

**CITY OF TACOMA PLANNING AND DEVELOPMENT SERVICES
ENVIRONMENTAL IMPACT STATEMENT
DRAFT SCOPE OF WORK FOR**

**NORTHWEST INNOVATION WORKS PROPOSED
NATURAL GAS TO METHANOL PRODUCTION PLANT
AND EXPORT FACILITY**

February 5, 2016

TABLE OF CONTENTS

1. Introduction.....	1
2. Proposal Description	1
2.1 Proposal.....	1
2.2 Permitting	3
3. Proposal Context.....	3
4. Alternatives	3
5. Air Quality.....	3
6. Environmental Health and Safety.....	7
6.1 Emergency Response.....	7
6.2 Worker and Resident Health and Safety	8
6.3 Industrial Facilities Proximate to the Site	8
7. Water Resources	8
7.1 Water Supply	8
7.2 Wastewater	9
7.3 Stormwater	10
7.4 Groundwater.....	10
8. Land and Shoreline Use	10
9. Transportation.....	11
10. Public Services and Utilities.....	11
11. Earth, Geology, and Soils	11
12. Plants and Animals	12
12.1 Terrestrial Wildlife	12
12.2 Terrestrial Vegetation.....	12

12.3 Aquatic Species..... 12

13. Historic and Cultural Preservation..... 13

14. Socio-Economic Impacts 13

15. Cumulative Environmental Impacts 13

16. Other Environmental Review Documents..... 14

17. Conclusion 14

Appendix 1 Summary of Scoping Comments (Scoping Report)

DRAFT

1. Introduction

City of Tacoma Planning and Development Services is overseeing preparation of an environmental impact statement under the State Environmental Policy Act, Ch. 43.21C RCW ("SEPA"), for Northwest Innovation Works Tacoma, LLC ("NWIW") proposed natural gas to methanol production plant and export facility. An EIS is designed to provide an impartial discussion of probable significant adverse environmental impacts, reasonable alternatives, and mitigation measures that would avoid or minimize adverse impacts. Scoping is utilized before a draft document is prepared to identify the central issues the EIS will focus on.

To inform EIS scope, the City is holding three public scoping meetings, on January 21, February 10, and February 16, 2016, and is accepting scoping comments through March 4, 2016. Over 700 people attended the January 21 meeting. In addition to the testimony presented at the meeting, over 700 written comments have been submitted to date. Those comments are summarized at Appendix 1, and have informed development of this initial scoping document.

Based on the questions and concerns raised in public comment to date on the likely scope of the proposal's significant impacts, the EIS will need to address all elements of the environment, as outlined in SEPA regulations (WAC 197-11-444). Also, questions were raised on the degree to which the EIS should address off-site impacts, given the project relies on piped in out-of-state natural gas, which will be converted to another material on site, which will then be shipped overseas. Given these facts, impacts are not isolated at the site, so off-site impacts must be addressed. Also, the proponent is currently pursuing two other methanol plants in Washington and Oregon, which underscores the need for the EIS to consider cumulative impacts. The EIS will utilize a "tiered" analysis so that those impacts most directly caused by the project receive the more detailed analysis, with those impacts outside the region and more attenuated, being acknowledged, but not receiving the same level of scrutiny.

2. Proposal Description

2.1 Proposal

NWIW, a business venture formed with funding from the Chinese government and British Petroleum, has proposed to develop and operate a natural gas-to-methanol product plant and export facility on approximately 125 acres leased from the Port of Tacoma. The project location is on the Blair-Hylebos Peninsula, Port of Tacoma, 3400 Taylor Way, Tacoma.

The project is designed to manufacture and ship methanol to global markets for use as feedstock for manufacturing olefins.¹ Olefins are petrochemicals used in manufacturing plastics.

¹ The City understands Xizhong Island Petrochemical Park in Dalian, China has signed agreements committing to purchase methanol from NWIW's three projects.

The plant is one of the three NWIW is proposing in Washington (at Kalama and Tacoma) and Oregon (at Clatskanie).² Combined, these three plants would produce about 14.4 million metric tons of methanol annually, which exceeds the 6.5 million metric tons annually produced nationwide in the U.S. through a handful of currently operating methanol facilities.³ This is a major project, with the Tacoma facility alone being described as a multi-billion dollar investment.

