

Chapter 5

# Operations: Existing Conditions, Project Impacts, and Proposed Mitigation Measures

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## 5.0 Introduction

For the purposes of this Final Environmental Impact Statement (Final EIS), environmental resource areas have been divided into three categories: the Built Environment, the Natural Environment, and Operations (Chapters 3, 4, and 5, respectively). The purpose of this chapter is to provide a discussion of the operations resource areas assessed for the Millennium Bulk Terminals—Longview project (Proposed Action).

Information contained in this Final EIS was extracted from technical reports prepared specifically for the Proposed Action. Provided in Volume III of this Final EIS, the technical reports are incorporated by reference and include the determination of study areas, analysis methods, existing conditions, and potential impacts.

Information sources used for this analysis are briefly discussed for each resource. In addition, a detailed list of sources is provided in Appendix A, *References*, of this Final EIS.

### 5.0.1 Operations Resource Areas

Chapter 5, *Operations: Existing Conditions, Project Impacts, and Proposed Mitigation Measures*, evaluates the operational resource areas relevant to the Proposed Action. The resource areas reviewed as part of the operations analysis include rail transportation; rail safety; vehicle transportation; vessel transportation; noise and vibration; air quality; coal dust; and greenhouse gas emissions and climate change (Table 5.0-1). Additional detailed information about these resources can also be found in the corresponding technical reports in Volume III of this Final EIS.

In addition to these resource areas, Chapter 6, *Cumulative Impacts*, discusses cumulative impacts resulting from the Proposed Action combined with other past, present, and reasonably foreseeable actions.

**Table 5.0-1. Resource Areas and Corresponding Final EIS Chapters**

| <b>Chapter</b>   | <b>Section Number</b> | <b>Environmental Resource Area</b>          |
|--|-----------------------|---|
| Chapter 3, Built Environment:<br>Existing Conditions, Project<br>Impacts, and Proposed<br>Mitigation Measures      | 3.1                   | Land and Shoreline Use                      |
|  | 3.2                   | Social and Community Resources              |
|  | 3.3                   | Aesthetics, Light, and Glare                |
|  | 3.4                   | Cultural Resources                          |
|  | 3.5                   | Tribal Resources                            |
|  | 3.6                   | Hazardous Materials                         |
| Chapter 4, Natural<br>Environment: Existing<br>Conditions, Project Impacts,<br>and Proposed Mitigation<br>Measures | 4.1                   | Geology and Soils                           |
|  | 4.2                   | Surface Water and Floodplains               |
|  | 4.3                   | Wetlands                                    |
|  | 4.4                   | Groundwater                                 |
|  | 4.5                   | Water Quality                               |
|  | 4.6                   | Vegetation                                  |
|  | 4.7                   | Fish  |
|  | 4.8                   | Wildlife                                    |
|  | 4.9                   | Energy and Natural Resources                |
| Chapter 5, Operations: Existing<br>Conditions, Project Impacts,<br>and Proposed Mitigation<br>Measures             | 5.1                   | Rail Transportation                         |
|  | 5.2                   | Rail Safety                                 |
|  | 5.3                   | Vehicle Transportation                      |
|  | 5.4                   | Vessel Transportation                       |
|  | 5.5                   | Noise and Vibration                         |
|  | 5.6                   | Air Quality                                 |
|  | 5.7                   | Coal Dust                                   |
|  | 5.8                   | Greenhouse Gas Emissions and Climate Change |

## 5.0.2 Alternatives and Timeframe for Analysis

This chapter analyzes the impacts that could occur as a result of construction and operation of the Proposed Action. The analysis contained in this chapter assumes construction beginning in 2018 and full operations<sup>1</sup> occurring by 2028. The impacts identified for 2028 would be similar to the impacts for the lifetime of the Proposed Action. Proposed mitigation measures are intended to apply for the lifetime of the Proposed Action.

This chapter also refers to Proposed Action-related rail and vessel traffic during construction and operations. Table 5.0-2 illustrates the Proposed Action-related rail and vessel traffic for the peak year of construction and full operations evaluated in this chapter, and the rail and vessel activity for the two stages between the peak year of construction and full operations. Throughout this chapter, the 190-acre coal export terminal site is referred to as the *project area*.

