility has been in service for less than 5 years but at least 1 year, from historical records representing the total operating life of the facility;
 - v. Use the maximum design capacity of the waste management unit; or
 - vi. Use measurements that are representative of maximum waste generation rates.
- d. For the purposes of the calculation required by Condition 3.7.b the permittee shall determine the flow-weighted annual average benzene concentration in a manner that meets the requirements given in Condition 3.7.d.i using either of the methods given in Conditions 3.7.d.ii or iii. [40 CFR 61.355(c)]
- i. The determination of flow-weighted annual average benzene concentration shall meet all of the following criteria:
 - A. The determination shall be made at the point of waste generation except for:
 1. The determination for sour water streams that are processed in sour water strippers shall be made at the point that the water exits the sour water stripper;
 2. The determination for wastes that are received from offsite shall be made at the point where the waste enters the hazardous waste treatment, storage, or disposal facility; and
 3. The determination of flow-weighted annual average benzene concentration for process unit turnaround waste shall be made using either of the methods given in Conditions 3.7.d.ii or iii. The resulting flow-weighted annual average benzene concentration shall be included in the calculation of annual benzene quantity as provided in Condition 3.7.b.i.C for the year in which the turnaround occurs and for each subsequent year until the unit undergoes the next process unit turnaround.
 - B. Volatilization of the benzene by exposure to air shall not be used in the determination to reduce the benzene concentration;
 - C. Mixing or diluting the waste stream with other wastes or other materials shall not be used in the determination - to reduce the benzene concentration;

- D. The determination shall be made prior to any treatment of the waste that removes benzene, except as specified in Conditions 3.7.d.i.A.1 through 3; and
 - E. For wastes with multiple phases, the determination shall provide the weighted-average benzene concentration based on the benzene concentration in each phase of the waste and the relative proportion of the phases.
- ii. **Knowledge of the waste.** The permittee shall provide sufficient information to document the flow-weighted annual average benzene concentration of each waste stream. Examples of information that could constitute knowledge include material balances, records of chemicals purchases, or previous test results provided the results are still relevant to the current waste stream conditions. If test data are used, then the owner or operator shall provide documentation describing the testing protocol and the means by which sampling variability and analytical variability were accounted for in the determination of the flow-weighted annual average benzene concentration for the waste stream. When an owner or operator and the Administrator do not agree on determinations of the flow-weighted annual average benzene concentration based on knowledge of the waste, the procedures under Condition 3.7.d.iii shall be used to resolve the disagreement; or
- iii. Measurements of the benzene concentration in the waste stream in accordance with the following procedures:
- A. Collect a minimum of three representative samples from each waste stream. Where feasible, samples shall be taken from an enclosed pipe prior to the waste being exposed to the atmosphere;
 - B. For waste in enclosed pipes, the following procedures shall be used:
 - 1. Samples shall be collected prior to the waste being exposed to the atmosphere in order to minimize the loss of benzene prior to sampling;
 - 2. A static mixer shall be installed in the process line or in a by-pass line unless the owner or operator demonstrates that installation of a static mixer in the line is not necessary to accurately determine the benzene concentration of the waste stream;
 - 3. The sampling tap shall be located within two pipe diameters of the static mixer outlet;
 - 4. Prior to the initiation of sampling, sample lines and cooling coil shall be purged with at least four volumes of waste;
 - 5. After purging, the sample flow shall be directed to a sample container and the tip of the sampling tube shall be kept below the surface of the waste during sampling to minimize contact with the atmosphere;
 - 6. Samples shall be collected at a flow rate such that the cooling coil is able to maintain a waste temperature less than 10 °C (50 °F);
 - 7. After filling, the sample container shall be capped immediately (within 5 seconds) to leave a minimum headspace in the container; and

8. The sample containers shall immediately be cooled and maintained at a temperature below 10 °C (50 °F) for transfer to the laboratory.
- C. When sampling from an enclosed pipe is not feasible, a minimum of three representative samples shall be collected in a manner to minimize exposure of the sample to the atmosphere and loss of benzene prior to sampling; and
- D. Each waste sample shall be analyzed using one of the following test methods for determining the benzene concentration in a waste stream:
1. Method 8020, Aromatic Volatile Organics, in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication No. SW-846 (incorporation by reference as specified in 40 CFR 61.18);
 2. Method 8021, Volatile Organic Compounds in Water by Purge and Trap Capillary Column Gas Chromatography with Photoionization and Electrolytic Conductivity Detectors in Series in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication No. SW-846 (incorporation by reference as specified in 40 CFR 61.18);
 3. Method 8240, Gas Chromatography/Mass Spectrometry for Volatile Organics in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication No. SW-846 (incorporation by reference as specified in 40 CFR 61.18);
 4. Method 8260, Gas Chromatography/Mass Spectrometry for Volatile Organics: Capillary Column Technique in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication No. SW-846 (incorporation by reference as specified in 40 CFR 61.18);
 5. Method 602, Purgeable Aromatics, as described in 40 CFR 136, appendix A, Test Procedures for Analysis of Organic Pollutants, for wastewaters for which this is an approved EPA methods; or
 6. Method 624, Purgeables, as described in 40 CFR 136, appendix A, Test Procedures for Analysis of Organic Pollutants, for wastewaters for which this is an approved EPA method.
- E. The flow-weighted annual average benzene concentration shall be calculated by averaging the results of the sample analyses as follows:

$$\bar{C} = \frac{1}{Q_t} \times \sum_{i=1}^n (Q_i)(C_i)$$

Where:

- C = Flow-weighted annual average benzene concentration for waste stream, ppmw.
- Q_t = Total annual waste quantity for waste stream, kg/yr (lb/yr).
- n = Number of waste samples (at least 3).
- Q_i = Annual waste quantity for waste stream represented by C_i, kg/yr (lb/yr).
- C_i = Measured concentration of benzene in waste sample i, ppmw.

- e. If the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr) as determined in Condition 3.7.b, the permittee must comply with applicable requirements of 40 CFR 61, Subpart FF.

3.8. NESHAP (40 CFR 63) Subpart A - General Provision Requirements

The permittee must comply with all provisions of 40 CFR 63 Subpart A – NSPS General Provisions, as applicable, adopted herein by reference.

3.9. NESHAP (40 CFR 63) Subpart ZZZZ – Emergency Engines

The permittee must comply with applicable requirements of 40 CFR 60 Subpart IIII for Emergency Generator Engines and Fire Water Pump Engine. [40 CFR 63.6590(c)]

4.0 OPERATION AND MAINTENANCE REQUIREMENTS

4.1. Operation of Pollution Control Devices and Processes

The permittee must operate and ensure proper functioning of all air pollution control devices and components at all times when the associated emission source is operating. [OAR 340-226-0120]

4.2. Operation and Maintenance for Emergency Stationary RICE

The permittee must comply with the following requirements for Emergency Generator Engines and Fire Water Pump Engine: [OAR 340-226-0100]

- a. At all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions;
- b. Change oil and filter every 500 hours of operation or annually, whichever comes first, or utilize an oil analysis program as described in 40 CFR 63.6625(i);
- c. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first;
- d. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary;
- e. During periods of startup, minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply;
- f. The permittee must install a non-resettable hour meter on each emergency stationary RICE prior to operation, if one is not already installed;
- g. The permittee must not operate EGEN1, EGEN2, or EPUMP for non-emergency purposes during plant startup commissioning or during the plant annual shutdown;
- h. The permittee may operate EGEN1 and EGEN2 for non-emergency purposes only between the hours of 10:00 a.m. and 4:00 p.m.; and

- i. The permittee must not operate both EGEN1 and EGEN2 for non-emergency purposes on any single calendar day.

4.3. Highest and Best Practicable Treatment and Control

The permittee must provide the highest and best practicable treatment and control of air contaminant emissions in every case so as to maintain overall air quality at the highest possible levels, and to maintain contaminant concentrations, visibility reduction, odors, soiling, and other deleterious factors at the lowest possible levels as provided below. [OAR 340-226-0100]

- a. The permittee must control emissions from ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, and ECO3I with Selective Catalytic Reduction (SCR) and Oxidation Catalyst.
 - i. The permittee must operate the SCR and Oxidation Catalyst with appropriate ammonia injection rates at all times that the exhaust gas and catalyst temperatures meet the specifications of the SCR and Oxidation Catalyst device manufacturer;
 - ii. Each SCR must be equipped with devices capable of continuously monitoring and recording the following operating parameters:
 - A. Ammonia injection rate;
 - B. Gas temperature at catalyst inlet; and
 - C. Pressure difference across the catalyst.
 - iii. Each Oxidation Catalyst must be equipped with devices capable of continuously monitoring and recording the following operating parameters:
 - A. Gas temperature at catalyst inlet; and
 - B. Pressure difference across the catalyst.
 - iv. The permittee must continuously monitor and record the SCR and Oxidative Catalyst operating parameters identified in Conditions 4.3.a.ii and iii;
 - v. The permittee must maintain the SCR and Oxidation Catalyst operating parameters identified in Conditions 4.3.a.ii and iii within the manufacturer's design operating ranges;
 - vi. The permittee must investigate and commence corrective action measures immediately after an observed excursion of any operating parameter range identified in Condition 4.3.a.v; and
 - vii. The permittee must correct the problem as soon as practicable, but no later than 10 calendar days from the date of discovery.
- b. The permittee must control emissions from Boiler 1, Boiler 2, H2HTR, and JETFRAC with SCR and Oxidation Catalyst.
 - i. The permittee must operate the SCR and Oxidation Catalyst with appropriate ammonia injection rates at all times that the exhaust gas and catalyst temperatures meet the specifications of the SCR and Oxidation Catalyst device manufacturer;
 - ii. Each SCR must be equipped with devices capable of continuously monitoring and recording the ammonia injection rate;
 - iii. Each Oxidation Catalyst must be equipped with devices capable of continuously monitoring and recording the following operating parameters:
 - A. Gas temperature at catalyst inlet; and
 - B. Pressure difference across the catalyst.

