

Chapter 13 Public Services and Utilities

13.1 Introduction

This chapter assesses the potential impacts on public services and utilities of the proposed project's Technology Alternatives and Marine Terminal Alternatives, a No-Action Alternative, and the related actions. The public services and utilities considered in this analysis include: (1) fire protection and emergency services, (2) police services, (3) schools, (4) public parks and recreation facilities, and (5) water and sewage services. This chapter also provides an estimate of potential economic benefits that would be generated by the proposed project in the form of tax revenues, jobs and wages, and revenue to the Port of Kalama from land leases and dock fees. Potential impacts to energy service providers are discussed separately in Chapter 7, Energy, of this environmental impact statement. Emergency response procedures and potential impacts related to vessel spills and other incidents that may occur with the proposed project are discussed in detail in Chapter 8, Environmental Health and Safety. This chapter discusses the methodology employed to assess impacts, describes the public service and utility providers that could be affected by the proposed project and alternatives, and assesses the potential impacts on these public services and utilities.

The analysis concludes that the proposed project, with either Technology Alternative and either Marine Terminal Alternative, would not result in significant adverse impacts to public services and utilities with the proposed mitigation measures described below.

13.2 Methodology

The following section describes the methodology used to characterize the affected environment and assess potential impacts for public services and utilities. This assessment begins with a screening analysis to determine whether the alternatives and related actions would have the potential to impact certain public services and utilities (see section 13.3). If warranted, a more detailed analysis is provided in the sections that follow.

The characterization of the affected environment consisted of researching publicly available information documented on the websites of service providers. The research identified the service providers for the proposed project and alternatives, the types of services offered by the provider, staffing levels, equipment, office/station locations, and overlapping responsibilities with other service providers, if available. The assessment of the related actions relies on the information in the environmental assessment prepared by the Federal Energy Regulatory Commission (FERC) for the proposed pipeline.

Potential impacts on public services and utilities can be direct or indirect. Direct impacts can occur when an alternative displaces, physically alters, or affects access to or from a public service or utility. Indirect impacts can occur if an alternative introduces a new population or activity that places substantial new demands on a public service or utility. The assessment of the environmental impacts analyzed the demand of each alternative on public services and utilities, identified the magnitude of the impact, discussed proposed project measures to reduce impacts, and assessed the significance of the impact after the implementation of impact reduction measures. Generally, the impact assessment was qualitative in nature, but in cases such as water and sewage systems, quantitative assessments were possible. The assessment of environmental impacts analyzed:

- Whether there is potential for the proposed project to impact public services and utilities. The analysis identified potential impacts to public service and utilities, as well as instances where the project would have no impact on them. For example, the analysis determined that the proposed project and alternatives would not have the potential to affect schools or parks and recreation facilities based on the screening analysis provided in section 13.3 below.
- The magnitude of the impact, where possible. The analysis of the magnitude of impacts was qualitative when numerical information or estimates for the magnitude of the impact were not available.
- Design or operational measures meant to reduce the magnitude of the impact. This analysis identified aspects of the project design, operational practices, or standards meant to reduce the level of the impact. As an example, providing security personnel on site would be an operational practice meant to reduce the need for police services.
- Whether impacts would be reduced to non-significant levels with implementation of proposed onsite measures. For example, an alternative may place new demands on fire services but the on-site systems, project design, or measures that are proposed would reduce the demands on fire services to non-significant levels.

In order to evaluate whether the project will generate tax revenue and other favorable impacts on economic resources to offset potentially increased demands on public services, ECONorthwest analyzed the proposed project's regional economic impacts using the Impact Analysis for Planning Model (IMPLAN). See **Appendix M**, Census Block Group Data (ECONorthwest 2015) for the analysis. IMPLAN, an input-output modeling system, describes the flow of goods and services between industrial sectors in regions usually defined as a county, a group of counties, or a state. The IMPLAN databases contain county-level, inter-industry trade flows for hundreds of estimated commodities based on nationwide production functions (i.e., relationships showing the average amounts of various goods and services required to produce a unit of each commodity). ECONorthwest customized the IMPLAN data based on proprietary information describing trade flows in the regional economy, and on information about the proposed project provided by the Applicant.

