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RE: SEPA Mitigated Determination of Non-Significance Issued to ALA Energy Liquid Petroleum Gas Terminal for Two New and 31 Prior Unpermitted Projects

Dear Mark Personius and Amy Keenan,

Below are comments on the State Environmental Policy Act (SEPA) Mitigated Determination of Non-Significance (MDNS) that Whatcom County issued to AltaGas's ALA Energy Ferndale Terminal for two new and 31 prior unpermitted projects.

The undersigned represent six organizations that work on environmental issues in Washington State which includes protecting the Salish Sea watershed, wildlife, human health, the climate, and public safety. The MDNS ignores the probable adverse environmental impacts of the 2 new and 31 prior unpermitted AltaGas ALA Energy activities. As discussed below, Whatcom County's review under the State Environmental Policy Act (SEPA) and the Whatcom County Code (WCC) is fundamentally flawed and should be withdrawn

For the reasons discussed below, the undersigned organizations request that Whatcom County withdraw the Mitigated Determination of Non-Significance ("MDNS") and require the preparation of an Environmental Impact Statement ("EIS") because numerous project impacts remain unexplored and others remain significant regardless of the proposed mitigating conditions. Further, while the EIS is being prepared, Whatcom County should require that the Ferndale Terminal vessel traffic be limited to the number of Very Large Gas

Carriers that called on the Ferndale Terminal in 2016, which is prior to the construction of the unpermitted projects.

Whatcom County is required to consider more than the "narrow, limited environmental impact of the immediate, pending action."[1] ALA Energy Ferndale Terminal is in the midst of a fundamental transition of its business model that will result in significant increases in the transportation of dangerous propane and butane, mostly for export each year. An EIS is needed to fully assess the safety and environmental risks of this transition, which is facilitated by the projects under review. An EIS must further provide an accurate history of ship traffic at the pier, as well as improved, detailed understanding of the impacts from underwater noise, ship strikes and physical disturbance, and pollution/contaminants that are the main sources of anthropogenic impacts to Southern Resident killer whales as identified in the DNV report,[2] and an accurate cumulative impacts assessment that includes an accident, oil spill, and explosion risk assessment. An EIS should be required as is stated in this Court of Appeals decision:

> Here, Phillips 66 has conceded that environmental concerns, including harm to killer whales, could arise if vessel traffic increases. Phillips 66 "does not dispute that Southern Resident Killer Whales are endangered, or that increased vessel traffic poses a threat to that species." Expert opinions corroborated that increased vessel traffic would harm the whales. Clearly, if the evidence showed a probable increase in vessel traffic attributable to the project, an EIS would have been triggered. An MDNS would not have been an option.[3]

The same is true here. The MDNS misses the key issue presented by the consolidated construction projects at the terminal—they will facilitate an increase in the transportation and handling of fossil fuels that pose significant environmental and safety risks. Those impacts must be considered in a full EIS, as the County originally intended.

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[1] Cheney v. City of Mountlake Terrace. (1976). 87 Wn.2d 338, 344, 552 P.2d 184. https://law.justia.com/cases/washington/supreme-court/1976/43805-1.html

[2] NOAR Appendix F - Marine Vessel Analysis. (2025). *ALA Energy Ferndale Terminal, Analysis of Vessel Noise Impacts on Southern Resident Killer Whale.* Page 3. https://www.whatcomcounty.us/DocumentCenter/View/99246/NOAR-Appendix-F---Marine-Vessel-Analysis

[3] Court of Appeals Division 1. (2022). *Phillips 66 Company vs Whatcom County Washington and Friends of the San Juans.* No. 82599-2-I. Page 10. https://www.courts.wa.gov/opinions/pdf/825992.pdf.

To assist in navigating our comments, click on the following bookmarks for our response:

Summary of Concerns Regarding MDNS

The following is a summary of our concerns with your decisions, which are more fully described later in our comments.

1) **<u>Failure to Analyze the Transition from a Butane Export Terminal to a Primarily Propane Export Terminal</u>**

   AltaGas is operating a huge fossil fuel distribution terminal which is growing, and which AltaGas's ALA Energy asserts can grow much further. In the past, the Ferndale terminal exported butane and transloaded propane produced locally at Washington State refineries.[4] Changes have occurred such that ALA Energy now distributes propane collected mainly in Canada and imported by rail to Ferndale, WA, primarily for export. These changes have increased the total amount of fossil fuels transshipped at the Ferndale Terminal and have significant environmental impacts that have not been thoroughly evaluated and addressed.

   The Ferndale Terminal was designed to receive butane from local refineries for export and propane from local refineries for transloading primarily from pipeline to trucks. Two storage tanks were constructed in 1977 and 1994 to hold 790,000 barrels of butane.[5] Smaller horizontal propane bullets were used to store propane. The large tanks were constructed at that size to provide a place to store enough butane to ship economically. The butane production at the local refineries was relatively small and it took time to fill the tanks with enough butane to load a tanker for export.

   Beginning in 2015 the Ferndale Terminal was converted into a major export terminal to store and ship large quantities of propane from Canada to Asia without proper community notification and engagement. One of the two storage tanks was converted from butane to propane. The two storage tanks with 400,000 barrels of propane contained in this tank is a major explosion risk to the community, a much higher explosion risk than that tank full of butane.[6] Moreover, butane and propane are not the same, and pose very different safety risks and transportation challenges.

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[4] RBN Energy LLC. (2014). *West Coast LPG Exports are a Brand New Game – A New Wave of Exports from Ferndale, WA*. https://rbnenergy.com/west-coast-lpg-exports-are-a-brand-new-game-from-ferndale-wa.

[5] Name of Operator: AltaGas Facilities (US) Inc. Name of Unit(s): Ferndale Terminal (2015). *Utilities and Transportation Commission Standard Inspection Report for Intrastate Hazardous Liquid Systems Records Review and Field Inspection*. https://www.utc.wa.gov/sites/default/files/2021-05/6187%2520Form%2520G2-Standard%2520Liquid%2520Insp%2520-%2520Records%2520and%2520Field%2520Review%2520%28Rev%2520Apr%25202013%29.pdf.

[6] American Planning Association. (1951). *Regulating the Storage, Distribution and Use of Propane and Butane*. https://www.planning.org/pas/reports/report25/.

2) **Failure to Analyze Capacity**

The Department of Natural Resources (DNR)'s lease limits the use of the Intalco/Petrogas pier to 48 ships per year. This limit should have been used to analyze transshipment capacity. However, the largest gas carrier can hold 585,000 barrels,[7] which for 48 ships per year equates to a maximum capacity of 28,080,000 barrels/year. Whatcom County failed to disclose that the applicant's report of "2953 GPM (101,245 BBL/D)" equates to 36,954,425 barrels/year, or **more than 25% greater capacity** than the DNR lease allows. The applicant has proposed a facility that can exceed the capacity of its DNR lease, a significant impact that should have been identified as such in the MDNS. The MDNS finding[8] on Maximum Capacity is inaccurate.

3) **Failure to Verify Transshipment Capacity**

One of the key procedural and substantive issues in this project is whether the unpermitted and new development results in an expansion of the fossil fuel transshipment facility by more than 10,000 barrels per day. The report that has been provided to the public is so heavily redacted that any independent assessment of its methodology or accuracy is impossible to determine. Considering that Whatcom County failed to correct the applicant's error in calculating the maximum transshipment capacity at the pier, and there is no indication that the County did any independent analysis, a publicly available independent analysis that shows that the unpermitted and new development doesn't increase capacity is needed. ALA Energy cannot rely on vague assurances that this document accurately calculates transshipment capacity. The 2021 "Cherry Point Amendments" focused specifically on limiting and accurately calculating transshipment expansion. This point is emphasized by another document in the record, a letter from Northwest Clean Air Agency that says the changes "that were not permitted…increased the facility's capacity for propane deliveries and handling."[9]

The State Environmental Policy Act (SEPA) Register falsely states that the "prior projects that were completed without building permits between 2016 and 2021. … generally

[7] Marine Insight (2025). *Top 10 Biggest LPG Carriers in the World.* https://www.marineinsight.com/types-of-ships/10-biggest-lpg-carriers/

[8] "The applicant has identified the facility's current total maximum transshipment capacity for fossil fuels to be a throughput of 2953 GPM (101,245 BBL/D)." Whatcom County (2025). *SEPA 2024-0052 Mitigated Determination of Nonsignificance (MDNS) Finding #18.* https://www.whatcomcounty.us/DocumentCenter/View/102728/SEPA2024-00052-MDNS-Distribution-Packet

[9] Letter dated October 15, 2021, from Mark Buford, Executive Director, Northwest Clean Air Agency, to Mark Personius, Director, Whatcom County Planning & Development Services.

include minor construction including piping, valves, electrical and pipe rack installation."[10] Our review of the commercial building permit applications shows that some of the unpermitted projects increased both capacity and throughput at the Ferndale Terminal.