- iv. The permittee must continuously monitor and record the SCR and Oxidation Catalyst operating parameters identified in Conditions 4.3.b.ii and iii;
 - v. The permittee must maintain the SCR and Oxidation Catalyst operating parameters identified in Conditions 4.3.b.ii and iii within the manufacturer's design operating ranges;
 - vi. The permittee must investigate and commence corrective action measures immediately after an observed excursion of any operating parameter range identified in Condition 4.3.b.v; and
 - vii. The permittee must correct the problem as soon as practicable, but no later than 10 calendar days from the date of discovery.
- c. The permittee must control emissions from 1BEDAY1, 1BEDAY2, 1BESV1, 1BESV2, 1BESV3, 1FADT, 1FASV1, 2BEDAY1, 2BEDAY2, 2BESV1, 2BESV2, 2BESV3, 2FADT, 2FASV1, 3BEDAY1, 3BEDAY2, 3BESV1, 3BESV2, 3BESV3, 3FADT, 3FADT2, 3FADT3, 3FASV1, 3FASV2, and 3FASV3 with Filtration Units.
- i. Each filtration unit must be equipped with an operational pressure differential indicator;
 - ii. The permittee must continuously monitor and record the pressure differential of each filtration unit;
 - iii. The permittee must follow the manufacturer's design operating differential pressure ranges for each respective filtration unit at the facility;
 - iv. The permittee must investigate and commence corrective action measures immediately after an observed excursion of the operating differential pressure range identified in Condition 4.3.c.iii;
 - v. The permittee must correct the problem as soon as practicable, but no later than 10 calendar days from the date of discovery;
 - vi. When replacing filters or fabric filter bags in any filtration unit, the permittee may not substitute a bag or filter with lower control efficiency specifications than what was specified in the original system design specifications; and
 - vii. The permittee must keep readily accessible records documenting the original engineering design specifications for all filtration units at the facility. These records must be kept for the life of the source.
- d. The permittee must control emissions from LOAD with a vapor combustion unit.
- i. The permittee must design and configure the exhaust stacks of the VCU system to comply with EPA's Test Method 1 and appropriately equipped with sample ports for sample and velocity traverses while source testing;
 - ii. The permittee must install a temperature monitoring system to continuously monitor and record the operating temperature in the combustion zones of the VCU system;
 - iii. The permittee must maintain the operating temperature of the VCU system at or above the average operating temperature recorded during the most recent approved source test at which compliance was demonstrated. Prior to source testing the operating temperature of the VCU system must be above 1,500°F;
 - iv. The permittee must investigate and commence corrective action measures immediately after an observed excursion of the temperature range identified in Condition 4.3.d.iii;

- v. The permittee must correct the problem as soon as practicable, but no later than 10 calendar days from the date of discovery; and
 - vi. The permittee must equip the VCU system with a process interlock that halts product loading during VCU system malfunction or upset condition events.
- e. The permittee must control emissions from AGRU and SWS with TO-INCIN, SBH-INCIN, and SCR-INCIN, in series.
- i. TO-INCIN:
 - A. The permittee must install:
 - 1. A temperature monitoring system to continuously monitor and record the operating temperature in the combustion zones of TO-INCIN; and
 - 2. Audible and visual alarms linked to the temperature monitoring system.
 - B. The permittee must maintain the operating temperature of the TO-INCIN system at or above the average operating temperature recorded during the most recent approved source test at which compliance was demonstrated. Prior to source testing the operating temperature of the TO-INCIN must be above 1,500°F;
 - C. The audible and visual alarms must trigger automatically upon the operating temperature of the TO-INCIN system being below the average operating temperature recorded during the most recent approved source test or 1,500°F if source testing has not yet been conducted;
 - D. The permittee must investigate and commence corrective action measures immediately after an observed excursion of the temperature range identified in Condition 4.3.e.i.B; and
 - E. The permittee must correct the problem as soon as practicable, but no later than 10 calendar days from the date of discovery.
 - ii. SBH-INCIN:
 - A. SBH-INCIN must be equipped with:
 - 1. An operational pressure differential indicator; and
 - 2. A device capable of measuring the sorbent injection rate.
 - B. The permittee must monitor and record the pressure differential for SBH-INCIN at least once per operating day;
 - C. The permittee must continuously monitor and record and sorbent injection rate for SBH-INCIN;
 - D. The permittee must follow the manufacturer's design operating differential pressure ranges and sorbent injection rate for SBH-INCIN;
 - E. The permittee must investigate and commence corrective action measures immediately after an observed excursion of the operating differential pressure range or sorbent injection rate identified in Condition 4.3.e.ii.D;
 - F. The permittee must correct the problem as soon as practicable, but no later than 10 calendar days from the date of discovery;
 - G. When replacing filters or fabric filter bags in SBH-INCIN, the permittee may not substitute a bag or filter with lower control efficiency

- specifications than what was specified in the original system design specifications; and
- H. The permittee must keep readily accessible records documenting the original engineering design specifications for all filtration units at the facility. These records must be kept for the life of the source.
- iii. SCR-INCIN
- A. SCR-INCIN must be equipped with an SCR and an Oxidation Catalyst;
- B. The permittee must operate the SCR and Oxidation Catalyst with appropriate ammonia injection rates at all times that the exhaust gas and catalyst temperatures meet the specifications of the SCR and Oxidation Catalyst device manufacturer;
- C. The SCRs must be equipped with devices capable of continuously monitoring and recording the following operating parameters:
1. Ammonia injection rate;
 2. Gas temperature at catalyst inlet; and
 3. Pressure difference across the catalyst.
- D. The Oxidation Catalyst must be equipped with devices capable of continuously monitoring and recording the following operating parameters:
1. Gas temperature at catalyst inlet; and
 2. Pressure difference across the catalyst.
- E. The permittee must continuously monitor and record the SCR and Oxidation Catalyst operating parameters identified in Conditions 4.3.e.iii.C and D;
- F. The permittee must maintain the SCR and Oxidation Catalyst operating parameters identified in Conditions 4.3.e.iii.C and D within the manufacturer's design operating ranges;
- G. The permittee must investigate and commence corrective action measures immediately after an observed excursion of any operating parameter range identified in Condition 4.3.e.iii.F; and
- H. The permittee must correct the problem as soon as practicable, but no later than 10 calendar days from the date of discovery.
- f. The permittee must control emissions from HCS, OWS, and RD/RJ1 with internal floating roofs;
- i. Each internal floating roof must meet the specifications of Condition 3.4.a;
 - ii. The permittee must inspect each tank in accordance with Condition 6.2; and
 - iii. The permittee must maintain records in accordance with Condition 9.2.
- g. During startup, shutdown, and emergency situation the permittee must control process gases associated with ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, ECO3I, JETFRAC, H2HTR, AGRU and SWS with FLARE.
- h. The permittee must take corrective action to return to highest and best practicable treatment and control upon exceeding any of the following action levels:
- i. 5 ppm NO_x at 3% O₂ from the Boiler 1 and Boiler 2 combined stack, BOILER;
 - ii. 5 ppm NO_x at 3% O₂ from H2HTR; and

- iii. 5 ppm NO_x at 3% O₂ from JETFRAC;
- i. The exceedance of an action level is not considered a violation of an emission limit in this permit but failure to take corrective action is a violation. [OAR 340-226-0120(2)(d)]

4.4. Process Leak Detection Program

The permittee must implement a process component leak detection program that at a minimum includes the following performance requirements:

- a. Quarterly, the permittee must monitor all process associated pipes, ductwork, connectors, valves/flanges, pumps and compressors to for leaks by complying with the following inspection and repair protocol:
 - i. The permittee must perform an inspection of the facility's product receipt, loading and vapor collection associated components in volatile organic liquid product service;
 - ii. The permittee must perform quarterly inspections by evaluating the components using Method 21;
 - iii. The permittee must record each detection of a leak. A leak is detected whenever a measured concentration of 5,000 ppm or greater is detected;
 - iv. The permittee must attempt to correct components identified to have recognized leaks within 5 calendar days. If components cannot be repaired with the first attempt the permittee must tag and log the component, noting the date of the identified leak;
 - v. The permittee must repair leaking components within 15 days;
 - vi. The permittee must report leaking components that are not repairable within the 15-day period to DEQ by 5:00 p.m. of the 15th day by phone, fax or e-mail. The report must identify the leaking component(s), the anticipated alternate repair period and the justification for an extended repair period;
 - vii. Leaking components that are taken out of service by isolation and bypass are not required to be reported to DEQ as required by Condition 4.4.a.vi; and
 - viii. DEQ may require submission of an excess emission report in accordance with Condition 10.1 for reported leaking components.