Input-output models estimate not only the employment and income generated to construct and operate a project (direct effects) but also the increased employment and income in industries linked to the project (indirect effects). The model also estimates the increased purchases that workers in the affected industries make, due to their increased income (induced effects). The sum of the direct, indirect, and induced effects is called the total effect. Economic output measures the total value of economic transactions related to the proposed project.

13.3 Regional Economy and Service Provider Screening Analysis

13.3.1 Proposed Project

Workers at the proposed project are expected to live in Southwest Washington and the Portland-Vancouver-Hillsboro metropolitan statistical area according to the *Economic Impact Analysis of the Proposed Kalama Manufacturing and Marine Export Facility* (ECONorthwest 2015) (see **Appendix M**). This area covers the major towns and cities within a less than

90-minute driving radius of the project site. The area is defined as the “regional economy” from which the proposed project would likely obtain nearly all of its employees.¹

The regional economy is large, encompassing 12 counties in Southwest Washington and Northwest Oregon with a population of 2.7 million people and a labor force of 1.4 million workers (ECONorthwest 2015). The area has hundreds of schools, parks and recreational opportunities, and dozens of school districts and park/recreation providers. The proposed project and alternatives would employ approximately 1,000 temporary construction workers and 192 permanent employees during operation. It is likely that many of the project construction and operational workers already live within the 12-county region, and these workers would not place new demands on schools, park, and recreation facilities. Even if all construction and operational workers relocated from outside the region for employment at the proposed project, the project would not have significant impacts on school, park, and recreation providers in the context of the overall population and abundance of service providers in the regional economy. Workers that relocate to take jobs at the proposed project would likely be dispersed throughout the 12-county region and would not introduce substantial new demands for schools, parks and recreation facilities in any one location. Therefore, the proposed project and alternatives would not result in significant adverse impacts to schools, park, and recreation facilities and further assessment is not warranted.

The proposed project could result in new demands on fire, emergency, police, water, and sewage service providers. Therefore, potential impacts to these public services and facilities warrant additional assessment.

13.3.2 Related Actions

The proposed project would be supported by two related actions: (1) the Kalama Lateral Project (the proposed pipeline); and (2) new transmission lines and substation improvements. The proposed pipeline would employ 87 workers during the peak of construction and a very small number of workers during operations. The proposed pipeline would not generate substantial demand for police services, parks, or schools. The proposed pipeline would not require public water and sewer services during construction or operation. Likewise, the new transmission lines and substation improvements would not introduce new employment nor would it place new demands on police or fire services, parks, schools, or public water and sewer services. Therefore, the related actions would not result in significant adverse impacts to police services, schools, or park and recreation facilities and further assessment is not warranted.

The proposed pipeline may generate demand for fire protection and emergency services from incidents involving external forces such as earthquakes, damage from third-party digging, geologic hazards, hydraulic hazards, or other natural occurrences (FERC 2014). Therefore, an assessment of these public services is provided below for the proposed pipeline.

13.4 Affected Environment

13.4.1 Fire Protection and Emergency Services

The proposed project could place new demands on fire and emergency services. These new demands would be offset by measures included in the operation and design of the proposed project. Northwest Innovation Works, LLC – Kalama (NWIW) would conduct a process hazard

¹ The 12-county metro region includes seven counties in Washington (Cowlitz, Clark, Lewis, Pacific, Skamania, Thurston, and Wahkiakum) and five counties in Oregon (Clackamas, Columbia, Multnomah, Washington, and Yamhill).

analysis (PHA) to identify risks of unplanned releases of hazardous chemicals or fire during the methanol manufacturing process and to identify safety measures and protocol. The PHA would reduce the risks related to a chemical release or fire.

The proposed project would also provide process-specific on-site fire suppression and emergency response capabilities that would be augmented by Cowlitz County Fire District No. 5 and would not place substantial new demands on public fire protection. Therefore, the proposed project would not result in a significant adverse impact to fire protection and emergency service providers.

See Chapter 2 and Chapter 8 for details regarding the on-site fire suppression and emergency facilities.