4) <u>Failure to Define the Proposed Action</u>

ALA Energy applied for a Major Project Permit (MPP)[11]. Whatcom County sent a "Notice of Application" on August 21, 2024 that ALA Energy … has applied for a Major Project Permit, SEPA and numerous commercial building permits…"[12] Yet, inexplicably, Whatcom County has now decided that "the proposal does not require an MPP and the projects will be processed as a CUP…"[13] ALA Energy apparently contests that a CUP is required and say it submitted MPP and CUP applications "without waiving its right to contest this requirement."[14]

It is imperative that a SEPA threshold determination be properly defined.[15] MPP, CUP or building permit projects are reviewed in multiple different ways, resulting in different decision-makers, different criteria,[16] and different assumptions as to what standards will be applied to the proposal. These standards are part of the review and determination as to whether proposed mitigation measures would address the probable adverse environmental impacts from the activities.

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[10] State Environmental Policy Act (SEPA) Register. 202503644 - Whatcom County. https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=202503644.

[11]Whatcom County. (2024). *ALA Energy's Major Project Permit Application for the Ferndale Terminal*. https://www.whatcomcounty.us/DocumentCenter/View/86952/I-Major-Project-Permit-Application-Form

[12]Whatcom County. (2024). *ALA Energy's Notice of Application Posting*. https://www.whatcomcounty.us/DocumentCenter/View/86955/MPP2024-00002-Notice-of-Application

[13] Whatcom County (2025). *SEPA 2024-0052 Mitigated Determination of Nonsignificance (MDNS)*. https://www.whatcomcounty.us/DocumentCenter/View/102728/SEPA2024-00052-MDNS-Distribution-Packet

[14] ALA Energy, LLC (2024). *SEPA Environmental Checklist*. https://www.whatcomcounty.us/DocumentCenter/View/86958/SEPA-Checklist

[15] Washington Administrative Code (1971). *WAC 197-11-060(3)(a)*. https://app.leg.wa.gov/wac/default.aspx?cite=197-11-060#:~:text=(3)%20Proposals.,environmental%20review%20is%20properly%20defined.

[16] Whatcom County Code. *Major Project Permit* (WCC 20.88; https://www.codepublishing.com/WA/WhatcomCounty/#!/WhatcomCounty20/WhatcomCounty2088.html),. *Conditional Use Permit (CUP)* (WCC 22.05.026(3); https://www.codepublishing.com/WA/WhatcomCounty/#!/WhatcomCounty22/WhatcomCounty2205.html) *CUP Criteria for Expansion of Fossil Fuel Transshipment Facilities* (WCC 22.05.026(4); https://www.codepublishing.com/WA/WhatcomCounty/#!/WhatcomCounty22/WhatcomCounty2205.html)

Moreover, the level of review under SEPA does not rely on distinctions between capacity and throughput. Instead, SEPA asks whether an action will have adverse environmental effects.[17] Such activities require environmental review. Our review of the permit application reveals that the effect of the prior unpermitted and new projects is to increase the capacity of the facility, resulting in significant adverse environmental and safety effects that must be assessed under SEPA. Whether or not they increase the total theoretical capacity of the terminal is irrelevant.

Whatcom County and ALA Energy (and their predecessors) have been piecemealing development at this site for years. Beginning in 2015 the Ferndale Terminal was converted into a major export terminal to store and ship large quantities of propane from Canada to Asia without proper community notification and engagement. "The danger of piecemealed review is that "the later environmental review often seems merely a formality, as the construction of the later segments of the project has already been mandated by the earlier construction."[18] This is exactly what is taking place with the current proposal at ALA Energy. The County should not play along with this subterfuge, but should require an EIS that fully examines the impacts of this transition.

5) <u>Failure to Mitigate Probable Significant Adverse Environmental Impacts</u>

SEPA Rules allow the lead agency to issue a determination of nonsignificance (DNS) only when the "responsible official determines there will be no probable significant adverse environmental impacts from a proposal."[19] A mitigated DNS allows "the applicant [to] clarify or change features of a proposal to mitigate the impacts…" but the "applicant shall revise the environmental checklist as may be necessary to describe the clarifications or changes."[20] A determination of significance (DS) is required when the "responsible official determines that the proposal ***may*** have a probable significant adverse environmental impact."[21]

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[17] Washington Administrative Code (1971). *WAC 197-11-704*. https://app.leg.wa.gov/wac/default.aspx?cite=197-11-704.

[18] Court of Appeals Division 2. (1998). *Concerned Taxpayers Opposed to Modified Mid-S. Sequim Bypass vs. Dep't of Transp.*, 90 Wash. App. 225, 231 n.2, 951 P.2d 812, 816 n.2. https://www.casemine.com/judgement/us/5914810dadd7b0493447db60.

[19] Washington Administrative Code (1971). *WAC 197-11-340(1)*. https://app.leg.wa.gov/Wac/default.aspx?cite=197-11-340.

[20] Washington Administrative Code (1971). *WAC 197-11-350(2)*. https://app.leg.wa.gov/wac/default.aspx?cite=197-11-350. The applicant has not revised the environmental checklist or their proposal to incorporate the mitigation measures in the MDNS. As such, the measures are unenforceable unless attached as conditions to an underlying permit which is not clear in the record.

[21] Washington Administrative Code. (1971). *WAC 197-11-360* (Emphasis added). https://app.leg.wa.gov/WAC/default.aspx?cite=197-11-360.

Information relevant to probable adverse impacts is essential to the reasoned choice amount alternatives and as to whether the proposed mitigation measures for the proposal, which includes new and continuing activities, are sufficient. The information on the number and types of ships using the pier, the number of times each ship must berth and go to anchor in order to fully load the cargo, where they anchor, what cargo was loaded and unloaded, is not speculative or not known. It should be known by the applicant and disclosed in the environmental review; yet it is not. Similarly, the number of rail cars or unit trains that frequent the facility since the 2016 environmental review has clearly changed, but specific data and the resulting impacts of those changes are not provided.

The proposal has more than a likelihood to have a probable significant adverse environmental impact. The responsible official, in assessing the significance of the proposal's impact on the environment, has not adequately considered the proposal's impact on the following:

a) The Salish Sea, and specifically Rosario Strait and the waters between the Ferndale Terminal and the Vendovi Island anchorage areas.
b) The change in capacity and cumulative impacts as a result of the transition from a butane export terminal to a propane export terminal.
c) Greenhouse Gas Emissions
d) Water Quality Impacts

Additional Support for Requiring an EIS

a) <u>Adverse Impacts to the Salish Sea</u>

Vessels at the Ferndale Terminal primarily transit through the Strait of Juan de Fuca, then through Rosario Strait to the terminal.[22] If the vessel must anchor, it does so in the Vendovi Anchorage. Ship traffic has expanded from 2-5 berthing events per year to 26 in 2019.[23] There is no record of environmental review having been completed for up to 48 vessels at the ALA Energy Terminal, nor any record of the increase from 32 Very Large Gas Carriers in 2024-25 to 48 vessels ALA Energy claims as their continuing activity.

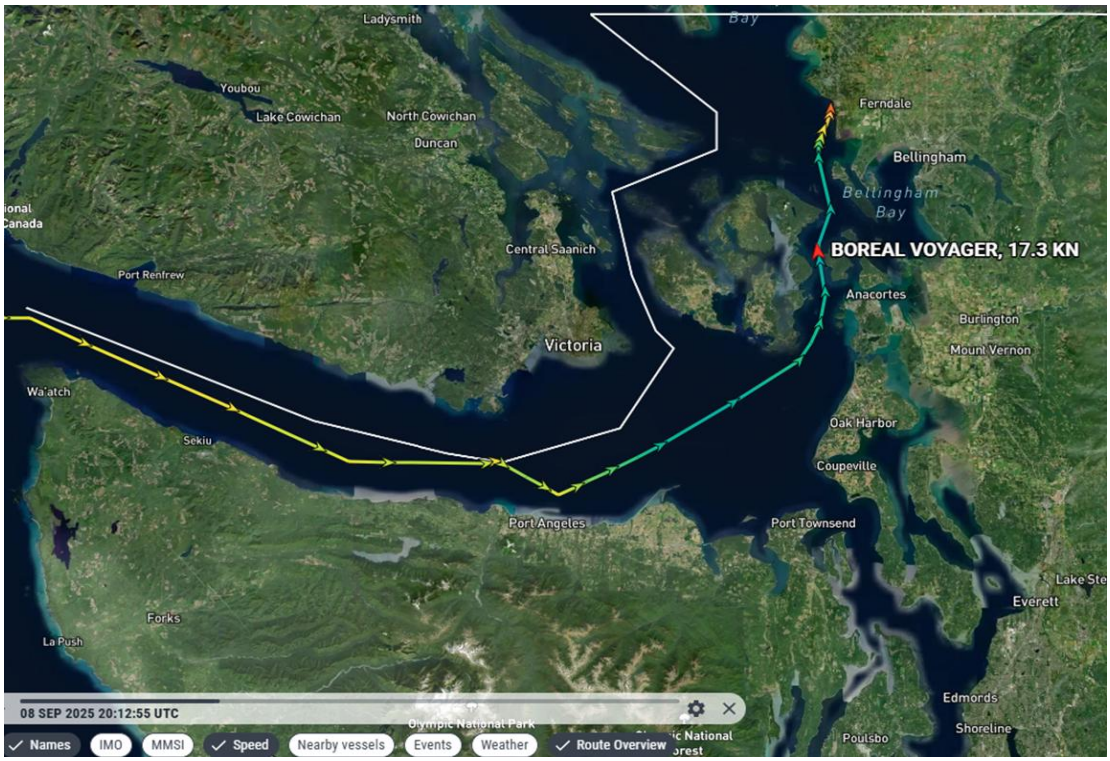
[22] NOAR Appendix F - Marine Vessel Analysis. (2025). *ALA Energy Ferndale Terminal, Analysis of Vessel Noise Impacts on Southern Resident Killer Whales.* Page 2. https://www.whatcomcounty.us/DocumentCenter/View/99246/NOAR-Appendix-F---Marine-Vessel-Analysis
[23] Letter dated October 15, 2021, from Mark Buford, Executive Director, Northwest Clean Air Agency, to Mark Personius, Director, Whatcom County Planning & Development Services.