4.5. Continuous Emissions Monitoring

- a. In addition to operating all CEMS and CPMS in accordance with the manufacturer's instructions, the permittee must operate all CEMS and CPMS in accordance with a quality assurance plan approved by and on file with the Department.
- b. The permittee must monitor NO_x and O₂ emissions from emissions points BOILER, H2HTR, and JETFRAC by calibrating, maintaining, and recording the output of a CEMS in accordance with DEQ's Continuous Monitoring Manual.

- i. Each CEMS must continuously monitor and record the concentration of NO_x and O₂ emissions on a wet or dry basis discharged into the atmosphere. [Continuous Monitoring Manual]
- ii. Each CEMS must consist of subsystems for sample extraction, conditioning, detection, analysis, and data recording/processing. [Continuous Monitoring Manual]
- iii. Each CEMS must meet the requirements of 40 CFR 60 Appendix B (performance specifications) and Appendix F (QA/QC procedures). [Continuous Monitoring Manual]
- iv. The CEMS must be capable of measuring emission levels under normal conditions and under periods of short-duration peaks of high concentrations.
 - A. The permittee may either use a single NO_x analyzer with a dual range (low-and high-scales) or two separate NO_x analyzers connected to a common sample probe and sample interface. Two separate NO_x analyzers connected to separate probes and sample interfaces may be used if RATAs are passed on both ranges.
 - B. For dual-range units, when the reading goes above the full-scale measurement value of the lower range, the higher-range operation must be started automatically.
- v. As an alternative to Condition 4.5.b.iv, the permittee may use a default high range value of 100 ppm when the low scale NO_x range is exceeded. The assumed 100 ppm high range value must be utilized for each unit operating hour in which the full-scale of the low range NO_x analyzer is exceeded.
- vi. The CEMS spans must be: [Continuous Monitoring Manual and 40 CFR 60 – Appendix B]
 - A. 10 ppm for NO_x low-scale;
 - B. 100 ppm for NO_x high-scale; and
 - C. 25% for oxygen
- vii. Each CEMS must complete a minimum of one cycle of sampling and analyzing for each successive 15-minute period. [Continuous Monitoring Manual]
- viii. NO_x concentrations must be corrected to 3% oxygen.
- ix. Relative Accuracy Test Audits (RATAs):
 - A. For purposes of RATA testing the emission action level values in Condition 4.3.g may be used as the applicable standard when emissions are below 50% of the emission action level.
 - B. The first CEMS data accuracy assessment must be a RATA [40 CFR 60 Appendix F, Procedure 1]
- c. The permittee must install, certify, operate, calibrate, maintain, and record the output of fuel flow meters for natural gas to Boiler 1, Boiler 2, JETFRAC, and H2HTR in accordance with the manufacturer's instructions and 40 CFR Part 75, Appendix D.
- d. The permittee must install, certify, operate, calibrate, maintain, and record the output of a fuel flow meter for PSA Tail gas to H2HTR in accordance with the manufacturer's instructions and 40 CFR Part 75, Appendix D.

5.0 PLANT SITE EMISSION LIMITS

5.1. Plant Site Emission Limits (PSEL)

The permittee must not cause or allow plant site emissions to exceed the following: [OAR 340-222-0040 and/or OAR 340-222-0041]

Pollutant	Limit	Units
PM	27	tons per year
PM ₁₀	27	
PM _{2.5}	27	
SO ₂	39	
NO _x	39	
CO	99	
VOC	70	
H ₂ S	9	
GHGs (CO ₂ e)	1,152,905	
GHGs (CO ₂ e) excluding biomass CO ₂	436,938	

5.2. Annual Period

The annual plant site emissions limits apply to any 12-consecutive calendar month period. [OAR 340-222-0035]

6.0 COMPLIANCE DEMONSTRATION

6.1. NSPS Subpart Dc Testing Requirements

There are no applicable testing requirements for Boiler 1 or Boiler 2 under NSPS Subpart Dc.

6.2. NSPS Subpart Kb Testing Requirements

The permittee must perform testing of each storage tank subject to Subpart Kb in accordance with 40 CFR 60.113b:

- a. After installing the control equipment required to meet Condition 3.4.a.i.A. of the permit [40 CFR 60.112b(a)(1)] (permanently affixed roof and internal floating roof), the permittee must:
- i. Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.
 - ii. For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in Condition 10.3.a. of the permit [40 CFR 60.115b(a)(3)]. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired, or the vessel will be emptied as soon as possible.
 - iii. For vessels equipped with a double-seal system as specified in Condition 3.4.a.i.A.2.b. of the permit [40 CFR 60.112b(a)(1)(ii)(B)]:
 - A. Visually inspect the vessel as specified in paragraph 6.2.a.iv. of this section at least every 5 years; or
 - B. Visually inspect the vessel as specified in paragraph 6.2.a.ii. of this section.
 - iv. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs 6.2.a.ii. and 6.2.a.iii.B. of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph 6.2.a.iii.A. of this section.
 - v. Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs 6.2.a.i. and 6.2.a.iv. of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph 6.2.a.iv. of this section is

not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

6.3. PSEL Compliance Monitoring using Emission Factors

The permittee must calculate the emissions for each 12-consecutive calendar month period based on the following calculation for each pollutant except as provided in Conditions 6.5, 6.6, and 6.7: [OAR 340-222-0080]

$$E = \Sigma(EF \times P) \times 1 \text{ ton}/2000 \text{ pounds}$$

where:

- E = pollutant emissions (tons/year);
- Σ = symbol representing "summation of";
- EF = pollutant emission factor (see Condition 15.0);
- P = process/production (see Condition 16.0)

6.4. Emission Factors

The permittee must use the default emission factors provided in Condition 15.0 for calculating pollutant emissions unless alternative emission factors are approved in writing by DEQ. The permittee may request or DEQ may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by DEQ. [OAR 340-222-0080]

6.5. Greenhouse Gas Emissions

The permittee must calculate greenhouse gas emissions in metric tons and short tons for each 12-consecutive calendar month period to determine compliance with the GHG PSEL by using the following: [OAR 340-215-0040]

- a. DEQ Fuel Combustion Greenhouse Gas Calculator; <https://www.oregon.gov/deq/FilterDocs/ghgCalculatorFuelCombust.xlsx>;
- b. EPA emission quantification methodologies as prescribed in 40 CFR Part 98 subparts E through UU;
- c. <https://ccdsupport.com/confluence/display/help/Optional+Calculation+Spreadsheet+Instructions>; or
- d. An alternative calculation method approved in writing by DEQ.

6.6. Mass Balance

The permittee must calculate the VOC emissions for each 12 consecutive calendar month period based on the following formula: [OAR 340-222-0080]

$$E_{VOC-A} = [\sum(C_x \times D_x \times K_x)] - W_x \times 1 \text{ ton}/2000 \text{ pounds}$$

where:

- E_{VOC-A} = Annual VOC emissions in tons
- C = Material usage for the period in gallons
- D = Material density in pounds per gallon
- K = VOC concentration in pounds of VOC per pound of material, expressed as a decimal
- x = Subscript x represents a specific material
- W = Weight of VOC shipped offsite in pounds

6.7. NO_x CEMS

The permittee must calculate the NO_x emissions from Boiler 1, Boiler 2, JETFRAC, and H2HTR for each 12 consecutive calendar month period based on the following formulas: [OAR 340-222-0080]

$$E = \sum[C \times K_1 \times F_d \times H \times K_2] \times 1 \text{ ton}/2000 \text{ pounds}$$

where:

- E = Emission unit pollutant emissions (tons/year);
- Σ = symbol representing “summation of”;
- C = Average hourly NO_x concentrations at 3% O₂ (ppmvd);
- K_1 = Constant for converting ppm to lb/scf = 1.194×10^{-7}
- F_d = EPA Method 19 value (8,710 dscf/MMBtu for natural gas, site specific F factor for PSA tail gas)
- H = Emission unit hourly heat input (MMBtu)
- K_2 = Oxygen Correction Factor $(20.9)/(20.9-3) = 1.17$

6.8. PSEL Compliance Monitoring

The permittee must demonstrate compliance with the PSEL by totaling the emissions from all devices and processes calculated under Conditions 6.3, 6.5, 6.6, and 6.7. [OAR 340-222-0080]

7.0 SOURCE TESTING

7.1. Source Testing Requirements

The permittee must perform the following source tests within sixty (60) days after first reaching the maximum capacity, but not more than 180 days after the start-up of operations of each unit, unless an extension is approved by DEQ in writing: [OAR 340-212-0120]

