

Chapter 5

Operations: Existing Conditions, Project Impacts, and Potential Mitigation Measures

5.0 Introduction

For the purposes of this Draft Environmental Impact Statement (Draft EIS), environmental resource areas have been divided into three categories: the Built Environment, the Natural Environment, and Operations, and are discussed in 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 Draft EIS was extracted from environmental technical reports located in Volume III of this Draft EIS and incorporated by reference. The technical reports include more detailed discussion on the determination of study areas, methods used for analysis, potential impacts, and mitigation.

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 Draft EIS.

5.0.1 Operations Resource Areas

Chapter 5, *Operations: Existing Conditions, Project Impacts, and Potential 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 Draft 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 Draft EIS Chapters

Chapter	Section Number	Environmental Resource Area
Chapter 3, Built Environment	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 Environment	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	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 operations¹ occurring by 2028.

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 the discussions, the 190-acre coal export terminal site is referred to as the *project area*.

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.

¹ 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*.

Table 5.0-2. Proposed Action-Related Rail and Vessel Activity by Construction and Operation Stage^a

	Peak Year of Construction (2018)	Stage 1a Start-up Operations	Stage 1b Increased Operations	Full Operations (by 2028)
Coal Export Terminal Throughput (metric tons per year)	0	10,000,000	25,000,000	44,000,000
Rail Traffic				
Average loaded train trips per day	0.65 ^b	2	5	8
Average empty train trips per day	0.65 ^b	2	5	8
Average total train trips per day	1.3 ^b	4	10	16
Vessel Traffic				
Average vessels per month	63 barges ^c	15 ^d	40 ^d	70 ^d

Notes:

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

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

^c 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*.

^d Approximately 80% Panamax and 20%.

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 5.0-3. Types of Impacts and Corresponding Study Area

Type of Impact	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"> • Construction: Temporary operational 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. • Operations: Impacts occurring in the project area resulting from rail unloading, coal storage, machinery operations, equipment, vessel loading, etc.
Indirect	An impact resulting from operations of the Proposed Action that occurs beyond the project area.	<ul style="list-style-type: none"> • Construction: Impacts from activities beyond the project area during construction, such as vehicle and rail traffic. • Operations: Impacts from activities beyond the project area during operations, such as rail, vehicle and vessel traffic.

Table 5.0-4 provides a summary of the direct impacts and indirect impacts study areas by Chapter 5 resource.

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

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"> • Reynolds Lead and BNSF Spur • BNSF main line 	Rail routes for Proposed Action-related trains
Section 5.2, Rail Safety	Project area	<ul style="list-style-type: none"> • Reynolds Lead and BNSF Spur • BNSF main line 	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	Project area	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"> • Area within 1 mile of the BNSF Spur and Reynolds Lead • BNSF main line • Columbia River 	<ul style="list-style-type: none"> • Rail routes for Proposed Action-related trains • Columbia River between the project area and 3 nautical miles offshore
Section 5.6, Air Quality	Project area and Proposed Action-related trains on the Reynolds Lead and BNSF Spur	Cowlitz County	<ul style="list-style-type: none"> • Rail routes for Proposed Action-related trains • Columbia River between the project area and 3 nautical miles offshore
Section 5.7, Coal Dust	Project area	<ul style="list-style-type: none"> • Reynolds Lead and BNSF Spur • BNSF main line (Ecology study area only) 	Rail routes for Proposed Action-related trains (Ecology study area only)

Resource	Direct Impacts Study Area	Indirect Impacts Study Area	
		Cowlitz County	Washington State
Section 5.8.1, Greenhouse Gas Emissions	<ul style="list-style-type: none"> • Cowlitz County (study area for both co-leads) • Rail and vessel transportation routes and combustion of coal in Asia (i.e., beyond Washington State) (Ecology study area only) 	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, specific permit conditions, and required planning documents were evaluated to determine if they would address potentially significant adverse impacts identified in this Draft 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 potential mitigation measures were identified to reduce the impact (Applicant Mitigation). These potential 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 potential mitigation measures were determined by the co-lead agencies (Cowlitz County and the Washington State Department of Ecology). Additionally, when applicable, each section identifies potential 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.