There is also no analysis of the probable significant adverse environmental impact that results in the draft of the Very Large Gas Carriers and the depth of water at the Ferndale Terminal. Ten of the Very Large Gas Carriers under contract have drafts that are **over 40** feet, and the average draft of all the Very Large Gas Carriers under contract is **39.34** feet. In 2020, Petrogas obtained a permit to dredge near the pier to re-establish -38 feet of depth at Mean Lower Low Water to reduce the frequency of deberthing, which must happen at low tide for deeper draft vessels. When this occurs, a "partially laden Terminal Vessel may deberth and transit to the Cherry Point Anchorage or the Vendovi Anchorage…"[24] The environmental checklist and supporting documents do not provide any information about the number of times a vessel has had to deberth, anchor and reberth, and what that impact is on the environment.

Whatcom County failed to consider the impacts of increased vessel traffic originating from nearby terminals, including in British Columbia.[25] For example, the oil tanker P. MONTEREY entered the Salish Sea and arrived at Trans Mountain's Westridge Terminal in Burnaby, BC on August 15, 2025. On August 17, while laden with cargo, the oil tanker transited past the ALA Energy Ferndale Terminal, through Rosario Strait, to the Vendovi Island anchorage area, where it anchored, laden, for seven days. On August 24 - 25, the tanker was at the Phillips 66 Ferndale Refinery, just south of the Ferndale Terminal, and then transited back to the Vendovi Island anchorage area, in ballast (without cargo), where the oil tanker stayed for two weeks, until September 8, 2025.

[24] NOAR Appendix F - Marine Vessel Analysis. (2025). *ALA Energy Ferndale Terminal, Analysis of Vessel Noise Impacts on Southern Resident Killer Whales*. Page 29. https://www.whatcomcounty.us/DocumentCenter/View/99246/NOAR-Appendix-F---Marine-Vessel-Analysis

[25] Washington Administrative Code. (1971). "(3) In determining an impact's significance (WAC 197-11-794; https://app.leg.wa.gov/WAC/default.aspx?cite=197-11&full=true#197-11-330), the responsible official shall take into account the following, that:… (c) Several marginal impacts when considered together may result in a significant adverse impact; (e) A proposal may to a significant degree: (ii) Adversely affect endangered or threatened species or their habitat; (iii) Conflict with local, state, or federal laws or requirements for the protection of the environment; and (iv) Establish a precedent for future actions with significant effects, involves unique and unknown risks to the environment, or may affect public health or safety." *WAC 197-11-350*. https://app.leg.wa.gov/WAC/default.aspx?cite=197-11&full=true#197-11-794.



BOREAL VOYAGER, 08 SEP 2025, Source: Marine Traffic

BOREAL VOYAGER at Ferndale Terminal, 09 SEP 2025, Image by David Stalheim

A critical part in protecting the Salish Sea ecosystem "is adherence to standards that reduce underwater radiated noise ("URN"). Terminal Vessel Operators abide by URN reduction standards provided by various entities related to: (1) vessel speeds;"[26] However, there are no requirements for vessels to slow down through Rosario Strait, nor are there any hydrophone/thermal camera monitoring stations there.[27] ALA Energy says they are voluntarily committed to "provide…guidance to Terminal Vessels…[to] operate at speeds as recommended by Quiet Sound and ECHO throughout the Puget Sound and the Strait of Juan de Fuca…Current recommendations are at speeds less than 11 knots."[28] The speed of the BOREAL VOYAGER at 17.3 knots through Rosario Strait demonstrates that the vessel operators are not complying with the "guidance" from ALA Energy.

Providing guidance is not mitigation. When making the threshold determination, Whatcom County failed to consider the context and intensity of vessel traffic from projects in Canada on threatened and endangered species. There is little doubt that the continuing activities, the unpermitted development and new development may have a probable significant adverse environmental impact, as we further detail below, requiring a threshold determination of significance and preparation of an EIS.

b) <u>Change from Butane to Propane Export Facility</u>

The proposal description for the Ferndale Terminal Existing and Planned Improvements on the State Environmental Policy Act (SEPA) Register states:

Included within this application are also a number of prior projects that were completed without building permits between 2016 and 2021. These permits generally include minor construction including piping, valves, electrical and pipe rack installation.[29]

This description is wholly inaccurate. A number of the projects plainly increase the ability of the terminal to move ever-increasing volumes of propane product, triggering significant adverse effects. Moreover, ALA Energy's assertion that there has been a decrease in transshipment capacity from 2016 - 2023 is contradictory to the data provided by Northwest Clean Air Agency (NWCAA) and DNR. A public records request had to be

[26] NOAR Appendix B.3: Marine Vessel Operations. (2024). *DNR Lease No. 20-A08488, Exhibit B.* Page 10. https://www.whatcomcounty.us/DocumentCenter/View/86717/Marine-Vessel-Analysis-20240628.
[27] NOAR Appendix F - Marine Vessel Analysis. (2025). *ALA Energy Ferndale Terminal, Analysis of Vessel Noise Impacts on Southern Resident Killer Whales.* Page vii. https://www.whatcomcounty.us/DocumentCenter/View/99246/NOAR-Appendix-F---Marine-Vessel-Analysis
[28] *Ibid.* Page 15.
[29] State Environmental Policy Act (SEPA) Register. (2025). *202503644 - Whatcom County.* https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=202503644.

submitted in order to review the 31 prior unpermitted project's commercial building permit applications.[30] Several of the prior unpermitted projects at the terminal work to increase the terminal's capacity. The prior unpermitted projects include major structural and equipment improvements. The increase in imports and exports could very likely be the result of these projects increasing the Ferndale Terminal's capacity. Examples of the prior unpermitted projects that have increased capacity include:

- COM2024-00103 (MOC 19-029): 2019 De-ethanizer (V-175) Addition
  The installation of the de-ethanizer reduces the quantity of ethane and lighter hydrocarbons in the propane product, which reduces the vapor pressure. This reduction in vapor pressure unloads the chillers and allows higher levels in storage containers, possibly including the Very Large Gas Carriers that export the propane product, thereby increasing capacity and throughput.

- COM2024-00107 (MOC 19-303-047): 2021 Wharf Transfer Pump (P-85) Addition
  The installation of a new API 610 vertical can-type marine loading pump (P-85) in parallel with the existing P-15 represents a clear and significant increase in marine loading capacity and system resilience. This capacity increase directly translates to the quantity of hydrocarbons that can be loaded onto the vessels at the wharf. A constraint to the maximum ship loading capability before adding P-85 was the former Wharf Transfer Pump P-15.

The 2021 Wharf Transfer Pump (P-85) Addition significantly increases the Ferndale Terminal's capacity, as stated in the original project description. This cover sheet from Coffman Engineers (page 1 of 128) dated September 2023 and the Land Fill and Grade Application submitted by ALA Energy includes a project description that omits this section of the project description that is included on the cover sheet (page 62 of 128) that was issued for construction in January 2021 (emphasis added):

> **THE PURPOSE OF THIS PROJECT IS TO PROVIDE ADDITIONAL PUMP CAPACITY FOR THE EXISTING WHARF LOADING SYSTEM WHICH LOADS SHIPS WITH LIQUID BUTANE MIX OR LIQUID PROPANE (REFRIGERATED LIQUIDS) AT PETROGAS'S FERNDALE TERMINAL. THE ADDITIONAL PUMP CAPACITY WILL IMPROVE SHIP LOADING TIMES AND WILL ALSO PROVIDE PUMP REDUNDANCY FOR THE WHARF LOADING SYSTEM.** ...