- a. The permittee must conduct an initial source test of emission points BOILER, ECO1, ECO2, ECO3, H2HTR, and JETFRAC to verify CO emission factors used to determine compliance with the PSELs of Condition 5.1;
 - i. Following the initial test, the permittee must conduct source tests of EPs BOILER, ECO1, ECO2, ECO3, H2HTR, and JETFRAC to verify CO emission factors used to determine compliance with the PSELs of Condition 5.1 at least once every five calendar years.
 - A. The EPs may either all be tested in the same calendar year, or subsets may be tested in different years and then retested not less than every five years thereafter; and
 - B. Subsequent testing of each EP must be at least 12 months after the EP was last tested.
 - ii. During the CO source tests of EPs BOILER, ECO1, ECO2, ECO3, H2HTR, and JETFRAC the following parameters must be monitored and recorded:
 - A. Opacity readings on the exhaust stacks following the procedures of EPA Method 9;
 - B. Type and quantity of fuel combusted in MMcf/hr;
 - C. Oxidation Catalyst operating parameters; and
 - D. Concentrations and emission rates of CO in pounds/hour and pounds/MMcf of fuel input.
- b. The permittee must conduct an initial source test of EPs ECO1, ECO2, and ECO3 to verify NO_x emission factors used to determine compliance with the PSELs of Condition 5.1;
 - i. Following the initial test, the permittee must conduct source tests of EPs ECO1, ECO2, and ECO3 to verify NO_x emission factors used to determine compliance with the PSELs of Condition 5.1 at least once every three calendar years.
 - A. The EPs may either all be tested in the same calendar year, or subsets may be tested in different years and then retested not less than every five years thereafter; and
 - B. Subsequent testing of each EP must be at least 12 months after the EP was last tested.
 - ii. During the NO_x source tests of EPs ECO1, ECO2, and ECO3 the following parameters must be monitored and recorded:
 - A. Opacity readings on the exhaust stack following the procedures of EPA Method 9;
 - B. Type and quantity of fuel combusted in MMcf/hr;
 - C. SCR operating parameters; and

- D. Concentrations and emission rates of NO_x in pounds/hour and pounds/MMcf of fuel input.
- c. The permittee must conduct a source test of VCU1 to verify VOC emission factors used to determine compliance with the PSELs of Condition 5.1;
- i. Following the initial test, the permittee must conduct a source test of VCU1 to verify VOC emission factors used to determine compliance with the PSELs of Condition 5.1 at least once every five calendar years;
 - ii. Subsequent testing of VCU1 must be at least 12 months after VCU1 was last tested; and
 - iii. During the source test, the following parameters must be monitored and recorded:
 - A. Opacity readings on the exhaust stack following the procedures of EPA Method 9;
 - B. Quantity (in gallons) of renewable diesel loaded;
 - C. VCU1 operating parameters; and
 - D. Outlet concentrations and emission rates in pounds/hour and pounds/Mgal of renewable diesel loaded.
- d. The permittee must conduct a source test of EP INCIN to verify PM, PM₁₀, PM_{2.5}, SO₂, VOC, CO, NO_x, and H₂S emission factors used to determine compliance with the PSELs of Condition 5.1 and to determine Sulfuric Acid emission rates;
- i. Following the initial test, the permittee must conduct a source test of EP INCIN to verify to verify PM, PM₁₀, PM_{2.5}, SO₂, VOC, CO, NO_x, and H₂S emission factors used to determine compliance with the PSELs of Condition 5.1 and to determine Sulfuric Acid emission rates at least once every five calendar years;
 - ii. Subsequent testing of EP INCIN must be at least 12 months after EP INCIN was last tested; and
 - iii. During the source test of EP INCIN, the following parameters must be monitored and recorded:
 - A. Opacity readings on the exhaust stack following the procedures of EPA Method 9;
 - B. Acid gas flow rate from the amine regeneration unit and sour water stripper unit;
 - C. H₂S content of the acid gas;
 - D. Type and quantity of fuel combusted in MMcf/hr;
 - E. TO-INCIN operating temperature;
 - F. SBH-INCIN operating parameters;
 - G. SCR operating parameters;
 - H. Oxidation Catalyst operating parameters;
 - I. Grain loading and emission rates of PM in gr/dscf and pounds/hour;
 - J. Concentrations and emission rates of H₂S, SO₂, and Sulfuric Acid in ppm and pounds/hour; and
 - K. Concentrations and emission rates of VOC, CO, and NO_x in pounds/hour and lb/MMcf fuel input.
- e. All tests must be conducted in accordance with DEQ's Source Sampling Manual and the approved source test plan. The source test plan must be submitted at least 30 days in

advance and approved by the Regional Source Test Coordinator. The source test report must be submitted to the Regional Source Test Coordinator within 60 days of the test unless otherwise approved in the source test plan;

Tested Pollutant	Reference Test Method*
PM/PM ₁₀ /PM _{2.5}	DEQ Method 5
NO _x	EPA Method 7E
CO	EPA Method 10
VOC	EPA Method 18 or 25A
SO ₂	EPA Method 6C
H ₂ S	EPA Method 15
Sulfuric Acid Mist	EPA CTM 13B
Opacity	EPA Method 9

*Substitution of alternative test methods must be pre-approved by the DEQ.

- f. Only regular operating staff may adjust the combustion system or production processes and emission control parameters during the source test and within two hours prior to the source test. Any operating adjustments made during the source test, which are a result of consultation with source testing personnel, equipment vendors or consultants, may render the source test invalid; and
- g. Unless otherwise specified by permit condition or DEQ approved source test plan, all compliance source tests must be performed as follows:
 - i. At least 90% of the design capacity for new or modified equipment;
 - ii. At least 90% of the maximum operating rate for existing equipment; or
 - iii. At 90% of the normal maximum operating rate for existing equipment. For purposes of this permit, the normal maximum operating rate is defined as the 90th percentile of the average hourly operating rates during a 12 month period immediately preceding the source test. Data supporting the normal maximum operating rate must be included with the source test report.

8.0 SPECIAL CONDITIONS

8.1. Emergency Engine Emission Limits

The permittee must ensure that EGEN1, EGEN2, and EPUMP are certified by the manufacturer to meet EPA Tier 4 emissions standards. [OAR 340-226-0100]

8.2. Rail and Truck Loadout

The permittee must loadout only renewable diesel at the truck and rail loadouts.

9.0 RECORDKEEPING REQUIREMENTS

9.1. NSPS Dc

The permittee must comply with all applicable recordkeeping requirements of 40 CFR 60 Subpart Dc:

- a. The permittee must record and maintain records of the type and quantity of fuel combusted during each operating day; [40 CFR 60.48c(g)(1)]
- b. The permittee must record and maintain records of the type and quantity of fuel combusted during each calendar month; or [40 CFR 60.48c(g)(2)]
- c. The permittee must record and maintain records of the total amount of records of the total amount of each steam generating unit fuel delivered to that property during each calendar month. [40 CFR 60.48c(g)(3)]

9.2. NSPS Kb

The permittee must comply with all applicable monitoring and recordkeeping requirements of 40 CFR Subpart Kb (see 40 CFR 60.116b Monitoring of operations and 40 CFR 60.115b Reporting and recordkeeping requirements).

- a. The permittee must keep readily accessible records showing the dimensions of each Subpart Kb subject storage vessel and an analysis showing the capacity of the storage vessel. **These records must be kept for the life of the respective source;**
- b. For each Subpart Kb subject storage vessel, either with a design capacity greater than or equal to 39,890 gallons storing a liquid with a maximum true vapor pressure greater than or equal to 0.5 psi or with a design capacity greater than or equal to 19,813 gallons but less than 39,890 gallons storing a liquid with a maximum true vapor pressure greater than or equal to 2.2 psi, the permittee must maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period;
- c. The permittee may use available data on the storage temperature to determine the maximum true vapor pressure as determined below:
 - i. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service;
 - ii. For refined petroleum products the vapor pressure may be obtained by the following:
 - A. Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see 40 CFR 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s); and

- B. The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.
- iii. For non-petroleum liquids, the vapor pressure:
 - A. May be obtained from standard reference texts, or
 - B. Determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see 40 CFR 60.17); or
 - C. Measured by an appropriate method approved by the Administrator; or
 - D. Calculated by an appropriate method approved by the Administrator.
- d. After installing the control equipment required to meet Condition 3.4.a.i. of the permit [40 CFR 60.112b(a)(1)] (permanently affixed roof and internal floating roof), the permittee must keep a record of each inspection performed as required by permit Conditions 6.2.a.i., 6.2.a.ii., 6.2.a.iii., and 6.2.a.iv. (as applicable). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

9.3. NESHAP (40 CFR 61) Subpart FF

The permittee shall maintain records that identify each waste stream at the facility subject to this subpart and indicate whether or not the waste stream is controlled for benzene emissions in accordance with this subpart. In addition, the permittee shall maintain the following records: [40 CFR 61.356(b)]

- a. For each waste stream not controlled for benzene emissions in accordance with this subpart, the records shall include all test results, measurements, calculations, and other documentation used to determine the following information for the waste stream: waste stream identification, water content, whether or not the waste stream is a process wastewater stream, annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration, and annual benzene quantity; and [40 CFR 61.356(b)(1)]
- b. For each facility where the annual waste quantity for process unit turnaround waste is determined in accordance with Condition 3.7.c.iv, the records shall include all test results, measurements, calculations, and other documentation used to determine the following information: identification of each process unit at the facility that undergoes turnarounds, the date of the most recent turnaround for each process unit, identification of each process unit turnaround waste, the water content of each process unit turnaround waste, the annual waste quantity determined in accordance with Condition 3.7.c.iv, the range of benzene concentrations in the waste, the annual average flow-weighted benzene concentration of the waste, and the annual benzene quantity calculated in accordance with Condition 3.7.b.i.C. [40 CFR 61.356(b)(5)]

