

## 3.10 TRAFFIC AND TRANSPORTATION

### 3.10.1 Affected Environment

#### 3.10.1.1 Highways and Roads

Figure 3.10-1 shows the major state highways and interstates in the vicinity of the proposed pipeline corridor. The proposed pipeline would cross or lie adjacent to approximately 120 roadways, ranging from major interstates to two-lane county roads and USFS roads.

Approximately 176.2 km (109 miles) or 47 percent of the approximate 370 km (230-mile) pipeline corridor would be within existing ROW. About three-quarters of the ROW is in private ownership. Most of the ROW in agency ownership belongs to the USFS (18 km [11 miles]), Bureau of Reclamation (19 km [12 miles]), Washington State Parks and Recreation (32 km [20 miles]), and the Washington State Department of Natural Resources (13 km [8 miles]) (Table 3.10-1).

**Table 3.10-1. Summary of Right-of-Way Ownerships**

Ownership	Miles*	Percentage
<b>Federal Agencies:</b>		
U.S. Forest Service	11.34	4.9
Bureau of Land Management	0.54	0.2
Bureau of Reclamation	12.42	5.4
U.S. Fish & Wildlife Service National Wildlife Refuge	<u>0.45</u>	<u>0.2</u>
Total Federal Ownership	24.75	10.7
<b>State Agencies:</b>		
Natural Resources	7.55	3.3
Parks & Recreation	19.76	8.6
Department of Fish and Wildlife	<u>0.22</u>	<u>0.1</u>
Total State Ownership	29.73	12.9
<b>Local Agencies:</b>		
King County Roads	1.51	0.7
<b>Private Ownership:</b>		
Private Owners	<u>175.04</u>	<u>75.9</u>
<b>Total Miles</b>	230.70	100

Source: OPL 1998.

\* Numbers are approximate and not the result of boundary survey.

Under existing conditions, OPL estimates that approximately 50 to 60 tanker trucks per day cross the Cascade Mountains via I-90 or U.S. Highway 2, transporting gasoline products from the Seattle-Tacoma area to central Washington that cannot be carried by pipeline. Depending on location, the average daily traffic (ADT) volumes on U.S. Highway 2 and I-90 range from approximately 5,000 to more than 28,000 vehicles per day. The existing tanker truck traffic using the two major state highways represents a very small component of the overall traffic volumes on these highways.

Part of the rationale for this project is the effect of traffic delays on the passes and their effect on product delivery. WSDOT was contacted (Myhr pers. comm.) to get a sample of traffic delay data on one pass. Over a 4-month period, November 1996 through March 1997, there were 100 closures of all or part of I-90 between Seattle and Ellensburg. Approximately half were eastbound. There were 30 total closures of I-90, eastbound and westbound over the 1996-97 winter season and half that many in 1995-96. There were 6 closures exceeding 12 hours in duration in 1996-97, all of which closed both lanes for periods ranging from 20 to 40 to 80 hours. Delays were so significant that an escorted convoy of fuel trucks was driven over Snoqualmie Pass.

Roads potentially affected by the project generally operate at level of service (LOS) B or better, or have very low ADT volumes (generally less than 500 vehicles per day). The exceptions are State Route 9 and State Route 522 (both north of State Route 524), which operate at LOS D. (OPL 1998.) The principal east-west corridor from Seattle to Kittitas is I-90.

### **3.10.1.2 River Transport and Barging**

According to OPL, under existing conditions, three barges per week are used to transport petroleum products up the Columbia River from Portland, Oregon to Pasco, Washington. Tidewater Barge Company is the sole operator of refined petroleum product being transported from Portland to terminals in Pasco, Clarkston, and Umatilla.

### **3.10.1.3 Marine Barging Activities**

Currently each of the four northwest refineries ships product via tanker and barge on Puget Sound to meet demand that is not met due to the lack of capacity of the Olympic pipeline. One refinery indicated that they shipped nearly 990,000 bbls of product to Portland in 1996 and an additional 535,000 bbls to Harbor Island (Stanley pers. comm.). This was shipped in a combination of tankers and barges but included 31 shipments to Portland and 27 shipments to Harbor Island, or about 5 shipments a month at an average of 25,000 bbls per shipment. Another refinery contacted for this analysis stated that they carried more than that but would not release actual numbers. Assuming that the two refineries that were not contacted shipped similar amounts, at least a dozen and perhaps as many as 20 petroleum barge shipments a month (at 25,000 bbls per shipment) are sent on to Puget Sound by the northwest refineries as a result of lack of capacity of the existing line.

### 3.10.1.4 Railroads

The Burlington Northern Railroad runs from Everett through the Cascade Mountains to Spokane. From Spokane, the Union Pacific Railroad travels south through Hooper Junction (near Washtucna, Washington) to Kennewick. A line also extends from Auburn through Stampede Pass to Cle Elum where it meets the Washington Central Railroad Company. The Washington Central Railroad Company runs east to Kennewick. (See [Figure 3.10-2](#) for railroad route overview.)