<sup>1</sup> Full operation means an export terminal throughput of up to 44 million metric tons of coal per year, as described in Chapter 2, *Project Objectives, Proposed Action, and Alternatives*.

This chapter also analyzes impacts that could occur if the Proposed Action were not approved (the No-Action Alternative). Chapter 2, *Project Objectives, Proposed Action, and Alternatives*, of this Draft EIS provides a description of the Proposed Action and No-Action Alternative.

**Table 5.0-2. Proposed Action-Related Rail and Vessel Activity by Construction and Operation Stage<sup>a</sup>**

|   | Peak Year of Construction (2018) | Stage 1a Start-up Operations | Stage 1b Increased Operations | Full Operations (by 2028) |
|---|----------------------------------|------------------------------|-------------------------------|---------------------------|
| <b>Coal Export Terminal Maximum Throughput (million metric tons per year)</b> | 0                                | 10                           | 25                            | 44                        |
| <b>Rail Traffic</b>   |                                  |                              |                               |                           |
| Average loaded train trips per day  | 0.65 <sup>b</sup>                | 2                            | 5                             | 8                         |
| Average empty train trips per day   | 0.65 <sup>b</sup>                | 2                            | 5                             | 8                         |
| Average total train trips per day   | 1.3 <sup>b</sup>                 | 4                            | 10                            | 16                        |
| <b>Vessel Traffic</b>   |                                  |                              |                               |                           |
| Average vessels per month   | 63 barges <sup>c</sup>           | 15 <sup>d</sup>              | 40 <sup>d</sup>               | 70 <sup>d</sup>           |

Notes:

<sup>a</sup> For additional information on the stages, see Chapter 2, Section 2.3.2, *Potential Future Operations and Transport*.

<sup>b</sup> If construction materials are delivered by rail to the project area, as described in Chapter 2, *Project Objectives, Proposed Action, and Alternatives*.

<sup>c</sup> If construction materials are delivered by barge and transported via truck to the project area, as described in Chapter 2, *Project Objectives, Proposed Action, and Alternatives*.

<sup>d</sup> Approximately 80% Panamax and 20% Handymax.

### 5.0.3 Study Areas and Type of Impacts Analyzed

Each resource area has its own study area depending on its physical characteristics or regulations that oversee the resource area. Two types of study areas were identified—a direct impacts study area and an indirect impacts study area. Table 5.0-3 explains the differences between these two study areas; in some cases, both study areas are the same. Table 5.0-4 provides a summary of the direct impacts and indirect impacts study areas by Chapter 5 resource.

**Table 5.0-3. Types of Impacts**

| Type of Impact <sup>a</sup> | Description   | Description of Impacts Categories  |
|-----------------------------|---|--|
| Direct                      | An impact resulting from either construction or operation of the Proposed Action that occurs in the project area. | <ul style="list-style-type: none"> <li>• <b>Construction:</b> Temporary impacts within the project area that are resolved or mitigated by the end of construction activity, or permanent impacts that result from changes to the project area due to construction of the coal export terminal.</li> <li>• <b>Operations:</b> Impacts occurring in the project area resulting from rail unloading, coal storage, machinery operations, equipment, vessel loading, etc.</li> </ul> |
| Indirect                    | An impact resulting from operations of the Proposed Action that occurs beyond the project area.                   | <ul style="list-style-type: none"> <li>• <b>Construction:</b> Impacts from activities beyond the project area during construction, such as vehicle and rail traffic.</li> <li>• <b>Operations:</b> Impacts from activities beyond the project area during operations, such as rail, vehicle and vessel traffic.</li> </ul>   |

Notes:

<sup>a</sup> Washington Administrative Code (WAC) 197-11-192.

