Northwest Innovation Works LLC and the Port of Kalama propose to develop and operate a natural gas-to-methanol production plant and storage facilities, and a new marine terminal, in the Port of Kalama.

The project objective is the manufacture and shipment of methanol to global markets for use as a feedstock for olefins used in manufacturing.

The objective of the marine terminal is to support the methanol production facility by providing cost-efficient access to global markets.
Steps for a State Environmental Policy Act (SEPA) Environmental Impact Statement (EIS)

**Public Scoping Period**

**Public Input**

Agencies, affected tribes, and the public are asked to help identify what the Draft EIS should analyze

**Current Stage**

**Data Collection and Analysis**

- Document existing conditions
- Develop environmental analysis and methodology
- Identify alternatives

**Draft EIS**

**The Draft EIS includes:**

- Description of proposal
- Existing conditions
- Alternatives
- Potential impacts
- Mitigation measures

**Final EIS**

**The Final EIS is used in Decision Making**

The Final EIS responds to comments and is used to inform permitting decisions

**Comments on Draft EIS**

- Provide comments via website, mail or meetings
- The Draft EIS will be available for review and comment

**Final EIS**

**Public Input**

**Scoping and the EIS**

- Public input is a key part of developing an EIS.
- Scoping is the first step in the SEPA process; it is used to identify potential issues to be studied in the EIS.
- Public input is solicited to identify potentially impacted environmental resources, alternatives, and measures to offset impacts.
- Lead agencies will consider the scoping comments and decide the scope of what the EIS will evaluate.

**SEPA Overview**

**KALAMA SEPA**

Manufacturing & Marine Export Facility

kalama.mfgfacilitysepa.com

**Lead Agencies:** Port of Kalama (Nominal Lead) and Cowlitz County

**Determination of Significance**

**Applicant’s Proposal**

**Responsible Officials:**

Ann Farr, Port of Kalama | Elaine Placido, Cowlitz County

For more information:

email: SEPA@KalamaMfgFacilitySEPA.com | phone: (360) 673-2390 | www.KalamaMfgFacilitySEPA.com
State Environmental Policy Act
Environmental Impact Statement

Areas of Analysis

• Earth
  • Geology and Soils
  • Seismic Events
• Air Emissions
• Water Quantity and Quality
• Plants and Animals
  • Terrestrial Species
  • Aquatic Species
• Energy and Natural Resources
• Environmental Health
  • Noise
  • Potential Releases of Toxic or Hazardous Materials
  • Emergency Response

• Land Use
  • Zoning and Comprehensive Plan Consistency
  • Parks and Recreation
  • Light and Glare
  • Aesthetics
  • Archaeological Resources
• Transportation
  • Vehicle Traffic
  • Waterborne Traffic
• Public Services and Utilities
The Methanol Manufacturing Process

Natural Gas from Pipeline

Treatment and Purification

Purified Natural Gas

Synthesis Gas Generation Process

Synthesis Gas

Distillation

Raw Methanol Product

Catalytic Conversion

Pure Methanol for Export

Methanol Production

What is Methanol?

- Manufactured and natural compound used for a variety of industrial and manufacturing purposes
- Also known as methyl alcohol or wood alcohol; is the simplest of all alcohols
- Chemical formula CH$_3$OH - Light, colorless flammable liquid
- Biodegradable and non-carcinogenic
- Harmful if ingested or inhaled and can be absorbed through the skin
- Stored and handled at atmospheric pressure and ambient temperature
- For more information see the Material and Safety Data Sheet BDH-130

How is Methanol Produced?

- Can be produced from anything that is or was a plant including coal, oil or natural gas
- Making pure methanol from natural gas follows this general process:
  - Synthesis Gas Generation: Combine natural gas with steam and heat to produce a synthesis gas of carbon monoxide, carbon dioxide and hydrogen
  - Catalytic Conversion: Use a catalyst to create a chemical reaction
  - Distillation: Distill the resulting liquid to yield 99 percent pure methanol and 1 percent water
- Approximately 70% of the natural gas will be converted to methanol. The remainder of the natural gas will be consumed during the production process as a fuel source.
Project Information

**Project Characteristics, Phases, and Product**

- Two phases will be developed, each capable of producing 5,000 metric tonnes of methanol per day (capacity of 3.6 million metric tonnes per year).
- Finished product will be stored in non-pressurized storage tanks with a total capacity of approximately 200,000 metric tonnes surrounded by a containment area.
- Finished product will be transferred by pipeline from storage to a new deep draft marine terminal on the Columbia River.
- Water will be purchased from the Port of Kalama under its existing water rights.
- Domestic wastewater from plant will be directed to the Port of Kalama wastewater treatment plant; process wastewater will be treated on-site and discharged to the Columbia River consistent with state water quality regulations and permits to be obtained for the project.
- Stormwater and process waste water will be collected, treated and disposed of consistent with state and federal requirements.
Permitting 2014-2015
• Preliminary engineering
• Prepare permit applications
• Prepare EIS
• Obtain permits