### 3.10.1.5 Air Transportation

Because of the lack of capacity of the existing OPL pipeline system, OPL has had to place restrictions on its existing pipeline system by prorating capacity among shippers. The ability to serve the airlines at Sea-Tac and Portland International Airports has been affected. The existing OPL pipeline is the only means for transporting jet fuel to the Sea-Tac International Airport. Air travel is anticipated to continue to increase (as evidenced by the need for a third runway at Sea-Tac International Airport). Proration increases costs for airlines in all cities because product must be acquired via more expensive means.

## 3.10.2 Environmental Consequences

### 3.10.2.1 Proposed Petroleum Product Pipeline

**Construction Impacts.** Transportation impacts associated with construction of the proposed project would be minimal. Minor impacts would result from trucks hauling pipe to the job sites, workers traveling to and from the job sites, and boring operations under roads and highways.

In order to distribute pipe along the pipeline ROW, trucks will visit the pipeline staging areas and haul away approximately 20 sections of pipe at a time. OPL estimates that the distribution of pipe along the corridor would take approximately 3 weeks. OPL also estimates that the truck volume to distribute the pipe would range from 15 to 25 trucks, or a total of 30 to 50 total trips, per day. Staging areas have not all been located but are intended to be developed commercial/industrial sites adjacent to major roadways.

Traffic volumes associated with construction of the proposal would not change the existing LOS on roads affected by the proposal. However, very low-volume roads in rural areas would experience a marked increase in traffic for a short period (normally less than 2 weeks for any one road). Despite the increase in traffic, these roadways would continue to operate with only minor delays because one travel lane would always remain open.

To the extent possible, workers would be encouraged to carpool to the construction yard. After arriving at the construction yard, most workers would be bussed to the pipeline site. Some workers (e.g., welders) would drive their own vehicles to the construction site. Because parking would be limited along the route, only construction-related vehicles that were absolutely necessary

for the job would be allowed at the pipeline site. Parking for most construction workers would be at a construction yard located near the project site. It would be the responsibility of the construction contractor to provide sufficient parking space for the workers. The longer pipeline spreads (1 and 3) would require a peak of 375 workers or 10 busloads of workers.

The pipeline workforce would be spread over many miles of the ROW as the various sequential construction activities are in progress. For example, the ROW clearing crew would be a few miles ahead of the area being trenched and further ahead of the areas being backfilled after the pipeline has been installed. As a result, vehicles needed along the corridor would be spread over many miles and would not be congregated at any one area.

There would be temporary and minor traffic delays during construction across roadways that are being trenched. Some delay may also be experienced at bridges when the pipeline is placed on the bridge. Trenched roadways would remain open and have flaggers controlling traffic while one lane is being trenched. Steel plates would be placed across the trench or the trench would be backfilled to grade so that traffic can move across the open trench until the pipeline is laid.

Tinkham Road, located south of I-90 and east of North Bend, would have to be closed during construction because the pipeline would be placed in the roadbed, rather than only crossing or running alongside the roadbed as would occur for other affected roads. The duration of this closure would be limited to the actual time required to complete the pipeline installation, approximately 5 days. The roadway would be rebuilt after the pipeline is placed.

**Traffic Hazards During Construction.** Traffic hazards would increase only slightly as a result of increased construction traffic. One of the more likely sources of traffic hazards would involve the transport of pipes along narrow roads. In some cases, pipe distribution trucks may have to haul sections of pipe 24 m (80 feet) long, which would require pilot vehicles to help negotiate hills and curves in mountainous regions.

Excavation of trenches and pits adjacent to state highways could also present a potential hazard to traffic. To minimize this potential impact, boring pits would be set back as far as is practical from the edge of the traveled roadway, and concrete barriers would be installed to protect the work site from other traffic. Open trenches through roadways would be covered during all non-construction hours.

Other measures proposed by OPL to minimize traffic impacts during the construction period are described in Appendix C.

**Operational Impacts.** During pipeline operation, very minor traffic volumes would be generated as a result of pump station and pipeline maintenance. Some traffic would occur during operation of the Kittitas Terminal.

During operation of the pipeline, maintenance personnel would visit the pump stations once daily. The pump stations would be located in easily accessible locations close to improved highways. Traffic generated for the maintenance of each pump station would total two round trips per day and would not impact local traffic operations.

Remote valve sites would require occasional maintenance. It is anticipated that each valve site would be visited a minimum of two times per year. Vegetation trimming along the ROW would be required intermittently, probably once or twice per year. Traffic generated for maintenance of the pipeline would be negligible at any one location, totaling less than one round trip per week.

The Kittitas Terminal would be located adjacent to the I-90 westbound off-ramp at Kittitas. Due to the proximity of this facility to the I-90 interchange, a slight hazard to passing motorists would exist. OPL estimates that truck traffic at the Kittitas Terminal would generate approximately 150 total trips per day, generally between the hours of 5 a.m. and 7 p.m. Drivers would have access to the facility 24 hours per day through the use of a card key system. Four employees would be stationed at the terminal; two would work a normal shift at the site, and the other two would be pipeline maintenance personnel who would arrive and depart the facility once or twice per day.