The Tacoma plant is slated to include up to four methanol production lines, each with a production capacity of 5,000 metric tons per day, for a total of 20,000 metric tons per day. The plant will also include ancillary elements such as an administrative and lab building, employee parking, access roadways, fire suppression facilities, air separation units, air storage, water storage and treatment facilities, wastewater treatment facilities, cooling towers, a flare system for the disposal of flammable gases and vapors, substations, and emergency generators.

Natural gas will be delivered to the methanol plant via a new lateral pipeline, which will transmit odorized gas. Northwest Pipeline GP will be responsible for obtaining permits and constructing this lateral pipeline. The lateral pipeline will connect the existing regional pipeline to the project site over an approximately 10-mile corridor through unincorporated Pierce County, the Puyallup Tribe of Indians Reservation, and the cities of Sumner, Puyallup, Fife, Tacoma, and potentially others. Separately, Northwest Pipeline GP is pursuing expansion of its regional pipeline between Sumas and Longview, Washington, which is being permitted through the Federal Energy Regulatory Commission. NWIW anticipates using natural gas distribution capacity that will be provided by that portion of the Northwest Pipeline regional expansion project between Sumas and Tacoma.

The plant's anticipated yearly production at full capacity is approximately 7.2 million metric tons of methanol.⁴ Up to approximately 300,000 metric tons of methanol will be stored in storage tanks at atmospheric pressure and ambient temperature and surrounded by secondary containment. Storage tanks will be co-located with plant components, as well as on approximately 15 acres of land adjacent to or in close proximity to the main 110-acre plant site. Methanol product will be transferred by pipeline across Port property from the storage area to the Port's existing deep draft marine terminal on the Blair Waterway. Roadway improvements to access that terminal may be necessary. NWIW anticipates loading between four and seven ships per month depending on vessel size. The Port will be responsible for obtaining permits for modifications to the dock, as well as localized dredging, if necessary, in the vicinity of the berth.

² The applicant has indicated that additional plants may be proposed in future and the plants currently proposed may be expanded.

³ China produces about 45 million tons of methanol each year. Cheap natural gas is reviving the U.S. industry. The EIS will need to verify these figures and correct them as needed.

⁴ Maximum output may need to be adjusted upwards as $20,000 \times 365 = 7.3$ million.

2.2 Permitting

Commenters asked that the EIS identify all City permits required and who the decision makers are for each step of the permitting process. The EIS will do so, along with noting required federal and state permits.

3. Proposal Context

Commenters requested that the EIS review what methanol production facilities have been constructed worldwide since the 1960s and all methanol production facilities in the United States. Further, commenters asked what facilities are still in operation, what their conditions are, and what the employment counts are. Commenters requested that the EIS provide details about NWIW, including if NWIW operates other methanol plants elsewhere, the capacity of those facilities, and how long the plants have been online. The applicant is presently pursuing permits for two other facilities within the Pacific Northwest. As requested, the EIS will provide background information on the methanol industry and applicant.

4. Alternatives

SEPA requires an EIS to assess probable, significant, adverse impacts associated with the proposed action, no-action, and a reasonable range of alternatives. As this proposal is properly viewed as a public project for purposes of SEPA review given the presence of government funding and Port of Tacoma property ownership, off-site alternatives will be developed and assessed. Possible alternatives to consider include:

- The proposal;
- No action;
- Alternative uses of the site which present reduced environmental impacts;
- Other locations for the project; and,
- Alternatives to the proposed approach to plastics production which present reduced environmental impacts, such as recycling or producing plastics in-state.

During the remainder of this scoping process and during EIS development, these alternatives will be revised and other alternatives considered for EIS inclusion.

5. Air Quality

The EIS will evaluate air pollution impacts. Public comment emphasized the need to evaluate the direct, indirect, and cumulative impacts of air pollution in the area near the proposed project as well as in the City of Tacoma and the Puget Sound region. The analysis will consider proposal impacts in conjunction with existing conditions. Emissions considered will include

those associated with increased shipping and ground transportation, gas line transport, and how those activities would contribute to air pollution and increased particulate matter. However, the analysis will be tiered, meaning that impacts at the site and its immediate environs, within U.S. territorial waters, and within the Puget Sound region, will be given the most attention.