9.4. Operation and Maintenance

The permittee must maintain the following records related to the operation and maintenance of the facility and associated air contaminant control devices: [OAR 340-214-0114]

- a. Quantity (MMcf) of natural gas and PSA Tail Gas combusted in Boiler 1, Boiler 2, ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, ECO3I, H2HTR, JETFRAC, FLARE, INCIN, VCU1, Monthly;
- b. Hours of normal operation of Boiler 1, Boiler 2, ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, ECO3I, H2HTR, and JETFRAC, Monthly;
- c. Hours of startup and shutdown operation of Boiler 1, Boiler 2, ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, ECO3I, H2HTR, and JETFRAC, Monthly;
- d. Quantity (tons) of bleaching aid and filter aid received, Monthly;
- e. Type and quantity (gallons) of materials received into and removed from storage tanks ANIFATS1, ANIFATS2, ANIFATS3, CACID1, CACID2, HCS, OWS, RD/RJ1, RD1, RD2, RD3, RN/RJ1, RN/RJ2, RN/RJ3, VEGOIL1, VEGOIL2, VEGOIL3, and WWT, Monthly;
- f. Number of roof landings and internal cleaning events for each storage tank, Monthly;
- g. Hours of operation of each Cooling Tower (CT01 and CT02), Monthly;
- h. FLARE Operational Records;
 - i. EPA Method 22 readings;
 - ii. Flare pilot flame presence determinations;
 - iii. Heating value determinations for gas being combusted by the flare, upon changes to gas composition;
 - iv. Exit velocity determinations, initial and upon changes; and
 - v. Number of hours of FLARE startup and shutdown operation, Monthly.
- i. Hours of operation of the Acid Gas Regenerator Unit, Sour Water Stripper, and associated control system, Monthly;
- j. Quantity (gallons) of renewable diesel loaded onto rail cars, Monthly;
- k. Quantity (gallons) of renewable diesel loaded onto trucks, Monthly;
- l. Quantity (gallons) of renewable diesel, renewable naphtha, and renewable jet fuel produced, Monthly;
- m. Control device operational parameters as required in Condition 4.3;
- n. Using the compliance calculation procedures from Conditions 6.3, 6.5, 6.6, and 6.7, perform a calculation of emissions to demonstrate compliance with the rolling 12-month PSEL limitations of Condition 5.1, Monthly;
- o. Results of the quarterly leak detection evaluation required in Condition 4.4, Monthly:
 - i. Date of inspection;
 - ii. Findings – identification of leaking component, location, nature and severity (instrument reading) of each leak; or indicate no leaks;
 - iii. Corrective action - for each detected leak record the corrective action performed and date of repair; and
 - iv. Maintain a record of each leaking component report submitted to DEQ as required by Condition 4.4.a.vi.

- p. Record major maintenance performed on air pollution control equipment. Each Occurrence;
- q. Record parameters necessary to calculate emissions from Tank roof landings, Each Occurrence;
- r. The following records for each emergency generator and fire pump engine (EGEN1, EGEN2, EPUMP): [OAR 340-214-0114]
 - i. Date, start time, end time and hours of operation of each emergency stationary RICE that is recorded through the non-resettable hour meter;
 - ii. Notification of the emergency situation; including what classified the operation as emergency;
 - iii. Date, start time, end time and hours of non-emergency operation used for maintenance checks and readiness testing;
 - iv. Records of operation and maintenance requirements in Condition 4.2.
- s. The following records for the NO_x and O₂ CEMS:
 - i. Records of routine observation checks;
 - ii. Records of routine maintenance and adjustments;
 - iii. Records of parts that are replaced;
 - iv. Spare parts inventory for the CEMS;
 - v. Records of CEMS calibrations;
 - vi. Records of CEMS daily calibration drift;
 - vii. Records of CEMS audits;
 - viii. Records of corrective action taken to bring an “out-of- control” (40 CFR 60 Appendix F) CEMS into control;
 - ix. Records of date and time when a CEMS is inoperative or “out-of-control” (40 CFR 60 Appendix F);
 - x. The one-hour average NO_x and O₂ concentrations corrected to 3% O₂;
 - xi. Hourly emission rates (lb/hr) of NO_x from EPs BOILER, JETFRAC, and H2HTR;
 - xii. identification of the operating hours for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;
 - xiii. identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
 - xiv. identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system; and
 - xv. description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2, 3, or 6 (40 CFR 60, Appendix B).
- t. A copy of the CEMS/CPMS quality assurance plan approved by the Department.

9.5. Excess Emissions

- a. The permittee must maintain the records of excess emissions listed below and as defined in OAR 340-214-0300 through 340-214-0340, recorded on occurrence. Typically, excess

emissions are caused by process upsets, startups, shutdowns, or scheduled maintenance. In many cases, excess emissions are evident when visible emissions are greater than 20% opacity as a six-minute block average;

- i. The date and time of the beginning of the excess emissions event and the duration or best estimate of the time until return to normal operation;
 - ii. The date and time the permittee notified DEQ of the event;
 - iii. The equipment involved;
 - iv. Whether the event occurred during planned startup, planned shutdown, scheduled maintenance, or as a result of a breakdown, malfunction, or emergency;
 - v. Steps taken to mitigate emissions and corrective action taken, including whether the approved procedures for a planned startup, shutdown, or maintenance activity were followed;
 - vi. The magnitude and duration of each occurrence of excess emissions during the course of an event and the increase over normal rates or concentrations as determined by continuous monitoring or best estimate (supported by operating data and calculations); and
 - vii. The final resolution of the cause of the excess emissions;
- b. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must immediately take action to minimize emissions by reducing or ceasing operation of the equipment or facility, unless doing so could result in physical damage to the equipment or facility, or cause injury to employees. In no case may the permittee operate more than 48 hours after the beginning of the excess emissions, unless continued operation is approved by DEQ in accordance with OAR 340-214-0330(4);
- c. In the event of any excess emissions which are of a nature that could endanger public health and occur during non-business hours, weekends, or holidays, the permittee must immediately notify DEQ by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311;
- d. If permittee anticipates that scheduled maintenance may result in excess emissions, the permittee must submit scheduled maintenance procedures used to minimize excess emissions to DEQ for prior authorization, as required in OAR 340-214-0320. New or modified procedures must be received by DEQ in writing at least 72 hours prior to the first occurrence of the excess emission event. The permittee must abide by the approved procedures and have a copy available at all times; and
- e. The permittee must maintain a log of all excess emissions in accordance with OAR 340-214-0340(3).

9.6. Complaints

The permittee must maintain a log of all complaints received by the permittee in person, in writing, by telephone or through other means according to Condition 2.6. Documentation must include all information identified in Condition 2.6. [OAR 340-214-0114]

9.7. Retention of Records

Unless otherwise specified, the permittee must retain all records for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application and make them available to DEQ upon request. The permittee must maintain the two (2) most recent years of records onsite. [OAR 340-214-0114]

10.0 REPORTING REQUIREMENTS

10.1. Excess Emissions

- a. The permittee must notify DEQ of excess emissions events if the excess emission is of a nature that could endanger public health. Initial notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 12.0 by email, telephone, facsimile, or in person; and
- b. When required by DEQ, the permittee must also submit follow-up reports summarizing records of excess emissions as required in Condition 9.4.r.i within 15 days of the date of the event.

10.2. NSPS Dc

There are no applicable Subpart Dc specific reporting requirements for Boiler 1 and Boiler 2.

10.3. NSPS Subpart Kb

The permittee must submit the following Subpart Kb specific reports/notifications to the EPA Administrator and DEQ, as applicable:

- a. If any of the conditions described in Condition 6.2.a.ii. of the permit [40 CFR 60.113b(a)(2)] are detected during the required annual visual inspection, a report shall be furnished to the Administrator and DEQ within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made;
- b. After each inspection required by Condition 6.2.a.iii. of the permit [40 CFR 60.113b(a)(3)] that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in Condition 6.2.a.iii.B. [40 CFR 60.113b(a)(3)(ii)], a report shall be furnished to the EPA Administrator and DEQ within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the required specifications [of 40 CFR 60.112b(a)(1) or 40 CFR 60.113b(a)(3)] and list each repair made; and
- c. Provide notification to the EPA Administrator and DEQ in writing, in accordance with the criteria stated in Condition 6.2.a.v., prior to the filling or refilling of each storage vessel for which an inspection is required by Conditions 6.2.a.i. and 6.2.a.iv.