13.4.2 Police

Law enforcement services for the project site would be provided primarily by the Cowlitz County Sheriff's Department (Cowlitz County 2015). Their office is located at 312 SW First Avenue in the City of Kelso and has 20 patrol deputies in 2013 (Washington State Auditor's Office 2013).

The existing marine terminals on nearby industrial sites along the Columbia River are subject to the Maritime Transportation Security Act (MTSA), which requires the development of port security programs. The Port of Kalama has a U.S. Coast Guard (USCG)-approved port security plan and security officer as required by MTSA (USCG 2015a). This security program supplements local police services in the port areas along the Columbia River. The Port contracts with a private firm to patrol the gate to each terminal while a ship is berthed and the terminal is always secured. The security staff implements the facility security plan if an incident occurs. All Port security contractors are trained, conduct regular drills, and conduct an annual security exercise. The security staff performs random patrols from 5 p.m. to 4 a.m. each day. Cameras cover all secured areas and record 24 hours a day (Port of Kalama 2015). Transportation Worker Identification Credentials (TWIC) are required for access to the secured areas of the port and individuals without TWIC credentials are escorted by authorized personnel. The USCG's Maritime Security (MARSEC) system is used to communicate threat levels and identify needs for greater security from the Port of Kalama and USCG during times when there is a credible threat affecting the Port or project site (USCG 2015b).

13.4.3 Water and Sewage

There is no existing water service to the project site. The nearest public water system is operated by the City of Kalama (City of Kalama 2007). The Port of Kalama would construct a collector well capable of delivering up to 6,600 gallons of non-potable water per minute to meet process water needs under an existing groundwater permit as part of the proposed project. Potable water for domestic uses would be supplied from a connection to the City of Kalama water system. Alternatively, the proposed project may receive potable water from the Port's water supply system rather than the City of Kalama. Water treatment would be provided on site if potable water is supplied by the Port.

The City of Kalama owns and operates a Group A public water system (Washington State Department of Health Identification No. 37550F) that services the City and a portion of unincorporated Cowlitz County. The water for the system is entirely supplied by the Kalama River. The City has a total storage capacity of 2.5 million gallons (MG) composed of a single 2.0-MG reservoir and 10 smaller reservoirs. The proposed project is located within the City's

“main pressure zone” served by the existing 2.0-MG reservoir. The City waterlines nearest to the proposed project are located in Tradewinds Road east of the project site and south of the site on the Steelcase site (City of Kalama 2007).

As of summer 2015, the City was updating its water system plan as required by the Washington State Department of Health. City representatives indicate that the system has sufficient supply and reservoir capacity to serve the water service area for six years and sufficient water rights for a 20-year period. In the baseline year (2014), 6-year planning period (2020), and 20-year planning period (2034), the City’s average day production is an estimated 845,000 gpd, 867,000 gpd, and 1.1 million gpd, respectively. The City anticipates supplementing its existing storage capacity for the main pressure zone serving downtown and the Port of Kalama in the 20-year timeframe by constructing another reservoir of 1.0-MG in addition to the existing 2.0-MG reservoir serving that zone. Treatment upgrades in the 20-year timeframe are expected to include adding a third filter to the City’s system (Gray and Osborne 2015).

There is currently no sewer service provided to the project site. The nearest wastewater treatment system is the Port of Kalama system. The Port’s system is a packaged wastewater treatment system with a design capacity of an average of 20,000 gpd (Gibbs and Olson 2015).

13.4.4 Economic Conditions in the Study Area

Workers for the proposed project are expected to live in Southwest Washington and the Portland-Vancouver-Hillsboro metropolitan statistical area (**Appendix M**). This area covers the major towns and cities within a less than 90-minute driving radius of the project site defined as the “regional economy” from which the proposed project would likely obtain nearly all of its employees.²

The local labor market has 1.4 million workers and an unemployment rate of 6.6 percent. Cowlitz County has a higher unemployment rate of 8.4 percent, suggesting a greater potential to supply workers for the proposed project. Unemployment rates in the 12-county regional economy range from 5.7 percent in Washington County, Oregon to 10.1 percent in Pacific County, Washington; these rates are shown in **Table 13-1** along with the size of the labor force.