Commenters referenced the United States Environmental Protection Agency's list of Hazardous Air Pollutants, which establishes workplace and emission standards for such substances. Commenters requested that the EIS identify all hazardous substances and the projected levels to be released at the proposed facility, even if found to be at or below minimum levels. Additionally, commenters requested that the EIS identify any non-regulated substances that may be released at the proposed facility that may constitute a nuisance.

The EIS analysis will identify the required air permits and federal, state, and local air emission requirements. Commenters requested that the degree of the Port of Tacoma's present compliance with regulatory requirements and existing conditions be considered.⁵ The EIS will do so. In addition, mitigation measures will be identified, such as emission reduction mechanisms and continuous air quality monitoring to ensure compliance.

Public comment identified greenhouse gas emissions as an air emission of particular concern given the climate change challenges the Pacific Northwest is facing.⁶ This is an issue the state, nation, and other countries are just beginning to address, given concerns that without concerted action, emissions will reach dangerous levels which threaten human health and safety.

Washington has proposed greenhouse gas emission rules, and the EIS will need to assess whether the project will be able to comply with those rules. The EIS will also need to consider consistency with international agreements (*e.g.*, the Paris climate change agreement along with U.S. agreements with other countries, including China); state laws such as Ch. 70.235 RCW; and other state and locally adopted policies, including the City of Tacoma's Climate Action Plan and Puget Sound Regional Council's Vision 2040.

To understand the proposal's greenhouse gas ramifications, an assessment must be made which encompasses the entirety of the proposal, as conceived from beginning to end. However, although the EIS will recognize each stage of the project, the EIS will not be designed to disclose every molecule of impact or capture every emission. That is an inefficient use of resources.

⁵ Given Tacoma's history with air emissions, residents are particularly concerned about new large-scale facilities with air emission impacts. The now defunct Asarco facility was referenced as an example.

⁶ *See e.g., State of Knowledge: Climate Change in Puget Sound*, The Climate Impacts Group, University of Washington (November, 2015); *Washington Greenhouse Gas Emission Reduction Limits: Report Prepared Under RCW 70.235.040*, Washington Dept. of Ecology, Pub. No. 14-01-006 (December, 2014), p. v ("Washington is experiencing long-term impacts consistent with what is expected as a result of climate change. The sea level is rising on most of Washington's coast, ocean acidification has increased, and there is long-term warming. Glaciers and spring snowpack have declined and the timing of stream flows has changed for many revisions. And, climate extremes like floods, droughts, fires and landslides are already affecting Washington's economy and environment.")

Rather, the EIS is to provide an adequate disclosure of the likely probable, significant adverse impacts stemming from or proximately caused by the proposal. As such, while the complete context for the project must be acknowledged, the EIS is not designed to consider in detail the portions of the proposal which lay on the outer edges of causation. So, for example, an analysis of natural gas extraction techniques and transportation on one end, and plastics production on the other, is not necessary and will not be include in the EIS. But, as the project is tied to those actions, those ties must be acknowledged.⁷

As noted above, the complete range of steps involved in the project will receive differing levels of analysis. The full range of steps include local steps of obtaining natural gas, local piping of the gas, converting the gas to methanol, transporting the methanol locally, and product end use. Detailed levels of analysis for the steps associated with local project construction and on-site manufacturing and operation will be included in the EIS with indirect impacts acknowledged in the EIS. In summary, these are the impacts arising from:

- Project construction;
- Natural gas extraction and transport;
- On site manufacturing;⁸
- Local methanol transport following manufacture; and,
- Methanol end use.