[30] Public records request R000878-082425 received by Friends of the San Juans from Whatcom County on August 24, 2025.

IN ORDER TO PROVIDE THE ADDITIONAL LOADING CAPACITY, THE PROJECT SCOPE INCLUDES INSTALLING A NEW PUMP (P-85) IN PARALLEL TO THE EXISTING PUMP (P-15) THAT SUPPORTS THE WHARF LOADING SYSTEM.

Both project descriptions state that "The existing pump (P-15) will remain in service and will only be operated in the event the new pump (P-85) is out of service." The permit application diagrams show that the new P-85 pump is more than double the size of the former P-15 pump.

Examples of the prior unpermitted projects that *may* have increased capacity and throughput include:

- COM2024-00091 (MOC 18-004) Addition of Chilled Propane Pump P-76
  A chilled propane pump, P-76, was added to pump chilled propane from V-113 out to the propane storage tank, T-1, where the propane is then loaded directly onto the Very Large Gas Carriers. The chilled propane pump allows for faster filling of the T-1 storage tank, which may increase capacity and throughput. The Kestrel Engineering PFD's (process flow diagrams) and control narrative are not included in the permit materials. The throughput of the terminal is likely increased by allowing higher propane transfer rates between the vessels V-117 and V-114 and T-1. The root cause of the vaporization in the line being mitigated by installation of the pump is most likely higher throughput.

- COM2024-00095 (MOC 18-030) P-13 Modifications to Allow Parallel Service to P-3
  The information supplied is insufficient to determine the purpose of P-3. However, when two pumps are placed in parallel, they can often be operated at the same time to increase capacity. The other reason a pump is placed in parallel with an existing pump is to provide a "spare" that allows operations to continue when maintenance is required on the existing pump, increasing throughput but not capacity. It could also be that P-13 is a larger capacity pump than P-3 which is another way of increasing capacity.

- COM2024-00102 (MOC 19-025, 19-026, 19-027): 2019 Rail Unloading Compressor (K-221A/B and K-222A/B) Replacement Project
  Depending on modification, this project could allow for additional rail car unloading capabilities, increasing throughput.

- COM2024-00104 (MOC 19-030) Re-route LV-1980A from HV-653 to HV-605
  Associated with the T-1 Bypass Project. Whether or not this project impacts capacity and throughput is dependent on the driver behind the T-1 Bypass Project. If this project

entails loading ships directly from railcars, then this project does impact capacity and throughput at the Ferndale Terminal.

Data provided by ALA Energy shows that the Ferndale Terminal's exports increased from 2016 to 2023 by 6,294,640 barrels; 5,868,683 barrels by Very Large Gas Carriers.[31] The total number of propane and butane barrels (bbl) imported by sector in 2016 and 2023.[32] The total number of propane and butane barrels (bbl) exported by sector in 2016 and 2023.[33]

COM2024-00085 Permanent Enclosed Ground Flare Project

A capacity assessment was conducted by Burns & McDonnell for the proposed new Permanent Enclosed Ground Flare Project, concluding that "the Flare Project will have no impact on the Terminal's maximum transshipment capacity defined by Whatcom County Code (WCC) 20.97.230.1…"[34] (Note that there is likely a typo with the intended code cited being WCC 20.97.130 which are the "M" definitions that includes Maximum Transshipment Capacity).

The proposed flare project itself does not provide for increased throughput at the Ferndale Terminal. This project is positive from an environmental perspective. The hydrocarbons that would be converted to carbon dioxide in the flare before release would be an improvement over the current hydrocarbon emissions and associate global warming impacts from the Ferndale Terminal. However, if the Ferndale Terminal, as originally constructed for the storage and export of butane, did not require a robust flare due to the very low throughput and VOC hydrocarbon releases that were below the threshold requirements for a robust flare, then the new Permanent Enclosed Ground Flare Project would be an essential element to completing the Ferndale Terminal's conversion to a primarily propane export terminal with the massive increase in throughput.

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[31] NOAR Appendix E-ALA Energy Ferndale Green House Gas Analysis. (2025). *ALA Energy Ferndale Greenhouse Gas Emissions Analysis, Table 2-4. Import and Export for 2016 and 2023 by Product and Mode.* Page 8. https://www.whatcomcounty.us/DocumentCenter/View/99245/NOAR-Appendix-E-ALA-Energy-Ferndale-Green-House-Gas-Analysis.

[32] NOAR Appendix E-ALA Energy Ferndale Green House Gas Analysis. (2025). *ALA Energy Ferndale Greenhouse Gas Emissions Analysis.* https://www.whatcomcounty.us/DocumentCenter/View/99245/NOAR-Appendix-E-ALA-Energy-Ferndale-Green-House-Gas-Analysis.

[33] NOAR Appendix E-ALA Energy Ferndale Green House Gas Analysis. (2025). *ALA Energy Ferndale Greenhouse Gas Emissions Analysis.* https://www.whatcomcounty.us/DocumentCenter/View/99245/NOAR-Appendix-E-ALA-Energy-Ferndale-Green-House-Gas-Analysis.

[34] Appendix C.3 Burns and McDonald Capacity Assessment - Flare (2). June 26, 2024. Letter from Jeff Bartels, PE. https://www.whatcomcounty.us/DocumentCenter/View/86979/Appendix-C3-Burns-and-McDonald-Capacity-Assessment---Flare-2.

Would the Ferndale Terminal be able to transship the quantity of hydrocarbons associated with loading 48 Very Large Gas Carriers per year, primarily with propane, without air permit violations if it did not install this flare? If the answer is 'no,' the Permanent Enclosed Ground Flare Project increases the capacity of the Ferndale Terminal. The capacity of the existing flare and relief system was not evaluated as part of the Burns & McDonnell studies. The flare and relief system is considered "the brakes" to any oil and gas facility and the capacity limits are highly regulated by OSHA (Occupational Safety and Health Administration). The Process Flow Diagram for the 2021 Wharf Transfer Pump (P-85) Addition states that the Propane Product contains 460% more ethane than the Butane Product. This change in composition affects the design and capacity requirements for the flare and relief system. ALA Energy states that the Permanent Enclosed Ground Flare Project is being installed as a compliance project, when in fact it appears to be needed to increase the Ferndale Terminal's capacity. A qualified engineer would expect that a larger flare would be needed for a 100,000 barrel/day propane facility than a 100,000 barrel/day butane facility. More data and a thorough independent analysis are needed for confirmation.

Throughput and the total amount of propane and butane imported and exported at the terminal can dramatically impact the environment and should be considered when determining whether an EIS is needed. The prior unpermitted projects' increase in both capacity and throughput from 2016 to 2023 have been omitted from the environmental review process to date. The increase in capacity may have a probable significant impact on the environment, requiring a threshold determination of significance and preparation of an EIS.

c) <u>Greenhouse Gas Emissions</u>

Because of changes in industry and changes enabled by the previously unpermitted projects, ALA Energy now primarily operates to distribute fossil fuels collected in Canada and shipped to Whatcom County. What was once an infrequently used butane storage and transshipment terminal is transitioning to one of the most consequential propane terminals on the west coast. This change has significant impacts. The assertion that their permitted capacity is still larger than the actual emissions should be considered alarming, particularly because upon granting this permit, Whatcom County will no longer have significant regulatory control or opportunity for additional environmental review.

In 2021, Whatcom County passed Ordinance 2021-046, an ordinance "intended to address the risks to public health, safety, and the environment associated with fossil fuel

facilities."[35] Provisions in the ordinance were "intended to provide the SEPA Responsible Official with more information in order to make reasoned decisions on threshold determinations and possible mitigation of impacts."[36] Importantly, Ordinance 2021-046 adopted new SEPA policies regarding air quality and climate (WCC 16.08.160(F)) which Whatcom County may use to condition or deny a proposal. (RCW 43.21C.060 and WAC 197-11-660)

To help inform the Whatcom County SEPA Responsible Official regarding greenhouse gas emissions from this proposal, the applicant submitted an analysis of potential greenhouse gas emissions impacts[37] and two reports[38] regarding the facility capacity. It is of particular importance that Whatcom County gets this right. This appears to be the first GHG emissions analysis submitted since a seven-year-long process led to the updated fossil fuel transshipment requirements at Cherry Point.

The accuracy of the lifecycle greenhouse gas emissions analysis is largely dependent on the accuracy of the transshipment capacity analysis, which is heavily redacted and hence unreviewable by the public.[39] The amount of propane and butane moving through the facility in each year of analysis is the single most important variable in estimating the lifecycle greenhouse gas (GHG) emissions. The public is left to guess about the accuracy of the information, since all of the substance of those submittals have been redacted. In each of the two reports, only the briefest introduction and a cursory results section are left visible after more than 30 pages are redacted. The conclusion that they reach is therefore impossible to evaluate and extremely consequential.