10.4. NESHAP Subpart FF

- a. The permittee shall submit to the Administrator by the initial startup a report that summarizes the regulatory status of each waste stream subject to Condition 3.7.a and is determined by the procedures specified in Condition 3.7.d to contain benzene. The report shall include the following information: [40 CFR 61.357(a)]
 - i. Total annual benzene quantity from facility waste determined in accordance with Condition 3.7.b;
 - ii. A table identifying each waste stream and whether or not the waste stream will be controlled for benzene emissions in accordance with the requirements of this subpart;
 - iii. For each waste stream identified as not being controlled for benzene emissions in accordance with the requirements of this subpart the following information shall be added to the table:
 - A. Whether or not the water content of the waste stream is greater than 10 percent;
 - B. Whether or not the waste stream is a process wastewater stream, product tank drawdown, or landfill leachate;
 - C. Annual waste quantity for the waste stream;
 - D. Range of benzene concentrations for the waste stream;
 - E. Annual average flow-weighted benzene concentration for the waste stream; and
 - F. Annual benzene quantity for the waste stream.
 - iv. The information required in Conditions 10.4.a.i through 10.4.a.iii of this section should represent the waste stream characteristics based on current configuration and operating conditions. The permittee only needs to list in the report those waste streams that contact materials containing benzene. The report does not need to include a description of the controls to be installed to comply with the standard or other information required in 40 CFR 61.10(a).
- b. If the total annual benzene quantity from facility waste is less than 1 Mg/yr (1.1 ton/yr), then the permittee shall submit to the Administrator a report that updates the information listed in Conditions 10.4.a.i through 10.4.a.iii whenever there is a change in the process generating the waste stream that could cause the total annual benzene quantity from facility waste to increase to 1 Mg/yr (1.1 ton/yr) or more. [40 CFR 61.357(b)]

10.5. Annual Report

For each year this permit is in effect, the permittee must submit to DEQ by **February 15th** -two (2) paper copies and one (1) electronic copy of the following information for the previous calendar year. If February 15th falls on a weekend or Monday holiday, the permittee must submit their annual report on the next business day.

- a. Operating parameters:

- i. Quantity (MMcf) of natural gas and PSA Tail Gas combusted in Boiler 1, Boiler 2, ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, ECO3I, H2HTR, JETFRAC, FLARE, INCIN, and VCU1;
 - ii. Hours of operation (both startup/shutdown and normal operations) of Boiler 1, Boiler 2, ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, ECO3I, H2HTR, and JETFRAC;
 - iii. Quantity (tons) of bleaching aid and filter aid received;
 - iv. Type and quantity (gallons) of materials received into and removed from storage tanks ANIFATS1, ANIFATS2, ANIFATS3, CACID1, CACID2, HCS, OWS, RD/RJ1, RD1, RD2, RD3, RN/RJ1, RN/RJ2, RN/RJ3, VEGOIL1, VEGOIL2, VEGOIL3, and WWT;
 - v. Number of roof landings and internal cleaning events for each storage tank;
 - vi. Number of hours of operation of each Cooling Tower (CT01 and CT02);
 - vii. Number of hours of FLARE startup and shutdown operation;
 - viii. Number of hours of operation of the Acid Gas Regenerator Unit, Sour Water Stripper, and associated control system;
 - ix. Quantity (gallons) of renewable diesel loaded onto rail cars;
 - x. Quantity (gallons) of renewable diesel loaded onto trucks; and
 - xi. Quantity (gallons) of renewable diesel, renewable naphtha, and renewable jet fuel produced.
- b. Calculations of annual pollutant emissions determined each month in accordance with Conditions 6.3, 6.5, 6.6, and 6.7.
- c. Data Assessment Reports for the NO_x CEMS which at a minimum must contain: the information specified in 40 CFR 60 Appendix F, Procedure 1, Section 7: Reporting Requirements.
- d. A brief summary listing the date, time, and the affected device/process for each excess emission that occurred during the reporting period.
- e. Summary of complaints relating to air quality received by permittee during the year in accordance with Condition 9.4.r.i.
- f. The following records for each emergency stationary RICE identified: [OAR 340-214-0114]
- i. Hours of operation of each emergency stationary RICE that is recorded through the non-resettable hour meter;
 - ii. Hours of emergency operation; including what classified the operation as emergency; and
 - iii. Hours of non-emergency operation used for maintenance checks and readiness testing.
- g. List permanent changes made in facility process, production levels, and pollution control equipment which affected air contaminant emissions.
- h. List major maintenance performed on pollution control equipment.
- i. Information as to whether there has been any changes in zoning within 1.5 kilometers of the source and, if so, whether that change increases the source risk; and
- j. Documentation showing that, for any area that the source demonstrated in its risk assessment was not used in a manner allowed by the land use zoning applicable to the

area, the area continues to not be used in the manner allowed by the land use zoning applicable to the area.

10.6. Greenhouse Gas Registration and Reporting

- a. If the calendar year greenhouse gas emissions (CO₂e) are ever greater than or equal to 2,756 tons (2,500 metric tons), the permittee must annually register and report its greenhouse gas emissions with DEQ in accordance with OAR 340 division 215; and
- b. If the calendar year greenhouse gas emissions (CO₂e) are less than 2,756 tons (2,500 metric tons) for three consecutive years, the permittee may stop reporting greenhouse gas emissions but must retain all records used to calculate greenhouse gas emissions for the five years following the last year that they were required to report. The permittee must resume reporting its greenhouse gas emissions if the calendar year greenhouse gas emissions (CO₂e) are greater than or equal to 2,756 tons (2,500 metric tons) in any subsequent calendar year.

10.7. Initial Startup Notice

The permittee must notify DEQ in writing of the date a newly permitted source is first brought into normal operation. The notification must be submitted no later than seven (7) days after the initial startup. [OAR 340-214-0110]

10.8. CEMS/CPMS Quality Assurance Plan

The permittee must develop and submit a Standard Operating Procedure and a Quality Assurance Plan for each type of CEMS and CPMS for each emission unit constructed under this permit. The plan must be submitted prior to the initial startup of the source.

10.9. Notice of Change of Ownership or Company Name

The permittee must notify DEQ in writing using a DEQ "Transfer Application Form" within 60 days after the following:

- a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
- b. Sale or exchange of the activity or facility.

10.10. Construction or Modification Notices

The permittee must notify DEQ in writing using a DEQ "Notice of Intent to Construct Form," or other permit application form and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 and OAR 340-245-0060(4)(c) before:

- a. Constructing, installing, or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;

- b. Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or
- c. Constructing or modifying any air pollution control equipment.

11.0 ADMINISTRATIVE REQUIREMENTS

11.1. Permit Renewal Application

The permittee must submit the completed application package for renewal of this permit **180 days prior to the expiration date**. Two (2) paper copies and one (1) electronic copy of the application must be submitted to the DEQ Permit Coordinator listed in Condition 12.2. [OAR 340-216-0040]

11.2. Permit Modifications

Application for a modification of this permit must be submitted at least 60 days prior to the source modification. When preparing an application, the applicant should also consider submitting the application 180 days prior to allow DEQ adequate time to process the application and issue a permit before it is needed. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the DEQ Business Office.

11.3. Annual Compliance Fee

The permittee must pay the annual fees specified in OAR 340-216-8020, Table 2, Part 2 and 3 for a Standard ACDP by **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by DEQ regulations will be mailed prior to the above date. **Late fees in accordance with Part 5 of the table will be assessed as appropriate.**

11.4. Change of Ownership or Company Name Fee

The permittee must pay the non-technical permit modification fee specified in OAR 340-216-8020, Table 2, Part 4 with an application for changing the ownership or the name of the company.

11.5. Special Activity Fees

The permittee must pay the special activity fees specified in OAR 340-216-8020, Table 2, Part 4 with an application to modify the permit.

12.0 DEQ CONTACTS / ADDRESSES

12.1. Business Office

The permittee must submit payments for invoices, applications to modify the permit, and any other payments to DEQ's Business Office:

Oregon Dept. of Environmental Quality
Financial Services – Revenue Section
700 NE Multnomah St., Suite 600
Portland, Oregon 97232-4100

12.2. Permit Coordinator

The permittee must submit all notices and applications that do not include payment to the Permit Coordinator.

Oregon Dept. of Environmental Quality
NWR Air Quality Permit Coordinator
700 NE Multnomah St., Suite 600
Portland, OR 97232-4100
nwraqpermits@deq.state.or.us

12.3. Report Submittals

Unless otherwise notified, the permittee must submit all reports (annual reports, source test plans and reports, etc.) to DEQ's Region. If you know the name of the Air Quality staff member responsible for your permit, please include it:

Oregon Dept. of Environmental Quality
Northwest Region Air Quality Permits
700 NE Multnomah St., Suite 600
Portland, OR 97232-4100
nwraqpermits@deq.state.or.us

12.4. Web Site

Information about air quality permits and DEQ's regulations may be obtained from the DEQ web page at www.oregon.gov/deq/.

13.0 GENERAL CONDITIONS AND DISCLAIMERS

13.1. Permitted Activities

- a. Until this permit expires or is modified or revoked, the permittee is allowed to discharge air contaminants from the following:

- i. Processes and activities directly related to or associated with the devices/processes listed in Condition 1.0 of this permit;
 - ii. Any categorically insignificant activities, as defined in OAR 340-200-0020, at the source; and
 - iii. Construction or modification changes that are Type 1 or Type 2 changes under OAR 340-210-0225 that are approved by DEQ in accordance with OAR 340-210-0215 through 0250 if the permittee complies with all of the conditions of DEQ's approval to construct and all of the conditions of this permit.
- b. Discharge of air contaminants from any other equipment or activity not identified herein is not authorized by this permit.

13.2. Other Regulations

In addition to the specific requirements listed in this permit, the permittee must comply with all other applicable legal requirements enforceable by DEQ.

