

**BRADWOOD LANDING LNG
ANTIDegradation REVIEW SHEET
FOR PROPOSED 401 WATER QUALITY CERTIFICATION**

1. What is the name of Surface Water that receives the discharge? Columbia River, Hunt Creek, Clatskanie River, Driscoll Slough, Westport Slough, Ludviksen Slough, Midland Canal, Uncle Tom Slough, Wallace Slough, Larson Slough, McLean Slough, and multiple ditches and other tributaries to these waters

Briefly describe the proposed activity:

The applicant proposes impacts to the above listed waters of the state in order to construct a turning basin, berthing area, terminal and associated facilities and infrastructure to receive and regasify imported LNG; and to construct an associated pipeline to carry approximately 1.3 billion cubic feet per day of gas to: a new delivery point at the existing Georgia-Pacific Wauna paper mill; a new interconnection with the existing NW Natural intrastate pipeline at Port Westward; a new delivery point at the existing PGE power plant at Port Westward; through a new meter station; and under the Columbia River to the terminus in Washington interconnecting with the existing Williams Northwest interstate pipeline, near Kelso WA.

The terminal would occupy approximately 116.7 acres (including 59 acres in the Columbia River) of an approximately 411 acre site. Up to 125 ships per year would call on the port, with capacities ranging from 100,000 to 200,000 cubic meters. These vessels require draft depths ranging from approximately 37 feet to 46 feet. The pipeline extends for approximately 19.4 miles in Oregon and an additional 16.9 miles into Washington.

Is this review for a renewal OR new (check one) permit application?
Go to Step 2.

2. Is this surface water an **Outstanding Resource Water** or upstream from an **Outstanding Resource Water**?
Yes. Go to Step 5.
 No. Go to Step 3.
3. Is this surface water a **High Quality Water**?
Yes. Go to Step 8.
 No. Go to Step 4.
4. Is this surface water a **Water Quality Limited Water**?
 Yes. Go to Step 14.
No. Go to Step 2. Note: The surface water must fall into one of three (3) categories: Outstanding Resource Water (Step 2), High Quality Water (Step 3), or Water Quality Limited Water (Step 4).

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5. ~~Will the proposed activity result in a permanent new or expanded source of pollutants directly to or affecting the Outstanding Resource Water? [see OAR 340-041-0004(3)-(5) for a description in rule of discharges that do not result in lowering of water quality or do not constitute a new and/or increased discharge or are otherwise exempt from antidegradation review; otherwise see "Is an Activity Likely to Lower Water Quality?" in *Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and Section 401 Water Quality Certifications*.]~~
- ~~Yes. — Recommend Preliminary Decision to deny proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 21.~~
- ~~No. — Please provide basis for conclusion. Go to Step 6.~~
6. ~~Will the proposed activity result in a lowering of water quality in the Outstanding Resource Water? [see OAR 340-041-0004(3)-(5) for a description in rule of discharges that do not result in lowering of water quality or do not constitute a new and/or increased discharge or are otherwise exempt from antidegradation review; otherwise see "Is an Activity Likely to Lower Water Quality?" in *Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and Section 401 Water Quality Certifications*.]~~
- ~~Yes. — Please provide basis for conclusion. Go to Step 7.~~
- ~~No. — Please provide basis for conclusion. Go to Step 18.~~
7. ~~If the proposed activity results in a non permanent new or expanded source of pollutants directly to or affecting an Outstanding Resource Water, will the lowering of water quality in the Outstanding Resource Water be on a short term basis in response to an emergency or to protect human health and welfare?~~
- ~~Yes. — Proceed with Application Process to Interagency Coordination and Public Comment. Go to Step 21.~~
- ~~No. — Recommend Preliminary Decision to deny proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 18.~~
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8. ~~Will the proposed activity result in a Lowering of Water Quality in the High Quality Water [see OAR 340-041-0004(3)-(5) for a description in rule of discharges that do not result in lowering of water quality or do not constitute a new and/or increased discharge or are otherwise exempt from antidegradation review; otherwise see "Is an Activity Likely to Lower Water Quality?" in *Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and Section 401 Water Quality Certifications*.]~~
- ~~Yes. — Go to Step 9.~~
- ~~No. — Proceed with Permit Application. Applicant should provide basis for conclusion. Go to Step 21.~~

~~9. OAR 340-041-0004(6)(c) of the *High Quality Waters Policy* requires that the Department evaluate the application to determine all water quality standards will be met and beneficial uses protected after allowing discharge to High Quality Waters. Will all water quality standards be met and beneficial uses protected?~~

~~Yes. — Please provide basis for conclusion. Proceed with Application Process to Interagency Coordination and Public Comment. Go to Step 10.~~

~~No. — Please provide basis for conclusion. Recommend Preliminary Decision to deny proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 21.~~