Table 13-1. Labor Force Size and Unemployment Rate by County in Local Region, 2014 Annual Averages

County/State	Labor Force	Unemployment Rate
Cowlitz, WA	44,048	8.4%
Lewis, WA	31,011	9.2%
Thurston, WA	123,119	6.6%
Pacific, WA	8,056	10.1%
Wahkiakum, WA	1,359	9.9%
Clark, WA	208,909	7.9%
Skamania, WA	4,978	8.7%
Columbia, OR	22,639	8.4%

² The 12-county metro region includes seven Washington counties (Cowlitz, Clark, Lewis, Pacific, Skamania, Thurston, and Wahkiakum) and five Oregon counties (Clackamas, Columbia, Multnomah, Washington, and Yamhill).

County/State	Labor Force	Unemployment Rate
Multnomah, OR	420,520	6.1%
Washington, OR	293,632	5.7%
Clackamas, OR	200,522	6.3%
Yamhill, OR	50,300	6.6%
12-County Region	1,409,093	6.6%

Source: U.S. Bureau of Labor Statistics (BLS)

13.4.5 Related Actions

13.4.5.1 Fire Protection and Emergency Services

All portions of the proposed pipeline would be located within the jurisdiction of Cowlitz County Fire District No. 5 (Cowlitz Fire District No. 5 2015). That district would be the primary responder to incidents along the pipeline. Cowlitz 2 Fire and Rescue provides hazardous materials response capabilities along the pipeline route (Cowlitz 2 Fire & Rescue 2014).

13.5 Environmental Impacts

The following sections analyze the potential impacts to public services and utilities during the construction and operation of the proposed project, the No-Action Alternative, and the related actions.

13.5.1 Proposed Project Alternative

The Technology Alternatives and Marine Terminal Alternatives would each have the same construction and operational employment and would result in the same potential demands on public services and utilities. Therefore, this analysis does not differentiate between the either Technology Alternative and either Marine Terminal Alternative.

The economic and tax analysis focuses on the employment, income (including benefits), and economic output that would be generated in the region by the construction and operation of the proposed project. The Technology Alternatives and Marine Terminal Alternatives for the proposed project would have the same potential for economic and tax impacts for the construction and operation of the proposed project. The related actions (natural gas supply³, electrical service) are expected to have less than significant economic and tax impacts in the context of the overall scale of the methanol facility and are not analyzed in this chapter.

13.5.1.1 Construction Impacts

Public Services and Utilities

Construction of the proposed project would generate demands for fire, emergency, and police services. These demands would be typical of an industrial construction site. The construction site would be fenced and locked to prevent entry by unauthorized persons. Security fencing and patrols would continue to ensure safety and prevent unauthorized activities during the second

³ In their 2014 application to the FERC for the Kalama Project (the proposed pipeline) requesting a certificate of public convenience and necessity, Northwest Pipeline LLC noted that a socioeconomic analysis was not required for the Kalama Lateral Project due to the fact that significant aboveground facilities were not proposed.

phase of construction when the first methanol production line is operational. Construction personnel would follow all applicable state, federal, and local regulations with regard to fire prevention. The construction of the proposed project would not result in substantial new demands on existing fire, emergency, and police service providers with the proposed security measures.

The proposed project would generate modest water demand during the first phase of construction. The need would be temporary, lasting only during the first phase of construction. Demand would be typical of industrial construction projects and would be satisfied by a temporary connection to the City's system. The on-site collector well would provide water for construction purposes during the second phase of construction. Therefore, water demands would be minimal during construction and there would be no significant adverse impacts to public water systems.

No public sewage systems would be used during construction. Portable toilets would be used on site during construction. Therefore, there would be no significant adverse impacts to public sewage systems during construction.

Economic and Tax Impacts⁴

Project construction would begin in September 2016 and last 26 months until October 2018. Total direct, indirect, and induced construction costs are anticipated to be \$1.8 billion (2018 dollars).

