

Chapter 6

Operations: Affected Environment and Project Impacts

6.0 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 (Chapters 4, 5, and 6, respectively). The purpose of this chapter is to discuss the operations resource areas assessed for the Millennium Bulk Terminals—Longview project (proposed export terminal).

Information contained in this Draft EIS was drawn from environmental technical reports located in Volume III of this Draft EIS and incorporated by reference. The technical reports include more detailed discussions on methods used for analysis, the affected environment, and potential impacts of the proposed export terminal.

6.0.1 Operations Resource Areas

Chapter 6, *Operations: Affected Environment and Project Impacts*, evaluates the operational resource areas relevant to the proposed export terminal. The resource areas in this analysis include rail transportation, rail safety, vehicle transportation, vessel transportation, noise and vibration, air quality, coal dust, and greenhouse gas emissions (Table 6.0-1). Additional detailed information about these resources can also be found in the corresponding technical reports in Volume III of this Draft EIS.

Chapter 8, *Minimization and Mitigation*, presents measures to mitigate potential impacts of the proposed export terminal identified in this chapter.

Table 6.0-1. Operations Resource Areas and Corresponding Draft EIS Sections

Chapter	Section Number	Environmental Resource Area
Chapter 6, Operations: Affected Environment and Project Impacts	6.1	Rail Transportation
	6.2	Rail Safety
	6.3	Vehicle Transportation
	6.4	Vessel Transportation
	6.5	Noise and Vibration
	6.6	Air Quality
	6.7	Coal Dust
	6.8	Greenhouse Gas Emissions

6.0.2 Alternatives and Timeframe for Analysis

This chapter analyzes impacts that would likely occur as a result of construction and operation of the proposed export terminal. The analysis assumes construction beginning in 2018 and full operations¹ occurring by 2028.

This chapter also refers to project-related rail and vessel traffic during construction and operations. Table 6.0-2 illustrates the project-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 location of the proposed export terminal for both the On-Site Alternative and Off-Site Alternative is referred to as the *project area*.

This chapter also analyzes impacts that could occur under the No-Action Alternative. Chapter 3, *Alternatives*, of this Draft EIS provides a description of the On-Site Alternative, Off-Site Alternative, and No-Action Alternative.

Table 6.0-2. Project-Related Rail and Vessel Activity by Construction and Operation Stage^a

	Peak Year of Construction (2018)	Stage 1a Startup Operations	Stage 1b Increased Operations	Full Operations (by 2028)
Proposed Export Terminal Throughput (million metric tons of coal per year)	0	10	25	44
Rail Traffic				
Average total train trips per day	1.30 ^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 3, Section 3.4.3, <i>Proposed Facilities, Construction, and Operations</i> .				
^b If construction materials are delivered by rail to the project area for the On-Site Alternative and Off-Site Alternative, as described in Chapter 3, <i>Alternatives</i> .				
^c If construction materials are delivered by barge and transported via truck to the project area for the On-Site Alternative and Off-Site Alternative, as described in Chapter 3, <i>Alternatives</i> .				
^d Approximately 80% Panamax-class and 20% Handymax-class vessels.				

¹ Full operation means an export terminal throughput of up to 44 million metric tons of coal per year, as described in Chapter 3, *Alternatives*.

6.0.3 Study Areas and Type of Impacts Analyzed

As discussed in Chapter 1, *Introduction*, the NEPA scope of analysis includes the activities requiring a Department of the Army permit from the Corps, plus those activities outside the permit area over which the Corps has sufficient control and responsibility. Therefore, the Corps' scope of analysis for this Draft EIS includes the project area, the area that would be dredged, any dredged material disposal sites, any off-site area that might be used for compensatory mitigation, and any other area in or adjacent to the Columbia River that would be affected by, and integral to, the proposed export terminal.