~~10. OAR 340-041-0004(6)(a) of the *High Quality Waters Policy* requires that the Department evaluate the application to determine if no other reasonable alternatives exist except to discharge to High Quality Waters. Were any of the alternatives (at a minimum, the following list must be considered) feasible?~~

- ~~• Improved operation and maintenance of existing treatment system~~
- ~~• Recycling or reuse with no discharge~~
- ~~• Discharge to on-site system~~
- ~~• Seasonal or controlled discharges to avoid critical water quality periods~~
- ~~• Discharge to sanitary sewer~~
- ~~• Land application~~

~~Yes. — Please provide basis for conclusion (see below for information requirements). Recommend Preliminary Decision that applicant use alternative. Go to Step 8.~~

~~No. — Please provide basis for conclusion (see below for information requirements). Go to Step 11.~~

~~In a separate statement to this application, please explain the *technical feasibility* of the alternative, explain the *economic feasibility* of the alternative, and provide an *estimated cost* of NPDES permit alternative for a five-year period from start-up.~~

~~11. OAR 340-041-0004(6)(b) of the *High Quality Waters Policy* requires that the Department evaluate the application to determine if there are social and economic benefits that outweigh the environmental costs of allowing discharge to High Quality Waters. Do the social and economic benefits outweigh the environmental costs of lowering the water quality?~~

~~Yes. — Please provide basis for conclusion (see below for information requirements). Go to Step 12.~~

~~No. — Please provide basis for conclusion (see below for information requirements). Go to Step 21.~~

~~The basis for conclusion should include a discussion of whether the lowering of water quality is necessary and important. “Necessary” means that the same social and economic benefits cannot be achieved with some other approach. “Important” means that the value of the social and economic benefits due to lowering water~~

quality is greater than the environmental costs of lowering water quality. Benefits can be created from measures such as:

- ~~Creating or expanding employment (provide current/expected number of employees, type & relative amount of each type)~~
- ~~Increasing median family income~~
- ~~Increasing community tax base (provide current/expected annual sales, tax info)~~
- ~~Providing necessary social services~~
- ~~Enhancing environmental attributes~~

and Environmental Costs can include:

- ~~Losing assimilative capacity otherwise used for other industries/development~~
- ~~Impacting fishing, recreation, and tourism industries negatively~~
- ~~Impacting health protection negatively~~
- ~~Impacting societal value for environmental quality negatively~~

~~12. OAR 340-041-0004(6)(d) of the *High Quality Waters Policy* requires that the Department to prevent federal threatened and endangered aquatic species from being adversely affected. Will the lowering the water quality likely result in adverse effects on federal threatened and endangered aquatic species?~~

~~Yes. Please provide basis for conclusion (see below for information requirements). Go to Step 21.~~

~~No. Please provide basis for conclusion (see below for information requirements). Go to Step 13.~~

~~13. Will the lowering of water quality in the **High Quality Water** be on a short term basis in response to an emergency or to protect human health and welfare?~~

~~Yes. Go to Step 18.~~

~~No. Recommend Preliminary Decision to deny proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 21.~~

14. Will the proposed activity result in a Lowering of Water Quality in the **Water Quality Limited Water**? [see OAR 340-041-0004(3)-(5) for a description in rule of discharges that do not result in lowering of water quality or do not constitute a new and/or increased discharge or are otherwise exempt from antidegradation review; otherwise see "Is an Activity Likely to Lower Water Quality?" in *Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and Section 401 Water Quality Certifications*.]

Yes. Go to Step 15.

No. Proceed with Permit Application. Applicant should provide basis for conclusion. Go to Step 21.

15. OAR 340-041-0004(9)(a)(A) of the *Water Quality Limited Waters Policy* requires that the Department evaluate the application to determine that all water quality standards will be met. Will all water quality standards be met?

Yes. Please provide basis for conclusion. Go to Step 16.

- No. Please provide basis for conclusion. Recommend Preliminary Decision to deny proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 21.

Response:

DEQ prepared an Evaluation and Findings Report that includes analysis of potential impacts to each water quality standard. These findings are summarized as follows:

DEQ is reasonably assured that the following water quality standards for the parameters of Bacteria, pH and Total Dissolved Gas would be met provided the applicant implement appropriate isolation measures and other best management practices.

However, through evaluation of the best available information, DEQ could not be reasonably assured that the following water quality standards would be met: Narrative Criteria (as described in OAR 340-041-0007); Biocriteria; Dissolved Oxygen; Nuisance Phytoplankton; Temperature; Total Dissolved Solids; Toxic Substances; and Turbidity.

Further, the dredging and subsequent side slope slumping will initiate channel alterations that will propagate down the Clifton Channel and cause significant degradation of these parameters. This lowering of water quality, along with loss of habitat and food sources, will adversely impact the existing designated beneficial uses of: Anadromous Fish Passage; Salmonid Fish Rearing; Salmonid Fish Spawning; Resident and Aquatic Life; Wildlife and Hunting; Fishing; and Aesthetic Quality in the Columbia River, which is designated as a salmon and steelhead migration corridor.