Project construction would result in the creation of jobs and expenditures on goods and services and lead to related indirect and induced effects. Expenditures for vendors providing products and services to the construction site (direct purchases) in turn would result in these vendors increasing spending on goods and services that are inputs to their businesses. For example, construction companies that work on the proposed project may need to purchase additional heavy equipment (trucks, cranes, backhoes, etc.). This purchase by a directly affected business is an indirect effect of the proposed project. If the income of an employee of the heavy equipment company is increased by his work on the proposed project, and if that employee then purchases other goods and services in the region from the increased income, this would constitute an induced effect.

The vast majority (89.2 percent) of construction workers are expected to be available locally. Of the approximately \$1.8 billion of direct, indirect, and induced construction costs, \$467 million would be direct local spending on materials, equipment, fuel, fees and services; \$155 million direct spending on local labor, wages, and benefits; and \$3.9 million direct spending on labor per diems for transient workers, for a total of \$625.9 million of local direct impact. The total (direct, indirect, and induced) construction spending for the project is estimated at approximately \$1.6 billion for materials, equipment, fuel, fees, and services; \$173.8 million in total labor spending; \$3.9 million in labor per diems for transient workers; and \$47.5 million in sales taxes.

Of the \$1.8 billion in construction costs, there is projected to be a total (direct, indirect, and induced) of \$289.5 million of local labor income impacts associated with the creation of 3,519 total jobs resulting from the project. Total local direct, indirect, and induced economic impacts were estimated by ECONorthwest to be approximately \$1.1 billion (**Table 13-2**).

⁴ All economic and fiscal figures cited in this section are from **Appendix M**.

Table 13-2. Local Economic Impacts of KMMEF Plant Construction

Impact	Employment (Job-Years)	Local Income and Benefits (Million 2018\$)	Local Economic Output (Million 2018\$)
Direct	1,001	\$158.9	\$625.9
Indirect	1,129	\$65.6	\$203.4
Induced	1,389	\$65.0	\$188.1
Total	3,519	\$289.5	\$1,017.3

Note: A job-year is the total number of jobs in each month in each year divided by 12 months.

Source: ECONorthwest 2015

In addition to local economic impacts during construction, the state, Cowlitz County, and taxing jurisdictions within the County would be positively impacted through payment of business and occupation (B&O), and sales taxes by NWIW. Construction of the facility would be subject to a 0.471 percent B&O tax based on the value of construction less sales taxes and would also be subject to a 1.50 percent B&O tax on engineering and architectural services. ECONorthwest estimates that the project would generate \$7.97 million in B&O tax revenue from the value of construction and another \$900,000 from engineering and architectural services.

NWIW would pay sales and use tax on the value of construction minus some exemptions, such as the value of reused goods and concrete-forming lumber. Washington imposes a 6.5 percent sales and use tax and Cowlitz County has a 1.2 percent sales and use tax. As a high unemployment county, qualified machinery, equipment, and buildings are also exempt from sales and use tax in Cowlitz County. ECONorthwest estimates that \$40.1 million of sales tax would be paid to the state, and \$7.4 million to Cowlitz County for construction of the methanol plant. Another \$229,347 would accrue to Cowlitz County and \$1.2 million to the state for the construction of the dock which is estimated to cost \$19.1 million. Total sales tax receipts to the state and County from the construction of the plant and dock are estimated at \$48.9 million (**Table 13-3**).

Combining sales and use and B&O taxes, during construction, the proposed project would pay \$57.7 million in taxes to the state and the County.

Table 13-3. Estimated Tax Revenues from Construction of the Proposed Project Alternative (millions of 2018\$)

Taxes	Amount
Sales and Use Taxes	\$48.9
Business and Occupation Tax	\$8.87
Total	\$57.7

Source: ECONorthwest, 2015

13.5.1.2 Operational Impacts

Fire Protection and Emergency Services

The proposed project could place new demands on fire and emergency services during its operation. These new demands would be offset by measures included in the operation and design of the proposed project. Additional discussion of the response to spills, fires, and other incidents at the proposed project or during vessel transport, and an assessment of potential impacts, is provided in Chapter 8, Environmental Health and Safety.