13.3. Conflicting Conditions

In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply. [OAR 340-200-0010]

13.4. Masking of Emissions

The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement. [OAR 340-208-0400]

13.5. DEQ Access

The permittee must allow DEQ's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468.095.

13.6. Permit Availability

The permittee must have a copy of the permit available at the facility at all times. [OAR 340-216-0020(3)]

13.7. Open Burning

The permittee may not conduct any open burning except as allowed by OAR 340, division 264.

13.8. Asbestos

The permittee must comply with the asbestos abatement requirements in OAR 340, division 248 for all activities involving asbestos-containing materials, including, but not limited to, demolition, renovation, repair, construction, and maintenance.

13.9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

13.10. Permit Expiration

- a. A source may not be operated after the expiration date of the permit, unless any of the following occur prior to the expiration date of the permit: [OAR 340-216-0082]
 - i. A timely and complete application for renewal of this permit or for a different ACDP has been submitted; or
 - ii. A timely and complete application for renewal or for an Oregon Title V Operating Permit has been submitted, or
 - iii. Another type of permit (ACDP or Oregon Title V Operating Permit) has been issued authorizing operation of the source.
- b. For a source operating under an ACDP or Oregon Title V Operating Permit, a requirement established in an earlier ACDP remains in effect notwithstanding expiration of the ACDP, unless the provision expires by its terms or unless the provision is modified or terminated according to the procedures used to establish the requirement initially.

13.11. Permit Termination, Revocation, or Modification

DEQ may terminate, revoke, or modify this permit pursuant to OAR chapter 340 division 216. [OAR 340-216-0082].

14.0 CLEANER AIR OREGON GENERAL CONDITIONS AND DISCLAIMERS**14.1. Reassessment of Risk**

- a. The permittee must reassess, and submit to DEQ, the source risk for cancer, chronic noncancer, and acute noncancer risk in accordance with OAR 340-245-0050(7)(b)(C) by no later than 60 days after the following [OAR 340-245-0100(8)(a)(F)]:

- i. Zoning changes approved and effective within 1.5 kilometers of the source that could increase risk; or
 - ii. Land use has changed in a way that could increase risk in any area in which land uses were excluded from the permittee's Cleaner Air Oregon risk assessment under OAR 340-245-0210(1)(a)(F) because such area was not used in a manner allowed by the applicable zoning.
- b. The permittee must reassess, and submit to DEQ, the source risk for cancer, chronic noncancer, and acute noncancer risk in accordance with OAR 340-245-0050(7)(b)(C) based on any of the following:
 - i. The permittee becomes aware that corrections or additional information are needed to revise or update the original risk assessment [OAR 340-245-0100(8)(a)(H)];
 - ii. The permittee proposes to modify any physical feature of the source that was used as a modeling parameter in the risk assessment that may increase risk [OAR 340-245-0100(8)(a)(D)];
 - iii. A Risk Based Concentration in OAR 340-245-8010 Table 2 for a Toxic Air Contaminant that is emitted by this source has been added or the value lowered, leading to an increase in risk [OAR 340-245-0100(8)(b)(B)];
 - iv. Risk assessment procedures in division 245 change that may increase risk, or impact the implementation or effectiveness of the Risk Reduction Plan [OAR 340-245-0100(8)(b)(C)]; or
 - v. When notified in writing by DEQ that the permittee must update or correct its previous risk assessment based on new or additional information [OAR 340-245-0100(8)(b)].

14.2. Permit Modifications

- a. When a revised risk assessment under condition 14.1, indicates this source no longer qualifies as a de minimis source under OAR 340-245-0050(7)(a)(A) or (B) the permittee must apply for a permit modification under OAR 340 Division 216 and submit fees as required under OAR 340-245-0100(8)(g) and Condition 12.1.
- b. When notified in writing by DEQ that a modification under division 245 is required, the permittee must submit the necessary information required under OAR 340-245-0100(3) to DEQ 90 days after the date of the written notification. [OAR340-245-0100(8)(c)]

14.3. CAO Submittal Deadline Extensions

The permittee may request an extension for submittals required under Conditions 14.1 and 14.2 in accordance with OAR 340-245-0030(3) by submitting a written request no fewer than 15 days prior to the submittal deadline.

15.0 EMISSION FACTORS

Emissions device or activity	Pollutant	Emission Factor (EF)	EF units	EF Reference
Boiler 1 & 2	PM/PM ₁₀ /PM _{2.5}	5.98	lb/MMcf	Manufacturer Guarantee
	SO ₂	0.6	lb/MMcf	AP-42 Table 1.4-2
	NO _x	0.84 (when CEMS not operational)	lb/hr (each)	Manufacturer Guarantee
	NO _x	7.12 (Startup and Shutdown when CEMS not operational)	lb/hr (each)	AP-42 Table 1.4-1
	CO	2.04	lb/hr (each)	Manufacturer Guarantee
	CO	5.98 (Startup and Shutdown)	lb/hr (each)	AP-42 Table 1.4-1
	VOC	5.5	lb/MMcf	AP-42 Table 1.4-2
ECO1F, ECO2F, ECO3F	PM/PM ₁₀ /PM _{2.5}	7.6	lb/MMcf	AP-42 Table 1.4-2
	SO ₂	0.6	lb/MMcf	AP-42 Table 1.4-2
	NO _x	0.21	lb/hr (each)	Manufacturer Guarantee
	NO _x	3.24 (Startup and Shutdown)	lb/hr (each)	AP-42 Table 1.4-1
	CO	0.50	lb/hr (each)	Manufacturer Guarantee
	CO	2.72 (Startup and Shutdown)	lb/hr (each)	AP-42 Table 1.4-1
	VOC	5.5	lb/MMcf	AP-42 Table 1.4-2

Emissions device or activity	Pollutant	Emission Factor (EF)	EF units	EF Reference
ECO1I, ECO2I, ECO3I	PM/PM ₁₀ /PM _{2.5}	7.6	lb/MMcf	AP-42 Table 1.4-2
	SO ₂	0.6	lb/MMcf	AP-42 Table 1.4-2
	NO _x	0.031	lb/hr (each)	Manufacturer Guarantee
	NO _x	0.49 (Startup and Shutdown)	lb/hr (each)	AP-42 Table 1.4-1
	CO	0.077	lb/hr (each)	Manufacturer Guarantee
	CO	0.41 (Startup and Shutdown)	lb/hr (each)	AP-42 Table 1.4-1
	VOC	5.5	lb/MMcf	AP-42 Table 1.4-2

Emissions device or activity	Pollutant	Emission Factor (EF)	EF units	EF Reference
H2HTR	PM/PM ₁₀ /PM _{2.5}	7.6	lb/MMcf Natural Gas	AP-42 Table 1.4-2 with PSA gas composition
		1.0	lb/MMcf PSA gas	
	SO ₂	0.6	lb/MMcf Natural Gas	AP-42 Table 1.4-2 with PSA gas composition
		0.08	lb/MMcf PSA gas	
	NO _x	4.53 (when CEMS not operational)	lb/hr	SCAQMD BACT assessment (with SCR control) for Air Liquide (March 2007).
	NO _x	64.3 (Startup and Shutdown when CEMS not operational)	lb/hr	AP-42 Table 1.4-1
	CO	5.52	lb/hr	SCAQMD BACT assessment (with SCR control) for Air Liquide (March 2007).
	CO	54.0 (Startup and Shutdown)	lb/hr	AP-42 Table 1.4-1
	VOC	5.5	lb/MMcf Natural Gas	AP-42 Table 1.4-2 with PSA gas composition
		0.73	lb/MMcf PSA gas	

Emissions device or activity	Pollutant	Emission Factor (EF)	EF units	EF Reference
JETFRAC	PM/PM ₁₀ /PM _{2.5}	7.6	lb/MMcf	AP-42 Table 1.4-2
	SO ₂	0.60	lb/MMcf	AP-42 Table 1.4-2
	NO _x	1.14 (when CEMS not operational)	lb/hr	SCAQMD BACT assessment (with SCR control) for Air Liquide (March 2007).
	NO _x	11.5 (Startup and Shutdown when CEMS not operational)	lb/hr	AP-42 Table 1.4-1
	CO	2.78	lb/hr	Manufacturer Guarantee
	CO	9.65 (Startup and Shutdown)	lb/hr	AP-42 Table 1.4-1
	VOC	5.5	lb/MMcf	AP-42 Table 1.4-2
1BEDAY1, 1BEDAY2, 1BESV1, 1BESV2, 1BESV3, 1FADT, 1FASV1, 2BEDAY1, 2BEDAY2, 2BESV1, 2BESV2, 2BESV3, 2FADT, 2FASV1, 3BEDAY1, 3BEDAY2, 3BESV1, 3BESV2, 3BESV3, 3FADT1, 3FADT2, 3FADT3, 3FASV1, 3FASV2, 3FASV3	PM	7.3E-04	lb/ton	AP-42 Table 11.12-2 with 99.9% Control
	PM ₁₀ /PM _{2.5}	4.7E-04	lb/ton	AP-42 Table 11.12-2 with 99.9% Control