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[35] Whatcom County. (2021). *Ordinance 2021-046: Amendments to the Whatcom County Comprehensive Plan and Whatcom County Code relating to the Cherry Point UGA fossil fuel facilities, piers, SEPA, greenhouse gas emissions, and other matters.* Page 1. https://documents.whatcomcounty.us/WebLink/DocView.aspx?id=4795624&dbid=0&repo=WC&searchid=23731923-0363-44df-93cb-107911735dae

[36] *Ibid*. Finding of Fact #72. Page 14.

[37] NOAR Appendix E-ALA Energy Ferndale Green House Gas Analysis. (2025). *ALA Energy Ferndale Greenhouse Gas Emissions Analysis*. https://www.whatcomcounty.us/DocumentCenter/View/99245/NOAR-Appendix-E-ALA-Energy-Ferndale-Green-House-Gas-Analysis.

[38] NOAR Appendices C1/C2-Prior 2016 Capacity Assessment CBI Redacted (2023). *Current Facility Capacity Evaluation Report*. https://www.whatcomcounty.us/DocumentCenter/View/86976/Appendix-C1-Current-Capacity-Assessment-CBI-_REDACTED and *Ferndale Capacity Evaluation Report (Butane Refrigerated Storage: Prior to Aug. 15, 2016*. https://www.whatcomcounty.us/DocumentCenter/View/86977/Appendix-C2-Prior-2016-Capacity-Assessment-CBI_REDACTED.

[39] NOAR Appendix E-ALA Energy Ferndale Green House Gas Analysis. (2025). *ALA Energy Ferndale Greenhouse Gas Emissions Analysis*. https://www.whatcomcounty.us/DocumentCenter/View/99245/NOAR-Appendix-E-ALA-Energy-Ferndale-Green-House-Gas-Analysis.

The core conclusion from the two reports, put side by side, is that the transshipment capacity declined from 2016 to 2023 by 7.7% (3,201 GPM (gallons per minute) to 2,954 GPM). It is not surprising that the GHG analysis, dependent on these figures, found a corresponding decrease of 16.3% (14.56 MT/year to 12.19 MT/year).

This decline in GPM capacity is contradicted by all other available evidence, including the actual increase in rail and vessel traffic since 2016. The claim is also illogical; why would a company complete dozens of upgrades at a terminal to have, at the end, a less effective terminal?

Most compellingly, though, the Northwest Clean Air Agency has already reached the opposite conclusion, stating that "[b]eginning in 2015, the facility also made a number of changes that were not permitted by NWCAA that increased the facility's capacity for propane deliveries and handling. These changes allowed the facility to make use of the greater capacity of replacement turbines to materially increase propane deliveries."[40]

Moreover, the methodological decision to utilize independent emissions rates from Environment and Climate Change Canada (ECCC) is extremely consequential to the outcome of the lifecycle analysis and is not sufficiently justified by the information provided in the report. In this case, the decision was to use ECCC's model for the emissions factors for well to gate emissions from Canadian wells for both propane and butane for 2023, rather than the GREET (Greenhouse gases, Regulated Emissions, and Energy use in Technologies) model otherwise generally used.

Comparison to the GREET 1_2023 and WA-GREET emission factors indicate that the ECCC factor is ~73% and 63% (respectively) of these values. This significant difference results in much lower projected emissions in 2023. This effect amplifies the impact of the predicted change in feedstock source discussed above.

It is clear that the use of this lower emissions factor paints ALA Energy's shifting focus on Canadian well-field gases in a more favorable light. But it is not clear that use of an alternative emission factor is justified. Without independent expert evaluation, we do not know whether these models equally weigh and contemplate all of the same contributions to global warming. If not, the apples-to-apples comparison is inappropriate, and the conclusions will be skewed.

[40] Letter dated October 15, 2021, from Mark Buford, Executive Director, Northwest Clean Air Agency, to Mark Personius, Director, Whatcom County Planning & Development Services.

There is significant evidence that emissions from Canadian well-field gases are systematically under-reported. According to the 2024 study, *Direct measurements of methane emissions from key facilities in Alberta's oil and gas supply chain*:

> Field measurements using a range of techniques have consistently shown that upstream O&G [oil and gas] emissions are 1.4 to 2.0 times higher than reported.[41]

This concern is amplified because ECCC does not provide an emission rate for butane from well-fields. So, the GHG analysis opted to simply use the same factor for both gases:

> Given the similar, and low fractions of butane and propane production in this process, it is reasonable to assume that the GHG emissions apportioned to propane are also applicable to butane production at the plant gate.[42]

The GHG analysis prepared also fails to address the possible use of Heavy Fuel Oil and scrubbers. It appears that twenty of the Very Large Gas Carriers in use since 2021 and those under current contracts have exhaust gas cleaning systems, better known as scrubbers, that enable ships to use Heavy Fuel Oil (HFO) and discharge the pollutants scrubbed from the smokestack. 81.85 percent of scrubbers are "open" and continuously discharge scrubber washwater overboard; only one percent of scrubbers are "closed" and the remainder are "hybrid."[43] Scrubbers remove the highly acidic sulfur oxides from ship exhaust stacks along with the toxic non-combusted components of the Heavy Fuel Oil and combustion by-products, including heavy metals, polycyclic aromatic hydrocarbons (PAHs), nitrates, nitrites, and particulate matter.[44]

From a review of the Vessel General Permit annual reports of the Very Large Gas Carriers that exports from the ALA Energy Terminal between January 2021 and April 2024 and those currently under contract, it appears that twenty of the Very Large Gas Carriers have scrubbers. Ships that use heavy fuel oil with scrubbers also produce significantly more air

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[41] Hugh Z. Li, Scott P. Seymour, Katlyn MacKay, James S. Wang, Jack Warren, Luis Guanter, Daniel Zavala-Araiza, Mackenzie L. Smith, Donglai Xie. (2024). *Direct measurements of methane emissions from key facilities in Alberta's oil and gas supply chain*. Science of The Total Environment, Volume 912, 2024, 169645, ISSN 0048-9697, https://doi.org/10.1016/j.scitotenv.2023.169645.

[42] NOAR Appendix E-ALA Energy Ferndale Green House Gas Analysis. (2025). *ALA Energy Ferndale Greenhouse Gas Emissions Analysis*. Page 5. https://www.whatcomcounty.us/DocumentCenter/View/99245/NOAR-Appendix-E-ALA-Energy-Ferndale-Green-House-Gas-Analysis.

[43] International Maritime Organization (IMO) (2025). *Uptake of Alternative Fuels*. https://futurefuels.imo.org/latest-information/fuel-uptake/.

[44] Pacific Environment. (2025). *Poison in the water: The call to ban scrubber discharge*. https://www.pacificenvironment.org/wp-content/uploads/2025/01/Poison-in-the-water.pdf.

pollution than ships using low-sulfur fuels, which contributes to asthma, cardiovascular disease, and cancer.[45] If the Very Large Gas Carriers use of scrubbers continues, that would mean a significant increase in lifecycle GHG emissions, in addition to the significant water quality and health impacts. It is unnecessary, and, for economic reasons it is unlikely that a vessel would use a scrubber while burning diesel. This contradicts the assumption in the Lifecycle GHG analysis.

CO2 emissions are slightly higher for HFO compared to diesel, on an energy basis. But black carbon emissions from this fuel are much, much higher compared to diesel. The International Council on Clean Transportation 2020 report, *Air emissions and water pollution discharges from ships with scrubbers,* makes this clear:

> For climate pollutants, including CO2 and black carbon (BC), using HFO with scrubbers results in higher emissions than MGO [marine gas oil]. Average CO2 emissions were 4% higher using HFO with a scrubber compared with MGO. BC emissions using HFO with a scrubber were expected to be 81% higher than using 0.07% sulfur MGO in a medium-speed diesel (MSD) engine and more than 4.5 times higher than using MGO in a slow-speed diesel (SSD) engine. This is because both MSD and SSD engines emit substantially more BC emissions when using residual fuels such as HFO compared with distillate fuels like MGO (Comer, Olmer, Mao, Roy, & Rutherford, 2017; Faber et al., 2020; Olmer, Comer, Roy, Mao, & Rutherford, 2017). Therefore, even though the scrubber removes some BC from the exhaust (roughly 10%), ships using HFO with scrubbers still emit more BC than those using MGO. [46]

While the climate impacts of black carbon are difficult to evaluate--because they are dependent on location of emissions, density, air mixing and many other factors--it is increasingly well understood that reducing black carbon is a particularly important climate mitigation strategy, especially in the short term.