Police

The proposed project would introduce a new port industrial use and may place new demands on police services. Police services would be provided primarily by the Cowlitz County Sheriff's Department. Police services would also be supplemented through compliance with the requirements of the MTSA for the proposed marine terminal, private security for the upland methanol production facility, and compliance with the U.S. Department of Homeland Security Chemical Facility Anti-Terrorism Standards (CFATS).

The Port of Kalama has a port security plan and security officer as required by MTSA (USCG 2015a). The Port would complete a vulnerability assessment to update its security plan for the proposed marine terminal in compliance with MTSA prior to the start of facility operations. The assessment may include recommendations for the security of personnel and cargo, structural integrity, protection systems, procedural policies, communication systems, transportation infrastructure, utilities, and contingency response. The proposed marine terminal would require TWIC access and would be gated to prevent entry by unauthorized persons.

The upland methanol production facility would be secured with a perimeter fence and entry gate with security guards and would employ a private security contractor. Employees would be required to obtain a TWIC and there would be security cameras throughout the facility. The Cowlitz County Sheriff's Department would be notified of any security risks such as bomb threats, unauthorized access attempts, hazmat incidents or any other security risks (NWIW 2015).

Water and Sewage

The proposed project would require water for the methanol production process and for typical domestic water demands. Domestic water needs would be accommodated by the City's water system, while process water needs would be met by the Port's proposed collector well. The proposed collector well would provide up to 6,600 gallons of non-potable water per minute, or approximately 8 to 9 MG per day. The proposed project would require approximately 5.2 MG per day of process water. Therefore, the proposed collector well would meet all of the process water demands for the proposed project and there would be no demands on or connection to a public system for process water.

Domestic water needs would be served via a connection to the City of Kalama's water system. If necessary, water treatment could be added by the Port to serve as a secondary source or replacement for the City of Kalama's potable water system. The project proponent would construct an extension of Kalama's water line to service the property and supply the domestic water needs of the project. The project proponent estimates domestic water use at 5,600 gpd based on the estimated 192 full-time employees at the facility. The City would be able to serve the 5,600 gpd of projected domestic use by the proposed project, as verified in a letter from the City of Kalama Public Works Department dated March 25, 2015 (City of Kalama 2015; see

Appendix L). The proposed project's domestic water usage would represent approximately 0.6 percent of the City of Kalama water system's average day production in 2020. Therefore, the proposed project would not result in significant adverse impacts on the City of Kalama's water system.

Domestic wastewater from the project would be treated by the Port's existing wastewater treatment system. The Port's wastewater treatment system can accommodate the domestic wastewater flows from the proposed project. The Port's wastewater treatment system is designed to accommodate a flow of 20,000 gpd and is currently operating at approximately 3,300 gpd, or 16 percent of capacity. The proposed project is expected to generate an additional 2,200 gpd in demand, which would bring the total wastewater treatment to 5,500 gpd, or 28 percent of capacity (Gibbs and Olson 2015).

Process wastewater from the methanol production process would be treated onsite in the proposed project's wastewater treatment system and would not impact Port or municipal wastewater systems.

Overall, the proposed project would not result in significant adverse impacts to public water or sewer facilities.

Economic and Tax Impacts

The proposed project operations would result in three categories of economic and tax impacts during operation: (1) economic impacts, (2) land lease/dock fee revenues to the Port of Kalama, and (3) tax revenues to state and local governments.

The proposed facility would have the capacity to produce 3.65 million tonnes of methanol per year and would be assumed to operate at 92 percent capacity. The facility would produce 3.358 million metric tonnes of methanol for export each year of operation. ECONorthwest estimated that the U.S. export price of methanol in 2018 would be \$383 per tonne. The plant would have annual direct economic output of \$1.286 billion. The facility would employ 192 full-time workers with a payroll of \$21 million per year. Annual operating expenses including electricity and water utility services, machinery, maintenance, and overhead costs are estimated at \$37.2 million (**Appendix L**).