**Table 5.0-4. Summary of Direct and Indirect Impacts Study Areas by Resource**

| Section and Resource                | Direct Impacts Study Area   | Indirect Impacts Study Area   |  |
|-------------------------------------|---|---|--|
|                                     |   | Cowlitz County  | Washington State   |
| Section 5.1, Rail Transportation    | Project area  | <ul style="list-style-type: none"> <li>• Reynolds Lead and BNSF Spur</li> <li>• BNSF main line</li> </ul>   | Rail routes for Proposed Action-related trains   |
| Section 5.2, Rail Safety            | Project area  | <ul style="list-style-type: none"> <li>• Reynolds Lead and BNSF Spur</li> <li>• BNSF main line</li> </ul>   | Rail routes for Proposed Action-related trains   |
| Section 5.3, Vehicle Transportation | Project area  | Public and private at-grade crossings on the Reynolds Lead and BNSF Spur, and all at-grade public crossings on the BNSF main line                             | Selected at-grade rail crossings along the rail routes for Proposed Action-related trains  |
| Section 5.4, Vessel Transportation  | Area surrounding Docks 2 and 3 where vessel loading would occur   | Columbia River  | Waterways that would be used by, or could be affected by vessels calling at the project area, including the waters out to 3 nautical miles offshore, the Columbia River Bar, the Columbia River upstream to Vancouver and the Willamette River upstream to the Port of Portland. |
| Section 5.5, Noise and Vibration    | Noise and vibration impacts within 1 mile of the project area   | <ul style="list-style-type: none"> <li>• Area within 1 mile of the BNSF Spur and Reynolds Lead</li> <li>• BNSF main line</li> <li>• Columbia River</li> </ul> | <ul style="list-style-type: none"> <li>• Rail routes for Proposed Action-related trains</li> <li>• Columbia River between the project area and 3 nautical miles offshore</li> </ul>  |
| Section 5.6, Air Quality            | The area in and near the project area that could be affected by construction and operation activities in the project area | Cowlitz County, to account for rail operations in Cowlitz County, and vessel activity on the Columbia River   | <ul style="list-style-type: none"> <li>• Rail routes for Proposed Action-related trains</li> <li>• Columbia River between the project area and 3 nautical miles offshore</li> </ul>  |

| Section and Resource                    | Direct Impacts Study Area  | Indirect Impacts Study Area   |  |
|---|--|---|--|
|   |  | Cowlitz County  | Washington State   |
| Section 5.7, Coal Dust                  | The area in and near the project area that could be affected by construction and operation activities in the project area  | <ul style="list-style-type: none"> <li>The areas within 1,000 feet of the Reynolds Lead and BNSF Spur</li> <li>The areas within 1,000 feet of the rail routes for Proposed Action-related trains on the BNSF main line in Washington State (Ecology study area only)</li> </ul> | Rail routes for Proposed Action-related trains (Ecology study area only) |
| Section 5.8.1, Greenhouse Gas Emissions | <ul style="list-style-type: none"> <li>Cowlitz County</li> <li>Rail and vessel transportation routes and combustion of coal in Asia (i.e., beyond Washington State) (Ecology study area only)</li> </ul> | Same as direct impacts (direct and indirect impacts were not differentiated for the analysis)   |  |
| Section 5.8.2, Climate Change           | Project area and transportation routes leading to the project area   | Same as direct impacts (direct and indirect impacts were not differentiated for the analysis)   |  |

## 5.0.4 Mitigation Measures Development Approach

Applicable regulations, potential permit conditions, and required planning documents were evaluated to determine if they would address potentially significant adverse impacts identified in this Final EIS. When applicable, each section describes specific voluntary measures (Voluntary Mitigation) to be executed by the Applicant during construction or operations. When potential significant environmental impacts remained, other proposed mitigation measures were identified to reduce the impact (Applicant Mitigation). Mitigation measures included in permit conditions would become legal requirements of the Applicant. In addition to the proposed mitigation measures identified in each section of this chapter, the following measure is proposed.

- The Applicant will provide to Cowlitz County and the Washington State Department of Ecology an annual report of compliance with mitigation requirements of an issued permit. Mitigation compliance reports will be part of the public record.

Proposed mitigation measures were identified as required by the Washington State Environmental Policy Act (SEPA) consistent with Washington Administrative Code (WAC) 197-11-660, which states that mitigation shall be reasonable, capable of being accomplished and imposed to the extent attributable to the identified adverse impact of the proposal.

The thresholds of significance and proposed mitigation measures were determined by the co-lead agencies (Cowlitz County and the Washington State Department of Ecology). Additionally, when applicable, each section identifies mitigation measures to be considered by other agencies, groups, or companies (Other Measures to be Considered) to reduce potential Proposed Action-related impacts that are beyond the Applicant's control or authority.