To adequately disclose significant impacts, each phase must be considered or at least acknowledged, although the level of analysis will depend on the strength of the causal connection, proximity to local environs and direct connection to the construction and operation of the proposed facility. Normal methanol production includes emissions of nonmethane hydrocarbons, carbon monoxide, carbon dioxide, nitrogen oxides, volatile organic compounds, sulfur oxides, and particulate matter.⁹ Liquid natural gas extraction and transportation also have emissions, including methane which leaks from natural gas oil wells, pipelines, and storage. Methane is an emission of particular concern, given its high heat trapping properties as a

⁷ Supplemental direction on the approach to the analysis will be provided following additional review and comment. Also, the EIS will consider the degree to which each stage of product development has already been accounted for and mitigated, which may help simplify the analysis.

⁸ The applicant has stated 70% of natural gas will be converted to methanol, while the remainder will be combusted to produce energy for the chemical processes. Emissions associated with this combustion process will need to be disclosed.

⁹ These EIS will verify and disclose the emissions from methanol production.

greenhouse gas.¹⁰ These types of emissions are then combined with those associated with ocean transport across the Pacific Ocean and the end use of methanol for plastics manufacturing. Thus, even though the detailed analysis that would be compiled if this were a drilling or barging operation will not be included in the EIS, the EIS must nevertheless acknowledge this context, but as stated above, not consider in detail the portions of the proposal that lay outside direct local causation. That is because in order to compare this proposal with other alternatives, it is important to acknowledge, not analyze the complete context, rather than plant operation alone in isolation from the inputs and outputs without which the project would not operate.

There are also cumulative greenhouse gas emissions to consider. NWIW is proposing a total of three, and potentially more, methane production facilities within the Pacific Northwest. Methanol production from these three facilities would eclipse production from the seven existing facilities operating nation-wide. Cumulative impacts from the three new facilities, and existing seven facilities, will need to be considered. The cumulative impact of most significance will likely prove to be the air emissions impact, given the transient nature of air and particulate emissions. And, among air emissions, it is likely the greenhouse gas emission issue which will warrant the closest scrutiny. Again, however, the analysis will not attempt to capture in detail every single regional, national or global emission associated the extraction, piping and transportation of methanol, but be succinct and straightforward while providing adequate analysis to inform local decision making on the direct local emissions of the proposal.

With respect to the no-action alternative, the EIS may briefly consider if a coal fired facility in China may instead be built. If so, it may be worth considering how much of China's feed stock for plastics are derived from coal and how likely that is to continue, given high water usage at such facilities, coal mine locations in arid areas, and other factors.

The EIS will also need to identify mitigation alternatives, such as: •

- Purchasing greenhouse gas emissions credits from a verified source;
- Offsetting emissions through renewable energy production;
- Alternatives to plastics, such as recycling;
- Requiring the tracking and reporting of all greenhouse gas emissions through the life of the proposed project; and,
- Other measures identified during EIS development, including those following public comment.

¹⁰ Public comment identified concerns over methane's potency, referencing California's Aliso Canyon methanol leak from an underground natural gas reservoir. That leak has not been given the news coverage other comparable environmental disasters have - despite a 1,000 foot tall plume - possibly as methane is not visible to the naked eye.

6. Environmental Health and Safety

6.1 Emergency Response

Methanol is flammable in liquid and gas states, and is considered highly toxic to humans and animals until it biodegrades. Consistent with comment, the EIS will complete a comprehensive analysis of the adequacy of federal, state, and local emergency response capabilities to address spills, explosion, and/or fire along the pipeline route, at the site, and during transfer for shipping purposes. Commenters asked that the EIS consider methanol tank construction and safety measures, including the degree of secondary containment. The EIS should also identify emergency response measure adequacy where the natural gas is being obtained and at the location where the methanol will be off-loaded. In total, the EIS assessment must address:

- Detailed emergency incident prevention, management, and response plans;
- Availability of fire response and emergency medical services, including transport times to specialty care facilities;
- Detailed emergency notification/advance warning plans for residents, businesses, and others, along with communication strategies, including ensuring emergency responders are aware of what hazardous materials are being transported and the potential for communications systems failure;
- Evacuation routes/plans with traffic flow analysis for communities, the nearby detention center, neighborhoods, businesses, and schools;
- Safeguards proven to contain leaks of toxic gases in order to immediately protect the public;
- Safeguards to be used should the first line of containment fail;
- Hazardous materials storage, handling, disposal, and monitoring;
- Fallout or blast zone delineation and potential impacts;
- Quantities, descriptions, capabilities, expertise, and experience of emergency response personnel, using a gap analysis;
- Measures in place to address potential health impacts to local residents and emergency response personnel that might result from additional exposure to hazardous materials related to a spill, fire, or explosion;
- How natural disasters (*e.g.*, earthquake, volcanic/lahar, wind, flood, tsunami) may contribute to and/or complicate response efforts;
- Emergency spill protocol for aquatic terrestrial and aquatic environments;
- Availability and source of funding, including the financial responsibilities of local governments, first responders, and the applicant;
- Available insurance or other financial mechanisms in place to address emergency scenarios, sufficient to cover all reasonably foreseeable costs of emergency response, clean-up, and habitat restoration; and,

- Emergency response record associated with NWIW (including its investors).

6.2 Worker and Resident Health and Safety

The EIS will address proposal impacts on worker health and safety. While the EIS focus will be on the site and surrounding environs, some attention to worker safety from natural gas extraction through end use is warranted. The safety records associated with NWIW, including its investors, in the same type of business ventures (or related ones to the extent this is a new enterprise for NWIW), and at existing methanol facilities, should be reviewed. Additionally, the safety record associated with the pipeline being used for transport will be considered.

The EIS will need to consider air emission impacts on human health and the environment. This includes assessing the health impacts on vulnerable populations, such as children and the elderly, as well as detainees at the nearby Immigration and Customs Enforcement detention center. The EIS will need to address these issues including, in particular, health risks for workers at the facility. Also, in the event of accidental releases, the EIS will need to address the degree to which a spill, explosion, or fire would impact air quality and exacerbate health impacts. This includes addressing concerns about the risks associated with chemicals required to clean up methanol spills and leaks. The EIS will identify those compounds.

6.3 Industrial Facilities Proximate to the Site

The proposal would be constructed proximate to railroad facilities and the LNG (liquefied natural gas) plant. Commenters noted that that proposed methanol refinery would be within the LNG blast zone and would be proximate to railroad tracks. The EIS will address safety concerns and impacts associated with proximity to these facilities..

7. Water Resources

7.1 Water Supply

The methanol plant will require significant quantities of water to function. Estimated usage amounts identify the facility as requiring about 10.4 million gallons of water per day (enough to supply 26,000 homes, assuming average use of 400 gallons per day).¹¹ Most of that supply will be consumed during the process or lost as water vapor. Further, the EIS will address where this water will be drawn from, the degree to which it will impact existing and planned uses, and whether this usage will result in or exacerbate water shortages in future, including during the summer months. Comments included requests for the following details:

¹¹ The EIS will need to confirm these figures.

- The specific amount and quality of water required for each reaction and stage of industrial process at the proposed facility;
- The temperature requirements of the water at each stage of its use at the proposed facility;
- The demonstrated technology for effectively recycling and cooling water at the facility;
- The environmental implications of recycling and cooling water in this way;
- Alternatives that require less water usage and the environmental impacts of those alternatives;
- The proposed project's ability to scale back use during drought periods;
- Specific processes at the facility that can be curtailed under defined drought conditions;
- NWIW plans or processes for water conservation during drought;
- The means that the City of Tacoma has to enforce water conservation during drought at the facility;
- How tidal forces will affect the water consumption and wastewater discharge from the proposed facility and environment;
- The ecological impacts of the proposed facility's water use on the aquatic and terrestrial life near those water sources; and,
- How impacts from the proposed facility may affect water customers, wildlife, and minimum in-stream flows in different seasons and during periods of drought.

7.2 Wastewater

The proposed methanol plant will produce a significant amount of wastewater, up to 1.44 million gallons per day. Commenters noted that the proposed facility will produce contaminated wastewater which may be handled by City of Tacoma employees while in the City of Tacoma storm water system and raised concerns about worker safety. The EIS will address how wastewater will be treated, removed from the site, and workers protected. This includes an assessment of any contaminants within the wastewater, which could include nickel, copper, zinc oxide, and other materials. Comments included requests for the following details:

- The chemical composition of the wastewater emitted from the plant;
- Whether the project can effectively use water sourced from wastewater treatment plants for some or all stages of the industrial process;
- A description of the pretreatment process that will be implemented for discharged water if it is determined that the proposed facility cannot reuse such water;
- Temperature of wastewater and its direct and indirect impacts;

- Whether there will be a requirement to reduce the temperature of the wastewater, to what degree, and how it will be done;
- Impacts from the wastewater on ecosystems including the tideflats, Commencement Bay and the Puget Sound;
- Whether the proposed facility can use wastewater from the Tacoma Wastewater treatment plant in its operations and if it would require additional treatment; and,
- A cost analysis of the City of Tacoma's water and on-site treatment requirements and costs.