The ECONorthwest analysis estimated local economic impacts in terms of jobs and wages based primarily on payroll and operating expenses. Employees would be expected to spend most of their estimated \$21 million in wages in the 12-county region. These direct payments to employees, direct purchases of operating inputs (e.g., machinery, maintenance services, and overhead costs), and direct plant output from the local area would result in total (direct, indirect and induced) impacts to the local economy of approximately \$1.4 billion annually. In addition to the 192 direct jobs, there would be 258 indirect, and 218 induced jobs supported in a typical operating year, for a total of 668 jobs associated with the facility (**Table 13-4**).

**Table 13-4. Annual Local Economic Impacts of KMMEF
Plant Operations (millions of 2018 \$)**

Impact	Employment	Local Labor Income and Benefits	Local Economic Output
Direct	192	\$21.0	\$1,286.3
Indirect	258	\$16.1	\$42.6
Induced	218	\$10.7	\$30.3
Total	668	\$47.8	\$1,359.2

Source: ECONorthwest, 2015

Wages are estimated to average approximately \$71,000 per year, roughly \$5,000 higher than a living wage for a family of four in Longview, \$10,000 above Cowlitz County’s median family income, and \$24,000 higher than the median annual wage in the county.

Five primary tax revenue streams apply to the proposed project during operation: B&O taxes, sales and use tax, leasehold taxes, hazardous substance taxes, and property taxes. B&O and sales tax revenues would accrue to the state and a portion of sales tax proceeds would accrue to Cowlitz County.

Washington imposes a B&O tax on methanol plant production equal to 0.484 percent of the wholesale value of production. Annual B&O tax estimates from methanol production would fall in the range of \$4.98 million to \$6.23 million annually, depending on adjustments for annual output in a given year. The state does not impose sales and use taxes on goods manufactured in the state and exported to other states or countries; therefore the facility would not pay sales tax for methanol production that is exported. However, the facility is expected to pay sales and use taxes for supplies, fuel (natural gas consumed at the plant for energy), and maintenance services. The analysis estimates that annual sales and use taxes during the operation of the proposed methanol manufacturing facility would be approximately \$1.18 million to Cowlitz County and \$6.41 million to Washington State, for a total of approximately \$7.59 million (**Table 13-5**).

Leasehold taxes apply when property is leased from a governmental owner, such as the Port of Kalama, in lieu of property taxes on the land. Leasehold excise taxes on the subject property would total \$197,754 per year, half of which (\$98,877) goes to local government.

Hazardous substance taxes for methanol are 0.7 percent of the value of methanol production, for which the analysis estimates the tax would total about \$9 million a year.

Property taxes are paid on the entire value of “real property” or all affixed industrial equipment. NWIW would lease the land and no taxes would be due on the land itself (except for the leasehold tax described above). The fiscal impact analysis assumed that the cost to construct (\$1.8 billion) is a reasonable estimate of the true and fair market value of buildings and equipment on which property taxes would be based (ECONorthwest 2015). **Table 13-5** shows the projected property tax revenues from the proposed project in the first year and tenth year of operations. Because the value of buildings and equipment depreciates over time, resulting in lower property taxes as equipment and buildings age, two estimates are provided – Year 1 and Year 10. Equipment additions and replacements would add to the taxable property, but it is uncertain to what degree and has not been included in the estimate. The proposed project would result in approximately \$16.47 million of property tax revenues to the various taxing

jurisdictions in the first year of operation and an estimated \$9.3 million in the tenth operational year.

The addition of the proposed methanol manufacturing facility to the tax rolls in Cowlitz County represents an 18 percent increase over existing County tax revenues. Because the addition of the proposed methanol manufacturing facility would represent more than a one percent increase in a single year, levy rates for schools, which are voted on by the public, may decline, thereby lowering taxes for other taxable property holders. ECONorthwest estimates that levy rates for state schools and the Kalama School District would decline resulting in tax revenue from the methanol manufacturing facility decreasing from \$9.29 million to \$8.20 million in the tenth year of operation (**Table 13-5**).