Phase 1 Construction 2015-2017
• Complete engineering
• Complete Phase 1 construction:
  • 1st methanol manufacturing area, marine terminal, and support facilities complete
  • Phase 1 begins operation

Phase 2 Construction 2017-2019
• Complete Phase 2 construction:
  • 2nd methanol manufacturing area and all support facilities complete
  • Phase 2 begins operation

Operations 2017-2040
• Phase 1 and Phase 2 complete and operational

Responsible Officials: Ann Farr, Port of Kalama | Elaine Placido, Cowlitz County
For more information: email: SEPA@KalamaMfgFacilitySEPA.com | phone: (360) 673-2390 | www.KalamaMfgFacilitySEPA.com
Marine Terminal

Marine Terminal and In-water Activities

- A new marine terminal will be constructed; construction activities include the construction of a new concrete dock and dredging to accommodate deep draft vessels.
- Anticipated ship traffic of 3 to 6 ships per month.
- Terminal will be available for general port activities and as a lay berth when not in use for methanol shipment.
Air, Noise, and Water

Air Emissions, Noise Assessment, and Water Discharge

- Air emissions will be primarily from the combustion of natural gas.
- The project will require a pre-construction permit and an operating permit that will limit emissions and require controls.
- Preliminary emission levels indicate the need for a Prevention of Significant Deterioration Permit.
- Noise from project equipment and manufacturing process will be assessed.
- The project will require a National Pollutant Discharge Elimination System (NPDES) Wastewater Discharge Permit and Construction Stormwater Permit.
- Water will be purchased from the Port of Kalama under its existing water rights.
- Domestic wastewater from the plant will be directed to the Port of Kalama Wastewater Treatment Plant.
### Preliminary List of Permits Needed:

<table>
<thead>
<tr>
<th>Permit / Authorization</th>
<th>Agency</th>
</tr>
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<tbody>
<tr>
<td><strong>Federal</strong></td>
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<tr>
<td>Rivers &amp; Harbors Act Section 10 / Clean Water Act Section 404 and Section 408</td>
<td>United States Army Corps of Engineers (USACE)</td>
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<tr>
<td>Endangered Species Act Section 7 Consultation</td>
<td>National Oceanic and Atmospheric Administration (NOAA) Fisheries/US Fish and Wildlife Service</td>
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<td>Marine Mammal Protection Act</td>
<td>NOAA Fisheries</td>
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<tr>
<td>National Environmental Policy Act</td>
<td>USACE, NOAA Fisheries</td>
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<tr>
<td>Private Aids to Navigation Permit</td>
<td>United States Coast Guard</td>
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<tr>
<td>Section 106 of the National Historic Preservation Act</td>
<td>USACE</td>
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<tr>
<td><strong>State</strong></td>
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<tr>
<td>Hydraulic Project Approval</td>
<td>Washington Department of Fish and Wildlife</td>
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<tr>
<td>Shoreline Conditional Use Permit</td>
<td>Washington Department of Ecology (Ecology)</td>
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<td>401 Water Quality Certification</td>
<td>Ecology</td>
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<td>Air Containment Discharge Permit</td>
<td>Southwest Clean Air Agency/Ecology</td>
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<tr>
<td>State Environmental Policy Act</td>
<td>Port of Kalama and Cowlitz County (County)</td>
</tr>
<tr>
<td><strong>Local</strong></td>
<td></td>
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<tr>
<td>Shoreline Substantial Development and Conditional Use Permit</td>
<td>County</td>
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<tr>
<td>Critical Areas</td>
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<tr>
<td>Floodplain Permit</td>
<td>County</td>
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<tr>
<td>Engineering and Grading</td>
<td>County</td>
</tr>
<tr>
<td>Building, Mechanical, Fire, etc.</td>
<td>County</td>
</tr>
</tbody>
</table>

### Land Use and Permits

#### Land Use and Permitting

- Site Owner: Port of Kalama
- Site Size: ±90 acres
- Comprehensive Plan Designation: Heavy Industrial
- Shoreline Designation: Urban (which allows industrial uses)
- Zoning: Site is Unzoned
- Permits required at the state, local, and federal level
Kalama Lateral Pipeline Project

Pipeline Project and Process

• The Kalama Lateral Pipeline will be constructed by Northwest Pipeline GP and will consist of a 3.1-mile, 24-inch diameter pipeline in a new 50-foot permanent right-of-way.
• Lateral pipeline will connect the proposed facility to the existing natural gas mainline.
• Lateral pipeline is undergoing a separate permitting process under Federal Energy Regulatory Commission jurisdiction but will be assessed in the Environmental Impact Statement.
• For more information or questions about the Kalama Pipeline Project
  • Visit: www.kalamapipeline.com
  • Email: KalamaPipeline@Williams.com
  • Phone: 1-888-892-8904
Health and Safety Provisions

- The proposed facility will be operated in compliance with all regulatory requirements, including applicable fire, health, and safety codes.
- Safety design features
  - Fire suppression systems
  - Fire safety equipment
  - Flare system
  - Floating roof storage tanks within spill containment areas
  - Modern plant systems
- The project will include a comprehensive fire suppression system and a detailed emergency response plan.