While the additional traffic at the Kittitas Terminal would not impact local traffic operations or the LOS at the I-90 interchange, WSDOT has indicated that the interchange does not meet current design standards. In particular, WSDOT has noted that the existing ramp lane widths (4.3 m [14 feet]) do not meet current design standards (4.6 m [15 feet]) and the existing acceleration and deceleration ramp tapers are not long enough. (WSDOT 1997.) To the extent that interchange improvements at I-90 are required for this project, OPL would negotiate its participation with WSDOT prior to construction of the terminal.

A spill should have little effect on transportation unless a highway was the actual spill location, in which case the roadway would likely be closed until the risk of fire or explosion was removed. A spill on any highway bridge, such as the I-90 Bridge at Vantage, would likely require closing the bridge until all product is recovered. A truck spill involving fire could close roadways for extended periods of time (see Appendix A). Repair work impacts on traffic would be the same as original construction with the likelihood that one lane would be closed.

Use of the Burlington Northern Beverly Railroad Bridge in its current condition could pose an unacceptable risk of pipeline breakage during the life of the project. If this option were selected, structural rehabilitation of the bridge abutments may be required, pending a more detailed review of the structural integrity of the bridge and its abutments.

A benefit of the project is that it would eliminate proration/restrictions on the existing OPL pipeline to Portland. As a result, transport of jet fuel to Sea-Tac and Portland International Airports could meet current and future needs as both airports experience increased ridership and use. It would avoid use of more costly alternative modes of transport for jet fuel. The proposal would also eliminate tanker trucks from arriving at the Kittitas/Ellensburg area late due to lane closures which have closed Snoqualmie Pass, and likely closed Stevens Pass, for 2 to 3 days at a time. Most of the refined petroleum product shipping activity in Puget Sound and along the Pacific Coast from the northwest refineries would be eliminated if the proposed pipeline were built.

**Cumulative Impacts.** The project would reduce the amount of trucking over the passes but would not have a significant effect on trucking overall. Cumulative impacts of significant reductions in petroleum barge activity in Puget Sound and along the coast combined with elimination

of petroleum barging on the Columbia River would create a significant reduction in such barge transport in Washington.

### **3.10.2.2 No Action**

Continued use of the existing system of petroleum product transport under the No Action Alternative would result in continued proration of the existing Seattle-Portland pipeline's capacity. Thus, shippers would be required to use alternative modes of transport to meet their needs at greater cost. For instance, Sea-Tac and Portland International Airports would have to use trucking or other more expensive means to obtain needed jet fuel.

Under the No Action Alternative, current modes of product transport would continue and would increase in the future. Increased trucking of product would occur to help meet the increased demands for petroleum products in central and eastern Washington. OPL anticipates that trucking would increase from 50 to 60 tanker trucks per day now, to 71 trucks in 1999, 80 trucks in 2004, 90 trucks in 2009, 101 trucks in 2014, and an average of 128 trucks per day in 2026. Although this is an increase in trucking activity, it would not affect LOS on I-90 or other roadways. Increased trucking activity would increase the risk of a spill incident along trucking routes at a higher rate than a pipeline, and any truck accident including a spill would certainly involve a roadway.

Under the No Action Alternative, annual barge use up the Columbia River is expected to increase from 292 trips annually in 1999, to 346 trips in 2014, and 423 barge trips in 2019. As Tidewater Barge continues to replace single-hull barges with larger double-hull barges, the increase may be at a lower rate than this.

Increased ocean barging of product from the four Puget Sound refineries (now at 12 to 20 shipments per month) would also occur under the No Action Alternative, with transfer to the river barges in Portland for transport to Pasco. It is estimated that increases in ocean barging would total 5,800 bbls per day in 1999, up to 35,889 bbls in 2019. Refined petroleum barge activity would continue to increase on Puget Sound, to Harbor Island, through the Strait of Juan de Fuca, and along the coast to Portland. In contrast, with the proposal, the volume of petroleum products shipped by ocean barge would be reduced and would be eliminated on the Columbia River above Portland, ultimately depending on product demand in central and eastern Washington.

## **3.10.3 Additional Proposed Mitigation Measures**

### **3.10.3.1 Construction Mitigation and Subsequent Impacts**

No additional mitigation measures beyond those included as part of the project by the applicant are proposed.

### **3.10.3.2 Operational Mitigation and Subsequent Impacts**

No mitigation measures are proposed for operation because operational impacts to transportation would be negligible.

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LIST OF ACRONYMS

average daily traffic (ADT)..... 3-195  
level of service (LOS) ..... 3-195

LIST OF CITATIONS

(Myhr pers. comm.)..... 3-195  
(OPL 1998.) The principal east-west corridor from Seattle to Kittitas is I-90..... 3-195  
(Stanley pers. comm.)..... 3-195  
(WSDOT 1997.) ..... 3-199