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[45] The International Council on Clean Transportation (ICCT). (2020). *Air emissions and water pollution discharges from ships with scrubbers* (https://theicct.org/publication/air-emissions-and-water-pollution-discharges-from-ships-with-scrubbers/) and Puntoni R, Ceppi M, Gennaro V, Ugolini D, Puntoni M, La Manna G, Casella C, Merlo DF. *Occupational exposure to carbon black and risk of cancer.* (2004). Cancer Causes Control.15(5):511-6. https://pubmed.ncbi.nlm.nih.gov/15286471/

[46] The International Council on Clean Transportation (ICCT). (2020). *Air emissions and water pollution discharges from ships with scrubbers*. Page 16. https://theicct.org/publication/air-emissions-and-water-pollution-discharges-from-ships-with-scrubbers/

Several studies have suggested that black carbon, a component of soot, may be the second or third most important climate driver behind CO2 on a global scale, and might even be more important in certain regions (Jacobson, 2000; Hansen et al., 2000; Ramanathan and Carmichael, 2008; Shindell and Faluvegi, 2009). Some have also noted that, unlike the case for CO2, soot reductions produce nearly immediate results because soot is removed from the atmosphere within weeks (Jacobson, 2002). In addition, soot emissions can cause direct effects on health and may affect precipitation patterns on a local and regional scale. The available evidence suggests that appropriately targeted soot controls have the potential to accelerate and enhance both climate and air quality related public health benefits as a complement to overall GHG-based climate strategies (Jacobson, 2007; Hansen et al., 2000; Wallack and Ramanathan, 2009; Grieshop et al., 2009). [47]

The climate impact of any HFO use, including HFO with scrubbers, should be accounted for if it is to be allowed.

An Environmental Impact Statement, prepared by an independent third party, can provide independent analysis to evaluate the accuracy of the GHG models and the facility capacity reports. It would be disheartening if the environmental review decision accepts an unverifiable, counterintuitive and discredited analysis with results shrouded behind dozens of pages of redactions. Whatcom County should require better. The public deserves better.

An Environmental Impact Statement can also explore mitigation measures that would address the probable adverse environmental impacts. Some measures should be required on an ongoing basis, scaled each year to the actual lifecycle emissions (driven primarily by increases in throughput) as compared to the lifecycle emissions prior to the unpermitted projects. Mitigation should consider payments made on an annual basis based on the actual transshipment of fossil fuels above the historic baseline. Consideration could be given to support projects locally that reduce greenhouse gas emissions, improvements to public facilities or partnerships with Tribes to develop clean energy resources, while supporting other community priorities like reduced energy costs for low-income residents and jobs in the community. Such projects could align with the currently unfunded Whatcom County Climate Plan, Strategies 3, 4, and 5.[48]

[47] Pew Center on Global Climate Change. (2009). *Black Carbon: A Science/Policy Primer*. Page 2. https://www.c2es.org/wp-content/uploads/2009/12/black-carbon-primer.pdf.
[48] Whatcom County. (2021). *Whatcom County Climate Action Plan*. https://www.whatcomcounty.us/4243/Climate-Action-Plan.

But first, the public and Whatcom County need complete, verified data that considers reasonable alternatives and adequate mitigation measures that are provided for public and agency review in an EIS.

The opportunity for these emissions to be addressed exists only during this short window. If Whatcom County does not act to gather environmental information before imposing mitigation on these emissions as a condition of SEPA and underlying permits, we will likely never get the chance to revisit this decision.

d) Water Quality Impacts

The environmental review fails to fully consider the water quality impacts from dredging that is anticipated to be needed to accommodate the deep draft vessels, and the discharge from the vessels from scrubbers and other pollutants.

AltaGas provided a list of terminal vessels with their summer draft and cargo capacity.[49] None of the Very Large Gas Carriers currently under contract have a draft that is less than **36.84** feet. Ten of the Very Large Gas Carriers under contract have drafts that are **over 40** feet, and the average draft of all the Very Large Gas Carriers under contract is **39.34** feet. As a result, the Very Large Gas Carriers must berth multiple times to fully load which increases vessel traffic impacts. A "partially laden Terminal Vessel may deberth and transit to the Cherry Point Anchorage or the Vendovi Anchorage…"[50]

The National Marine Fisheries Service has identified "dredging and dredge material disposal" as one of "12 types of human activities that have the potential to affect the habitat features essential to the conservation of Southern Resident killer whales."[51] The need for future dredging is not speculative, and as such should be considered as part of the proposal. In 2020, Petrogas obtained a permit to dredge up to 12,000 cubic yards of sediment to re-establish -38 feet of depth at Mean Lower Low Water to reduce the frequency of reberthing. The proposal said the "reduction in tugboat traffic and mooring operations will result in a safer overall operation and reduce environmental impacts".[52]

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[49] Letter to Whatcom County from Nicole Finnamore, Director, Export Development, Regulatory, AltaGas Ltd. June 10, 2025. ENGO Appendix B List of Terminal Vessels Current Contracts.

[50] NOAR Appendix F - Marine Vessel Analysis. (2025). *ALA Energy Ferndale Terminal, Analysis of Vessel Noise Impacts on Southern Resident Killer Whales.* Page 29. https://www.whatcomcounty.us/DocumentCenter/View/99246/NOAR-Appendix-F---Marine-Vessel-Analysis.

[51] NOAA National Marine Fisheries Service. (2021). *Revision of the Critical Habitat Designation for Southern Resident Killer Whales Final Biological Report.* Page ii. https://repository.library.noaa.gov/view/noaa/31587.

[52] Whatcom County. (2020). *SEPA2020-00018.* https://www.whatcomcounty.us/DocumentCenter/View/51984/2-shr2020-00006-Project-Proposal-20200302.

Only four of the 59 Very Large Gas Carriers under contract have a summer draft of less than 38 feet. Since 93% of the vessels under contract have drafts deeper than what was dredged in 2020, it is likely that ALA Energy will either request additional dredging to maintain the -38-foot MLLW (Mean Lower Low Water) depth or to dredge even deeper.

No consideration of further activity related to or connected to this proposal is included in the environmental review, including dredging to maintain depths for Very Large Gas Carriers. The environmental impacts in the Cherry Point Aquatic Reserve from the release of potentially toxic sediments at the pier from drafts that exceed 35 feet and the multiple berthings and anchoring required to load the Very Large Gas Carriers as well as the dredging need to be evaluated.

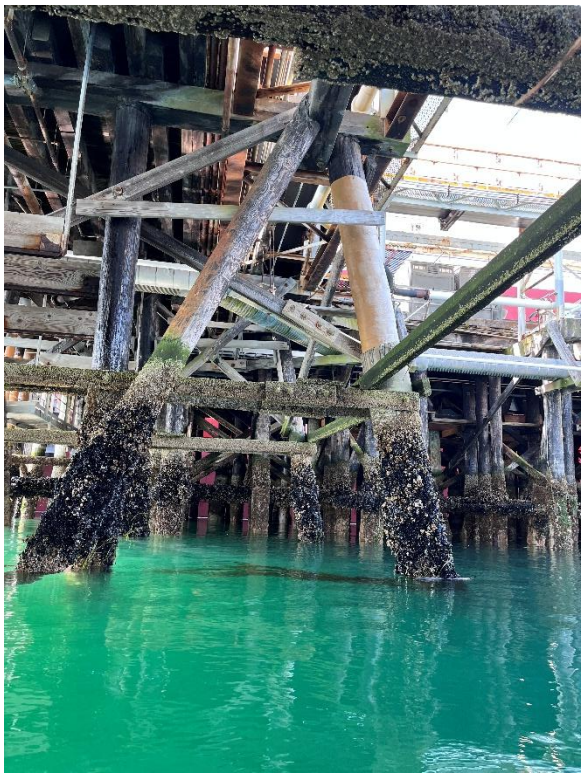
The ALA Energy Terminal pier has decades of toxic materials in the sediments due to the multitude of creosote pilings, some of which are still in place. According to DNR:

> Another threat to sediment quality in the reserve is the existence of creosote pilings. Creosote-related contaminants have been documented to be toxic to some marine biota including Pacific herring embryos and can readily leach into the aquatic environment (Duncan et al. 2017; Vines et al. 2000; Xiao et al. 2002). Once released, heavy PAHs sink and can accumulate in marine sediments which poses a threat to some bottom dwelling organisms (Malins et al. 1985). Within the last decade 1,497 creosote pilings existed within close proximity to the Cherry Point Aquatic Reserve. Of the 1,497 pilings, 709 have either been removed/treated or plan to be within the next 5 years. Although there have been significant efforts by the industries to remove and/or wrap creosote pilings within their leaseholds, the remaining pilings will continue to cause ecological exposure and potential impacts from creosote-impaired water quality, and contaminated sediments adjacent to the pilings.[53]

No information was provided in the environmental review regarding the number, location or condition of existing creosoted pilings at the pier, nor compliance with the DNR lease to "accelerate the normal piling repair or replacement to an average rate of 10 piles per year (about twice the normal replacement rate)..."[54]

[53] Washington State Department of Natural Resources. (2024). *Cherry Point Aquatic Reserve Management Plan*. Appendices A – G. Page 43. https://dnr.wa.gov/sites/default/files/2025-03/aqr_resv_cp_appendices.pdf.
[54]NOAR Appendix B.3: Marine Vessel Operations. (2024). *DNR Lease No. 20-A08488, Exhibit B* https://www.whatcomcounty.us/DocumentCenter/View/86717/Marine-Vessel-Analysis-20240628.