Emissions device or activity	Pollutant	Emission Factor (EF)	EF units	EF Reference
ANIFATS1, ANIFATS2, ANIFATS3, CACID1, CACID2, HCS, OWS, RD/RJ1, RD1, RD2, RD3, RN/RJ1, RN/RJ2, RN/RJ3, VEGOIL1, VEGOIL2, VEGOIL3 Storage	VOC	Use TANKS software or AP-42 algorithms for 12-month emission rate calculation	tons/yr	TANKS software, AP-42 Section 7.1
Roof Landings and Internal Cleanings	VOC	Use AP-42, Section 7.1 and/or API Technical Report 2568	lbs/event	AP-42, Section 7.1, API TR 2568
WWT	VOC	0.012	ton/month	TOXCHEM version 4 4
	H2S	0.017	ton/month	TOXCHEM version 4 4
CT01, CT02	PM	0.032	lb/hour	Derived in application
	PM ₁₀	0.028	lb/hour	Derived in application
	PM _{2.5}	0.017	lb/hour	Derived in application
	VOC	0.84	lb/hour	Derived in application
EGEN1, EGEN2 (non-emergency operation)	PM/PM ₁₀ /PM _{2.5}	0.22	lb/hour	Derived in application.
	SO ₂	0.019	lb/hour	Derived in application.
	NO _x	2.20	lb/hour	EPA Tier IV Emission Standards
	CO	11.5	lb/hour	EPA Tier IV Emission Standards

Emissions device or activity	Pollutant	Emission Factor (EF)	EF units	EF Reference
	VOC	0.62	lb/hour	EPA Tier IV Emission Standards
EPUMP (non-emergency operation)	PM/PM ₁₀ /PM _{2.5}	0.038	lb/hour	Derived in application.
	SO ₂	5.0E-03	lb/hour	Derived in application.
	NO _x	0.27	lb/hour	EPA Tier IV Emission Standards
	CO	2.36	lb/hour	EPA Tier IV Emission Standards
	VOC	0.13	lb/hour	EPA Tier IV Emission Standards
FLARE (pilot)	PM/PM ₁₀ /PM _{2.5}	7.6	lb/MMcf	AP-42 Table 1.4-2
	SO ₂	0.6	lb/MMcf	AP-42 Table 1.4-2
	NO _x	100	lb/MMcf	AP-42 Table 1.4-1
	CO	84	lb/MMcf	AP-42 Table 1.4-1
	VOC	5.5	lb/MMcf	AP-42 Table 1.4-2
FLARE (startup)	PM/PM ₁₀ /PM _{2.5}	3.00	lb/hour	AP-42 Table 13.5-1
	SO ₂	97.4	lb/hour	Input Gas Composition
	NO _x	46.9	lb/hour	AP-42 Table 13.5-1
	CO	43.5	lb/hour	Input Gas Composition
	VOC	455	lb/hour	AP-42 Table 13.5-2
	H ₂ S	1.06	lb/hour	Gas analysis and FLARE control

Emissions device or activity	Pollutant	Emission Factor (EF)	EF units	EF Reference
FLARE (shutdown)	PM/PM ₁₀ /PM _{2.5}	1.75	lb/hour	AP-42 Table 13.5-1
	SO ₂	56.8	lb/hour	Input Gas Composition
	NO _x	27.3	lb/hour	AP-42 Table 13.5-1
	CO	25.3	lb/hour	Input Gas Composition
	VOC	265	lb/hour	AP-42 Table 13.5-2
	H ₂ S	0.62	lb/hour	Gas analysis and FLARE control
AGRU, SWS, TO-INCIN, SBH-INCIN, SCR-INCIN (EP INCIN)	PM/PM ₁₀ /PM _{2.5}	7.6	lb/MMcf (INCIN natural gas input)	AP-42 Table 1.4-2
	SO ₂	4.97	lb/hr	Manufacturer Guarantee
	NO _x	0.43	lb/hr	Manufacturer Guarantee
	CO	1.45	lb/hr	Manufacturer Guarantee
	VOC	13.8	lb/MMcf (INCIN natural gas input)	AP-42 Table 1.4-2 + 99.5% Inlet VOC Control
	H ₂ S	0.32	lb/hr	Gas analysis and INCIN control
LOAD (VCU1 combustion)	PM/PM ₁₀ /PM _{2.5}	7.6	lb/MMcf	AP-42 Table 1.4-2
	SO ₂	0.6	lb/MMcf	AP-42 Table 1.4-2
	NO _x	50	lb/MMcf	AP-42 Table 1.4-1
	CO	84	lb/MMcf	AP-42 Table 1.4-1
	VOC	5.5	lb/MMcf	AP-42 Table 1.4-2

Emissions device or activity	Pollutant	Emission Factor (EF)	EF units	EF Reference
LOAD (VCU1 rail loadout)	VOC	6.61E-4	lb/Mgal	AP-42 Chapter 5.2 Equation 1; 98.7% capture and 98% control
LOAD (VCU1 truck loadout)	VOC	1.10E-3	lb/Mgal	AP-42 Chapter 5.2 Equation 1; 98.7% capture and 98% control
LEAK	VOC	2.06	ton/month	Preferred and Alternative Methods for Estimating Fugitive Emissions from Equipment Leaks Final Report published in November 1996
	H ₂ S	5.70E-3	ton/month	Process Gas Composition

16.0 PROCESS/PRODUCTION RECORDS

Emissions device or activity	Process or production parameter	Frequency
Boiler 1, Boiler 2, ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, ECO3I, H2HTR, JETFRAC, FLARE (pilot), INCIN, VCU1	Quantity (MMcf) of natural gas and PSA Tail Gas combusted	Monthly
Boiler 1, Boiler 2, ECO1F, ECO1I, ECO2F, ECO2I, ECO3F, ECO3I, H2HTR, JETFRAC	Hours of operation (Both startup/shutdown and normal operation)	Monthly

Emissions device or activity	Process or production parameter	Frequency
1BEDAY1, 1BEDAY2, 1BESV1, 1BESV2, 1BESV3, 1FADT, 1FASV1, 2BEDAY1, 2BEDAY2, 2BESV1, 2BESV2, 2BESV3, 2FADT, 2FASV1, 3BEDAY1, 3BEDAY2, 3BESV1, 3BESV2, 3BESV3, 3FADT, 3FADT2, 3FADT3, 3FASV1, 3FASV2, and 3FASV3	Quantity (tons) of bleaching aid and filter aid received	Monthly
ANIFATS1, ANIFATS2, ANIFATS3, CACID1, CACID2, HCS, OWS, RD/RJ1, RD1, RD2, RD3, RN/RJ1, RN/RJ2, RN/RJ3, VEGOIL1, VEGOIL2, VEGOIL3, WWT	Type and quantity (gallons) of materials received into and removed from storage	Monthly
	Roof Landing and Internal Cleaning Events	Monthly
CT01, CT02	Hours of operation	Monthly
EGEN1, EGEN2, EPUMP	Hours of non-emergency operation	Monthly
FLARE	Hours of startup and shutdown operation	Monthly
AGRUSWS (INCIN, SBH-INCIN, and SCR-INCIN)	Number of hours of operation of the Acid Gas Regenerator Unit, Sour Water Stripper, and associated control system	Monthly
LOAD	Quantity (gallons) of renewable diesel loaded onto rail cars	Monthly
	Quantity (gallons) of renewable diesel loaded onto trucks	Monthly

17.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit	O ₂	oxygen
ASTM	American Society for Testing and Materials	OAR	Oregon Administrative Rules
AQMA	Air Quality Maintenance Area	ORS	Oregon Revised Statutes
calendar year	The 12-month period beginning January 1st and ending December 31 st	O&M	operation and maintenance
CAO	Cleaner Air Oregon	Pb	lead
CEMS	Continuous Emissions Monitoring System	PCD	pollution control device
CFR	Code of Federal Regulations	PEMS	Predictive emission monitoring system
CO	carbon monoxide	PM	particulate matter
CO _{2e}	carbon dioxide equivalent	PM ₁₀	particulate matter less than 10 microns in size
DEQ	Oregon Department of Environmental Quality	PM _{2.5}	particulate matter less than 2.5 microns in size
dscf	dry standard cubic foot	ppm	part per million
EPA	US Environmental Protection Agency	PSA	Pressure-swing Absorption
FCAA	Federal Clean Air Act	PSD	Prevention of Significant Deterioration
Gal	gallon(s)	PSEL	Plant Site Emission Limit
GHG	greenhouse gas	PTE	Potential to Emit
gr/dscf	grains per dry standard cubic foot	RACT	Reasonably Available Control Technology
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040	scf	standard cubic foot
I&M	inspection and maintenance	SCR	Selective Catalytic Reduction
lb	pound(s)	SER	Significant Emission Rate
MMBtu	million British thermal units	SIC	Standard Industrial Code
NA	not applicable	SIP	State Implementation Plan
NESHAP	National Emissions Standards for Hazardous Air Pollutants	SO ₂	sulfur dioxide
NG	Natural Gas	Special Control Area	as defined in OAR 340-204-0070
NO _x	nitrogen oxides	TACT	Typically Achievable Control Technology
NSPS	New Source Performance Standard	VE	visible emissions
NSR	New Source Review	VOC	volatile organic compound
		year	A period consisting of any 12-consecutive calendar months