7.3 Stormwater

The EIS will need to address stormwater issues at the site, and how stormwater will be managed, including its treatment and removal from the site.

7.4 Groundwater

The EIS will address impacts to groundwater from the proposal and measures taken to ensure groundwater safety. Commenters expressed concern about the health of the South Tacoma Aquifer should additional water resources be allocated to the proposed facility and asked that the EIS review impacts to the South Tacoma Aquifer over the course of the next 30 years.

In addition, groundwater protection is a significant issue in natural gas fracking. An explanation of how the proposal contributes to those off-site groundwater impacts will be provided. Safety measures along pipeline routes will also be identified.

8. Land and Shoreline Use

The EIS will address proposal compatibility with applicable City land use plans, zoning code, and the City's Shoreline Master Program, along with assessing surrounding development patterns. County, County-Wide, and multi-County policies, including Puget Sound Regional Council's Vision 2040 will also be considered.

The area is planned for industrial development, but impacts from this type of facility at this location have not been specifically addressed. Also, there are residential communities proximate to the site and proposal impacts on those communities will need to be addressed. In assessing land use compatibility, the EIS must consider impacts on visual resources, noise impacts (including from additional shipping traffic)¹², light/glare issues, odor concerns and

¹² For example, public comment raised questions on increased use of fog horns.

proposal impacts on other uses proximate to the facility, such as on parks and recreational activities.

9. Transportation

Transportation impacts associated with construction and operation, and additional vessel traffic will be addressed. During operation, there will be daily traffic associated with employees working what may be three shifts, coupled with delivery trucks to the facility. Total vehicle and vessel trips will need to be identified and impacts disclosed. Adequacy of existing transportation facilities, including impacts at railroad crossings, will be addressed.

10. Public Services and Utilities

The adequacy of public services and utilities to serve the site will be fully addressed. The City of Tacoma will provide water, stormwater, and wastewater infrastructure. The adequacy of the City's existing facilities, required improvements to those facilities, and impacts to rate-payers must be addressed.

Plant energy needs must also be addressed. At full production, the plant will require 450 megawatts of electricity per day. The EIS will address the adequacy of the infrastructure to supply that energy, the availability of the energy, and the infrastructure improvements which are necessary. Also, where that energy is coming from and the impacts associated with supplying that energy, will need to be disclosed.

11. Earth, Geology, and Soils

Ground disturbing impacts at the site and along the pipeline route will be addressed along with long-term soils impacts. Site vulnerability to seismic and tidal issues will be addressed, including:

- The potential for liquefaction at the site and the ability of the facility to withstand earthquakes will be assessed.
- Commenters asked that the EIS study the climate change predictions for sea level rise on the tideflats of Tacoma, where the project is proposed to be constructed. Commenters noted that climate change coupled with more intense and frequent rain events may increase the risks of flooding and damaging high tides at the proposed project site. The EIS will consider these concerns.

With respect to soils health, while methanol is understood to biodegrade quickly and therefore be unlikely to present accumulation concerns, other materials to be used at the facility do not biodegrade quickly. Consequently, a risk assessment and approach to managing that waste, and if necessary remediating it, must be addressed. Measures for ensuring successful facility decommissioning at the end of its useful life, and ensuring the site is not left in a contaminated state, must be outlined. As a precursor to that, present conditions must be documented. For example, commenters questioned whether the Kaiser Aluminum site has been adequately cleaned up. That status will be confirmed.

12. Plants and Animals

12.1 Terrestrial Wildlife

The EIS will address proposal impacts on terrestrial wildlife within the site and surrounding area.