No information was provided regarding sediment and the presence of toxic substances around the pier. Additional testing of the sediment around the pier should have been provided as the number of ships calling on the terminal, most of which have to berth multiple times per load, has a probable adverse impact on the environment.



Intalco (ALA Energy) Pier, 9-9-25, Image by D. Stalheim

No analysis was provided about the draft of Very Large Gas Carriers as compared with the ships used to transport alumina ore. If the ships used to transport alumina ore were Handysize bulk carriers the draft would have been 32.81 feet.[55]

One of the Very Large Gas Carriers that has been used for exports and is currently under contract with the Ferndale Terminal, the AQUAMARINE PROGRESS, uses an "open" scrubber that constantly discharges exhaust pollutants overboard. The total amount of scrubber discharge (tons), heavy metals (kilograms; kg), and PAHs (kg) discharged while in the Salish Sea were calculated using data provided in the Vessel General Permit reports for the AQUAMARINE PROGRESS in 2021, 2022, and 2023, in combination with the amount of time the vessel spent in the area. While concentrations are typically used to assess pollutant levels, it's impossible to determine the concentrations of the pollutants discharged without having a better understanding of variables like diffusion rate and the underlying wave and current dynamics. For simplicity, and to highlight the point that a large number of dangerous pollutants were released in the AQUAMARINE PROGRESS scrubber discharge, we simplified the calculations to focus solely on the amount of each pollutant that was released into the environment. Our calculations were modeled after the study Vessel Pollution in Pacific Canada by Environment and Climate Change Canada for the Government of Canada.[56]

[55] Bulk Carrier Guide. (2010). *Bulk Carrier Guide*. https://bulkcarrierguide.com/size-range.html.
[56] Commission for Environmental Cooperation (2024). *Vessel Pollution in Pacific Canada: Government of Canada Response to Submission SEM 23-007*. https://www.cec.org/wp-content/uploads/wpallimport/files/23-7-rsp_en.pdf.

In 2022, 96,633 tons of scrubber discharges went into Washington State water. The following year, more than 700 kg of nitrates and nearly 70 kg of zinc were discharged into the Salish Sea from the AQUAMARINE PROGRESS alone. Heavy metals are elemental and therefore cannot biodegrade; cannot be metabolized or broken down into less toxic substances by living organisms. When heavy metals and PAHs are absorbed by marine organisms they can cause weakened immune systems, organ damage, and in some cases, death.[57] These contaminants can also negatively impact top predators, like Southern Resident killer whales and humans as the pollutants bioaccumulate up the food chain.[58]

Table: Scrubber discharge (tons) and the total amount of nitrates, heavy metals, and polycyclic aromatic hydrocarbons (PAHs) (kilograms; kg) discharged overboard while the AQUAMARINE PROGRESS was in the Salish Sea.

PARAMETER	2021	2022	2023
Scrubber Discharge (tons)	40,469.55	96,533.70	54,416.12
Nitrates (kg)	80.22	155.81	708.81
Arsenic (kg)	0.63	1.50	1.54
Cadmium (kg)	0.09	0.37	0.15
Chromium (kg)	0.68	1.63	4.62
Copper (kg)	148.98	50.02	3.08
Lead (kg)	3.48	2.79	1.54
Nickel (kg)	3.93	10.41	1.54
Selenium (kg)	NA	NA	1.54
Thallium (kg)	NA	NA	1.54
Vanadium (kg)	13.52	55.22	3.08
Zinc (kg)	46.41	28.70	69.34
PAHs (kg)	0.26	0.27	0.35

Source: Vessel General Permit Reports for the AQUAMARINE PROGRESS in 2021, 2022, and 2023

The bioaccumulation of heavy metals and toxic chemicals in the food chain affects both wildlife and human health.[59] A recent study found that extremely low concentrations – just

[57] Zhang et al. (2024). *Toxicity of oil components to marine organisms: Insights from water-soluble fractions.* Scientific Reports, 14, Article 71547. https://www.nature.com/articles/s41598-024-71547-4#:~:text=Oil%20components%2C%20including%20water%2Dsoluble,%2C10%2C11%2C12.

[58] Kwiatkowski et al. (2024). *Health risks from chemical exposures in vulnerable populations.* Journal of Environmental and Public Health, 20(3). https://journals.sagepub.com/doi/10.1177/1934578X241311451#:~:text=21%2C22,susceptibilities%20that%20increase%20health%20risks.

[59] Pacific Environment. (2024). *Ship pollution: From air to ocean* (https://www.pacificenvironment.org/wp-content/uploads/2024/08/Ship-pollution-From-air-to-ocean-Scrubbers_August-2024.pdf) and

0.001% – of the discharges from scrubbers severely affect the larval development and reproductive success of copepods, which are vital to marine food webs. This study shows that scrubber discharges could have severe impacts on the copepod population, which in turn could impact the entire aquatic food chain.[60]

Data from the Vessel General Permit reports also shows that the pH of the scrubber discharges from the AQUAMARINE PROGRESS ranged from 2.53 - 6.02. Acidification is a growing concern for Salish Sea ecosystems as the ecosystem is naturally more acidic than other waters, primarily due to its high rates of summer upwelling, leaving the ecosystem especially susceptible to ocean acidification from anthropogenic activities. Even small changes in pH can pose a significant risk to marine life, with calcifying organisms like shellfish being the most likely to be negatively impacted. For example, Pacific oysters can survive brief dips below a pH of 7.7, but anything below that significantly impacts their chances of survival. Washington State's shellfish industry is worth $53.3 million,[61] but the industry has been struggling for the last couple of decades as a result of ocean acidification, with some years experiencing a 100% mortality rate in young hatchery-raised oysters due to the acidic waters.[62] Ocean acidification also has cultural consequences, as coastal Indigenous communities have been harvesting shellfish since time immemorial. The pH of scrubber discharge water is extremely acidic and is likely to cause significant mortalities to marine life throughout the Salish Sea, impacting the ecosystem, fisheries success, and longstanding cultural traditions.

An Environmental Impact Statement (EIS) is needed to ensure that all existing and potential adverse environmental impacts are addressed, all reasonable alternatives are considered, and the mitigation measures address the probable adverse environmental impacts. Additional information to support our comments is included on the following pages.

Pacific Environment. (2025). *Poison in the water: The call to ban scrubber discharge* (https://www.pacificenvironment.org/wp-content/uploads/2025/01/Poison-in-the-water.pdf).

[60] Picone, Marco et al. (2023) *Impacts of exhaust gas cleaning systems (EGCS) discharge waters on planktonic biological indicators*. Marine Pollution Bulletin, Volume 190. 114846, ISSN 0025-326X. https://www.sciencedirect.com/science/article/pii/S0025326X23002771.

[61] US Environmental Protection Agency (EPA). (2021). *Marine Water Quality in the Salish Sea*. https://www.epa.gov/salish-sea/marine-water-quality.

[62] Ocean Acidification International Coordination Centre. (2018). *The race for adaptation in an increasingly acidic Salish Sea*. https://news-oceanacidification-icc.org/2018/03/14/the-race-for-adaptation-in-an-increasingly-acidic-salish-sea/.

Capacity and Throughput

The undersigned have been following this unpermitted expansion since the NWCAA investigation and Notice of Violation was reported in January 2022,[63] and the $4 million penalty payment was reported in January 2023.[64]

For over two years, the undersigned and the public have been waiting for Whatcom County to fulfill its stated permitting compliance pathway:

> The County has determined that, at a minimum, Petrogas must apply for and obtain a Conditional Use Permit, certain other building and construction permits, and prepare an Environmental Impact Statement (EIS) under SEPA that evaluates facility modifications and changes in the amount of product throughput since the last SEPA evaluation for the plant was completed in 2016.
> ...
> Mark Personius, Whatcom County Planning and Development Services Director said: "We have reached agreement with Petrogas on a compliance process to address and evaluate changes made at the Petrogas plant. The path forward will allow the public to participate in a transparent public review of permit applications and to provide comment on preparation of a full environmental impact statement under the state's SEPA process, including evaluation of appropriate conditions for the facility."[65]

Currently, propane and butane are delivered to the Ferndale terminal via rail, truck, and pipeline and used locally or "loaded onto Very Large Gas Carriers (VLGCs) for shipment to overseas markets, offering our global customers significant advantages with shorter shipping distances compared to the U.S. Gulf Coast."[66]

Included in the Notice of Application are two reports provided by Burns and McDonnell, the *Current Facility Capacity Evaluation Report* and the *Ferndale Capacity Evaluation Report (Butane Refrigerated Storage: Prior to Aug 15, 2016)*. These reports conclude, after 31 pages

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[63] Bellingham Herald. January 3, 2022. *Whatcom officials in 'uncharted territory' after facility accused of unpermitted expansion*. By Ysabelle Kempe. https://www.bellinghamherald.com/news/local/article256827867.html.