The proposed methanol manufacturing facility is expected to pay approximately \$4.9 million annually in dock fees and land leases to the Port of Kalama. Revenue from these sources can be reinvested by the Port to pay for infrastructure and other operations, and to help attract industrial tenants and jobs to Kalama and Cowlitz County. As noted above, the Port of Kalama does not collect property taxes from residents, as all expenses are paid through operating revenue. The land lease and dock fee revenue paid by the proposed facility would contribute to operating revenue, and would support the Port’s ongoing practice of not collecting property taxes from residents.

Table 13-5. Estimated Annual Tax Revenues Generated by Operations at Full Buildout – Proposed Project Action (2018\$)

Tax Type	Amount (Millions of 2018\$)
Sales and Use	\$7.59
Business and Occupation	\$4.98 - \$6.23
Leasehold	\$0.20
Hazardous Substance	\$9.0
Property Year 1	\$16.47
Property Year 10 (no levy decrease)	\$9.29
Property Year 10 (decreased levy rates)	\$8.20
Land Lease/Dock Fee Revenues	\$4.90
Total Taxes Year 1	\$43.14 - \$44.39
Total Taxes Year 10 (no levy decrease)	\$35.96 - \$37.21
Total Taxes Year 10 (decreased levy rates)	\$34.87 - \$36.12

Source: ECONorthwest 2015

Note: Assumes property levy rates stay the same in the first and tenth year

In total, the facility is estimated to pay \$43.14 - \$44.39 million in taxes to the state and County in the first year of operation, \$35.96 - \$37.21 million during the tenth year of operation if levy rates remain unchanged, and \$34.87 - \$36.12 million of operation if school levy rates decrease. Levy rates in each year would vary depending on the B&O tax paid in a given year based on plant output.

13.5.2 Related Actions

13.5.2.1 Construction Impacts

Kalama Lateral Project

Northwest estimates a staff of approximately 75 construction personnel and 12 construction inspectors would be required during peak construction activities for the proposed pipeline. Construction is expected to require five months (FERC 2015).

Utility line trenching and construction are common construction activities in Cowlitz County. The proposed pipeline would be constructed in accordance with U.S. Department of Transportation (DOT) regulations in Title 49 CFR Part 192, Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards; by 18 CFR 380.15, Siting and Maintenance Requirements; and by other applicable federal and state safety regulations. Construction of the proposed pipeline would not generate substantial new demands for water or sewer services. Overall, construction of the proposed pipeline would not result in significant adverse impacts on public services and utilities.

13.5.2.2 Operational Impacts

Kalama Lateral Project

The proposed pipeline would transport natural gas to the project site. The transportation of natural gas by pipeline involves some incremental risk to the public due to the potential for accidental release of natural gas. The greatest hazard is a fire or explosion following a major pipeline rupture. The proposed pipeline would be designed, constructed, operated, and maintained in accordance with the DOT Minimum Federal Safety Standards in 49 CFR 192. The regulations are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures. Detailed discussion regarding the operational impacts of the proposed pipeline are described in Chapter 8.

Operation of the proposed pipeline would not place new demands on water and sewer systems or fire and emergency services. The proposed pipeline would not result in significant adverse impacts to public services and utilities.

13.5.3 No-Action Alternative

The proposed project would not be constructed on the project site under the No-Action Alternative. However, it is anticipated that the Port would pursue future industrial or marine terminal development at the North Port site, consistent with the Port's Comprehensive Scheme for Harbor Improvements. Should the project site be developed with another port industrial use, it would generate demand for police, fire, water, sewer, and emergency services during construction and operation. The types of demand on these services would depend on the specific type of industrial project. Construction impacts from an alternative industrial use would be expected to be similar. Operational impacts from an alternative industrial use would depend on the specific use.

13.6 Mitigation Measures

13.6.1 Project Mitigation

The design features and best management practices the Applicant proposes to avoid or minimize environmental impacts during construction and operations and those required by agency standards or permits are assumed to be part of the Project and have been considered in

assessing the environmental impacts to public service and utility resources. The avoidance and minimization measures to reduce potential risks from fires and explosions from the proposed project and related actions are provided in Chapter 8.

13.6.2 Additional Mitigation

There are no significant adverse impacts identified for public service and utility resources; therefore, no additional mitigation measures are identified.

13.7 References

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