12.2 Terrestrial Vegetation

The EIS will address proposal impacts on terrestrial vegetation within the site and surrounding area.

12.3 Aquatic Species

The EIS will address impacts on marine habitats and wildlife resources found within the project area and shipping route, which may include:

- Commercial shellfish and fishing;
- WDFW-listed Priority Habitat and Species;
- Recreational shellfish and fishing activities;
- Resident and migratory birds and marine mammals;
- Salt marshes, tidal flats, and other sensitive shallow water habitats;
- State and federally listed threatened and endangered species; and
- Tribal shellfish and fishing concerns.

Some impacts to animal species also have economic repercussions, such as to the fishing and tourist industries. For example, orca whales contribute to local economies dependent on tourism, especially between April and September, in the San Juan Islands.

Also, additional marine vessel traffic will result in greater shoreline erosion, increased turbidity, greater risk of introducing invasive species in ballast water, more vessel strikes of large

marine mammals, additional stranding of juvenile salmon on beaches from large wakes, and increased risk of oil spills or accidents. These impacts will be addressed.

Commenters noted that plastics pollution in the oceans is known to kills sea birds and sea life. The EIS will note this issue. Commenters also requested that the EIS analyze the bioaccumulation rates of the chemicals used at the proposed facility. EIS analysis will focus on impacts within U.S. territorial waters, with a summary of shipping impacts extending beyond that.

13. Historic and Cultural Preservation

The EIS will address impacts on cultural and historic resources, including historic properties, archaeological sites, and traditional cultural properties such as sacred sites, traditional fishing areas, and cultural landscapes in and proximate to the project area, and with respect to fishing, primarily within U.S. territorial waters.

14. Socio-Economic Impacts

The EIS will consider proposal impacts on property values and the potential costs associated with property damage in the event of a spill, explosion, fire, or other accident, and identify measures to ensure financial security is in place to address such accidents.

The EIS will also consider the cost of emergency response, planning, and staffing; infrastructure construction and improvements; and costs associated with impacts to the various elements of the environment the EIS addressed, including to commercial marine traffic, the fishing and shellfishing industries, and lost tourism and recreation opportunities.

These losses will be considered against the employment gains (including disclosures as to the wages associated with that employment) and public tax revenues associated with the project, after accounting for any exemptions or special offsets the proponent expects to utilize.

15. Cumulative Environmental Impacts

The proposal's cumulative impacts must be disclosed, which include total impacts over the proposal's life span, as well as impacts in conjunction with other related projects. The applicant is proposing two other facilities within the Pacific Northwest, which will be added to the roughly seven facilities currently existing nationwide.¹³ Not every element of the environment is necessarily cumulatively impacted by all of these facilities, as certain impacts are localized. However, where impacts combine for a more pronounced effect, all methanol facilities should be

¹³ The number of existing facilities will need to be confirmed.

considered. For example, as addressed in the section above on air impacts, air emissions do not stay in one place, so do have cumulative impacts which must be considered. Also, development within the area, including at the Port of Tacoma, will need to be considered.

16. Other Environmental Review Documents

The EIS will include consideration of relevant environmental review documents, to the extent they help inform the analysis. These may include the following:

- The Port of Tacoma completed an FEIS for redevelopment of the Blair-Hylebos Peninsula in 2009. This document addresses impacts associated with industrial development within this area.
- The City prepared an Emergency Response/Intelligent Transportation Systems study addressing resources and constraints in the proposal area.
- FERC is preparing an environmental assessment of the new pipeline and associated facilities.
- The Port of Kalama and Clark County are preparing an environmental impact statement addressing the Kalama project.

17. Conclusion

SEPA's over-riding purpose is to ensure decision making is fully informed with respect to environmental repercussions. Public comments have identified significant issues which need to be evaluated to provide those required disclosures. Many comments center on the need to protect Tacoma's environmental health both now and into the future. Concerns raised include public safety, air emissions (including greenhouse gases), water usage, and waste management, among many others. The EIS will address these issues, identify areas in which mitigation is feasible, and evaluate more environmentally benign alternatives to the proposal. And, as scoping proceeds, EIS scope will be refined and elaborated on.