- ~~16. OAR 340-041-0004(9)(a)(C) of the *Water Quality Limited Waters Policy* requires that the Department evaluate the application to determine that all recognized beneficial uses will be met and that threatened or endangered species will not be adversely affected. Will all beneficial uses be met and will threatened or endangered species be protected from adverse effects?~~

~~— Yes. Please provide basis for conclusion. Go to Step 17.~~

- ~~— No. Please provide basis for conclusion. Recommend Preliminary Decision to deny proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 21.~~

Response:

- ~~17. OAR 340-041-0004(9)(a)(D)(i-iv) of the *Water Quality Limited Waters Policy* requires that the Department evaluate the application for one of the following: Will~~

the discharge be associated (directly or indirectly) with the pollution parameter(s) causing the waterbody to be designated a Water Quality Limited Water?

— Yes. — Please provide basis for conclusion. Recommend Preliminary Decision to deny proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 21.

— No. — Please provide basis for conclusion. Go to Step 18.

Response:

— Have TMDLs, WLAs, LAs, and reserve capacity been established, compliance plans been established, and is there sufficient reserve capacity to assimilate the increased load under the established TMDL?

Yes. — Please provide basis for conclusion. Go to Step 18.

No. — Please provide basis for conclusion. Recommend Preliminary Decision to deny proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 21.

Response:

Will the proposed activity meet the requirements, as specified under OAR 340-041-0004(9)(a)(D)(iii) of the *Water Quality Limited Waters Policy*, for dissolved oxygen?

Yes. — Please provide basis for conclusion. Go to Step 18.

— No. — Please provide basis for conclusion. Recommend Preliminary Decision to deny proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 21.

Response:

Will the activity solve an existing, immediate, and critical environmental problem?

Yes. — Please provide basis for conclusion. Go to Step 18.

No. — Please provide basis for conclusion. Recommend Preliminary Decision to deny proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 21.

Response:

18. — Is the proposed activity consistent with local land use plans?

— Yes. — Go to Step 19.

— No. — Please provide basis for conclusion. Recommend Preliminary Decision to deny proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 21.

19. — OAR 340-041-0004(9)(e)(A) requires the Department to consider alternatives to lowering water quality. Were any of the alternatives (at a minimum, the following list must be considered) feasible?

- Improved operation and maintenance of existing treatment system
- Recycling or reuse with no discharge

- ~~Discharge to on-site system~~
- ~~Seasonal or controlled discharges to avoid critical water quality periods~~
- ~~Discharge to sanitary sewer~~
- ~~Land application~~

~~—Yes.— Please provide basis for conclusion (see below for information requirements). Recommend Preliminary Decision that applicant use alternative. Go to Step 14.~~

~~—No.— Please provide basis for conclusion (see below for information requirements). Go to Step 20.~~

~~In a separate statement to this application, please explain the *technical feasibility* of the alternative, explain the *economic feasibility* of the alternative, and provide an *estimated cost* of NPDES permit alternative for a five-year period from start-up.~~

Response:

~~20.— OAR 340-041-0004(9)(c)(B) of the *Water Quality Limited Waters Policy* requires the Department to consider the economic effects of the proposed activity, which in this context consists of determining if the social and economic benefits of the activity outweigh the environmental costs of allowing a lowering of water quality. Do the social and economic benefits outweigh the environmental costs of lowering the water quality?~~

~~—Yes.— Please provide basis for conclusion. Proceed with Application Process to Interagency Coordination and Public Comment. Go to Step 21.~~

~~—No.— Please provide basis for conclusion. Recommend Preliminary Decision to deny proposed activity (subject to Interagency Coordination and Public Comment). Go to Step 21.~~

The basis for conclusion should include a discussion of whether the lowering of water quality is necessary and important. "Necessary" means that the same social and economic benefits cannot be achieved with some other approach. "Important" means that the value of the social and economic benefits due to lowering water quality is greater than the environmental costs of lowering water quality. Benefits can be created from measures such as:

- ~~Creating or expanding employment (provide current/expected number of employees, type & relative amount of each type~~
 - ~~Increasing median family income~~
 - ~~Increasing community tax base (provide current/expected annual sales, tax info)~~
 - ~~Providing necessary social services~~
 - ~~Enhancing environmental attributes~~
- and Environmental Costs can include:
- ~~Losing assimilative capacity otherwise used for other industries/development~~
 - ~~Impacting fishing, recreation, and tourism industries negatively~~
 - ~~Impacting health protection negatively~~
 - ~~Impacting societal value for environmental quality negatively~~

Response:

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21. On the basis of the Antidegradation Review, the following is recommended:
Proceed with Application to Interagency Coordination and Public Comment Phase.
- Deny Application; return to applicant and provide public notice.

Action Approved

Section: _____

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