Within the overall NEPA scope of analysis, study areas have been defined for each resource. The size and location of each study area depends, in part, on the physical and/or biological characteristics of the resource, logistics, nature and extent of potential impacts, and how the resource is regulated. Separate study areas are normally identified for direct impacts and indirect impacts. Table 6.0-3 explains the general differences between direct and indirect impact study areas.

Table 6.0-3. Types of Impacts and Impact Examples

Type of Impact	Description	Example of Impacts
Direct	An impact resulting from either construction or operation of the proposed export terminal at either the On-Site Alternative or Off-Site Alternative location. Direct impacts are caused by the action and occur at the same time and place (40 CFR 1508.8).	<ul style="list-style-type: none"> • Construction: Temporary impacts within the project area that are resolved or mitigated by the end of construction, or permanent changes to the project areas due to construction of the proposed 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 construction or operation of the proposed export terminal that occurs outside the project area or later in time. Indirect impacts are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable (40 CFR 1508.8).	<ul style="list-style-type: none"> • Construction: Impacts that occur outside the project area, such as vehicle and rail traffic that support construction activities • Operations: Impacts from activities that occur outside the project area, such as rail, vehicle and vessel traffic that support operational activities, or that occur within the project area later in time

Table 6.0-4 provides a summary of the direct impacts and indirect impacts study areas for operations resources. These study areas were developed based on the U.S. Army Corps of Engineers' Memorandum for Record (MFR) entitled *Scope of Analysis and Extent of Impact Evaluation for National Environmental Policy Act Environmental Impact Statement*, dated February 14, 2014. The study areas contained in this Draft EIS typically conform with the MFR. In some cases, study areas were adjusted to reflect the characteristics and specific elements for each resource area.

Table 6.0-4. Summary of Direct Impacts and Indirect Impacts Study Areas by Resource

Resource	Direct Impacts Study Area	Indirect Impacts Study Area
Section 6.1, Rail Transportation	Project area for the On-Site Alternative and Off-Site Alternative	Project areas and Reynolds Lead and BNSF Spur rail corridor
Section 6.2, Rail Safety	Project area for the On-Site Alternative and Off-Site Alternative	Project areas and Reynolds Lead and BNSF Spur rail corridor
Section 6.3, Vehicle Transportation	Project area for the On-Site Alternative and Off-Site Alternative	Arterials and secondary roads in the vicinity of the Longview industrial area along the Columbia River, which includes public and private at-grade crossings on the Reynolds Lead and BNSF Spur
Section 6.4, Vessel Transportation	Area surrounding the proposed docks where vessel maneuvering and loading would occur	Waterways to be used by or affected by vessels calling at the project areas, which includes the lower Columbia River from the mouth of the river to Vancouver, Washington, ² and the Willamette River upriver to the Port of Portland
Section 6.5, Noise and Vibration	Area within 1 mile of the project areas for the On-Site Alternative and Off-Site Alternative	Direct impacts study area plus the area within 1 mile of the BNSF Spur and Reynolds Lead
Section 6.6, Air Quality	Approximate 5-mile radius around the project areas for the On-Site Alternative and Off-Site Alternative	Approximate 20-mile radius from the project areas
Section 6.7, Coal Dust	Project area for the On-Site Alternative and Off-Site Alternative and area beyond the project areas potentially affected by terminal operations	Project areas and the areas within 1,000 feet of the Reynolds Lead and BNSF Spur
Section 6.8, Greenhouse Gas Emissions	Project areas and in the vicinity of the project areas that could be affected by greenhouse gases resulting from construction and operation of the proposed export terminal, and the lower Columbia River from the project area to the mouth of the river	Same as direct impacts (direct and indirect impacts were not differentiated for the analysis)

² For purposes of this EIS, the lower Columbia River ends at the landward limit of the Territorial Sea, which is a line drawn between the seaward tips of the North Jetty and South Jetty. The Port of Vancouver is the furthest upriver port receiving large commercial vessels.