[64] Cascadia Daily News. January 18, 2023. *Petrogas to pay $4 million penalty after unpermitted expansion*. By Julia Lerner. https://www.cascadiadaily.com/2023/jan/18/petrogas-to-pay-4-million-penalty-after-unpermitted-expansion/.

[65] Whatcom County. (2023). *Whatcom County and Petrogas West LLC Reach Agreement on Compliance Path for Cherry Point Facility*. https://www.whatcomcounty.us/CivicSend/ViewMessage/message/195837.
See also: Cascadia Daily News. March 8, 2023. *Whatcom County reaches agreement on Cherry Point expansion: The path forward will allow the public to participate in a transparent public review.* By Julia Lerner. https://www.cascadiadaily.com/2023/mar/08/whatcom-county-reaches-agreement-on-cherry-point-expansion/.

[66] AltaGas (2025). *ALA Energy Ferndale Terminal*. https://www.altagas.ca/infrastructure/operations/ala-energy-ferndale-terminal.

of redacted information, that the Ferndale Terminal's transshipment capacity declined from 2016 to 2023 by 7.7% (3,201 U.S. gallons per minute (GPM) to 2,954 GPM).

This finding is in error and needs to be corrected so as not to set the facility's capacity higher than it really is. The County apparently accepted the applicant's current total maximum transshipment capacity for fossil fuels to be a throughput of 2953 GPM (101,245 BBL/D) based on the Burns & McDonnell (6/8/2023) report without any independent review. Unfortunately, that report did not consider both factors that are required to determine capacity spelled out in the definition of Maximum Transshipment Capacity in WCC 20.97. The Burns & McDonnell report only considered "The maximum physical limit of a facility's capacity for off-loading," but failed to consider the other part of that definition which also requires consideration of:

> Shipment limitations imposed by county, state or federal authorities that can be demonstrated by the applicant to restrict the frequency and/or annual amount of fossil fuel shipments at its facility. If any such limitations form the basis of a maximum transshipment capacity calculation, then any future increases in fossil fuel shipments above those previously imposed limits would constitute an increase in maximum transshipment capacity.

While the Burns & McDonnell report came up with a capacity figure of "2953 GPM (101,245 BBL/D)" which equates to 36,954,425 barrels/year, the DNR lease for the pier at the terminal includes a limitation of 48 ships per year. The current largest gas carrier in operation can hold 585,000 barrels[67], which for 48 ships per year equates to a capacity of 28,080,000 barrels/year if the applicant used the largest ships available. So, the capacity limitation based on the DNR lease for the pier is about 25% less than what is used in the MDNS. This significant discrepancy needs to be corrected.

In reality, the applicant does not currently use the largest ships available and from what we can tell the average capacity for the ships currently contracted with is 532,206 barrels, which equates to 25,545,888 barrels at 48 ships per year, an even lower maximum transshipment capacity. Neither the applicant nor the County appear to have considered these capacity limitations, or how any shared use agreement between Intalco and PetroGas that was in effect even after the time PetroGas purchased the pier in 2016 may have limited the capacity to fewer than 48 ships per year.

The claim by ALA Energy that there has been a decline in transshipment capacity is contradicted by the Northwest Clean Air Agency's (NWCAA's) October 15, 2021, letter to Whatcom County, that states:

[67] Marine Insight (2025). *Top 10 Biggest LPG Carriers in the World*. https://www.marineinsight.com/types-of-ships/10-biggest-lpg-carriers/

Northwest Clean Air Agency (NWCAA) has issued the enclosed Notice of Violation (NOV) to the Petrogas Ferndale Terminal facility located in the Cherry Point Industrial Area. The alleged violations address an unpermitted increase in the Petrogas facility's emissions of volatile organic compounds (VOCs) resulting from a material increase in the volume of propane delivered to the facility, beginning in 2015 and continuing through the present.

In 2016, NWCAA approved the facility's application to replace two aging compressors, which the facility stated were near end of life. The SEPA [State Environmental Policy Act] checklist submitted to Whatcom County for the compressor replacement project stated the "[c]urrent use of rail and shipping facilities will not change as a result of this project" and "the project will not increase the total number or frequency of rail cars to and from the terminal."[68] In 2020, Petrogas applied to install a new permanent Marine Loading Arm and the environmental checklist said "No" to the question "Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal?"[69]

Beginning in 2015, the facility also made a number of changes that were not permitted by NWCAA that increased the facility's capacity for propane deliveries and handling. These changes allowed the facility to make use of the greater capacity of replacement turbines to materially increase propane deliveries. The enclosed NOV identifies violations of air quality permitting and regulatory requirements related to the facility changes, the increase in propane throughput, and the resulting increase in VOC emissions.

While materials may be received at the facility by pipeline, truck, and rail, most of the throughput expansion since 2015 has been attributable to rail receipts. Railcar unloading expanded from an average of about 1,000 cars/year to up to 16,633 railcars in 2019. Ship traffic also expanded from 2 - 5 berthing events per year to 26 in 2019.
...
NWCAA wanted to call this matter to Whatcom County's attention, since the County was the lead agency for SEPA purposes for the 2016 compressor replacement project and could be the SEPA lead agency for any future permitting action that stems from the enclosed NOV.[70]

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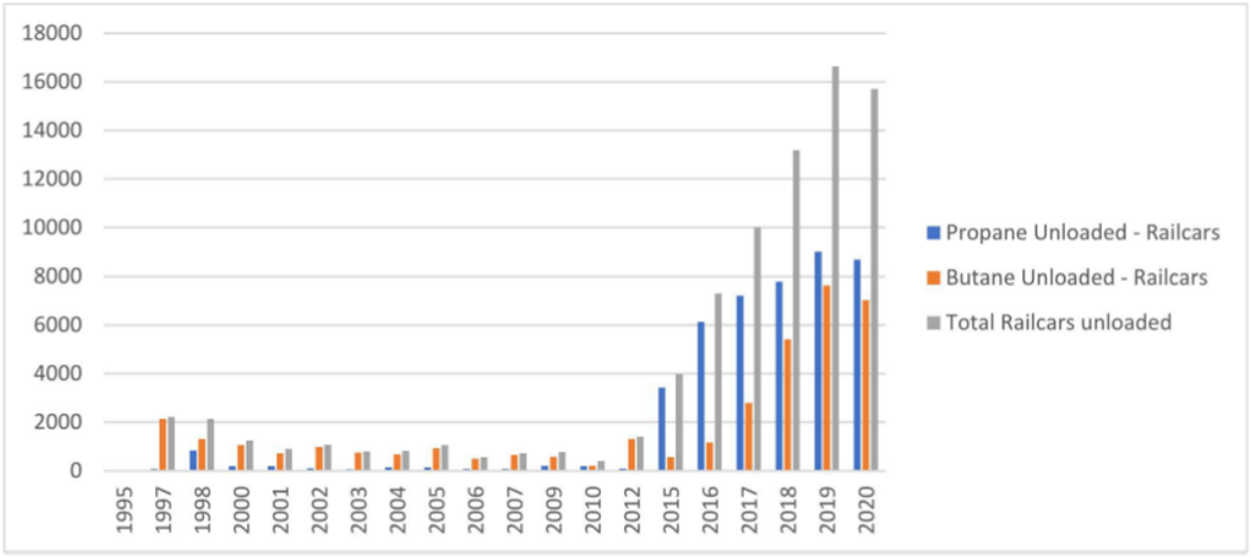
[68] Whatcom County. (2016). *SEP2016-00004*. https://apps.ecology.wa.gov/separ/Main/SEPA/Record.aspx?SEPANumber=201604703.
[69] Whatcom County. (2020). *SEP2020-00007*. https://apps.ecology.wa.gov/separ/Main/SEPA/Document/DocumentOpenHandler.ashx?DocumentId=93201
[70] Letter dated October 15, 2021, from Mark Buford, Executive Director, Northwest Clean Air Agency, to Mark Personius, Director, Whatcom County Planning & Development Services.



The number of railcars that unloaded propane and butane at the ALA Energy Terminal.[71]

In ALA Energy's recent response to comments, they state:

> ALA Energy has … completed a historical review of the terminal for projects from August 15, 2016-present, to resolve allegations that we expanded capacity during that time…This third-party historical review confirmed that we actually reduced maximum transshipment capacity by 8,500 barrels per day, demonstrating that a Major Project Permit (MPP) and Conditional Use Permit (CUP) are not required.

And:

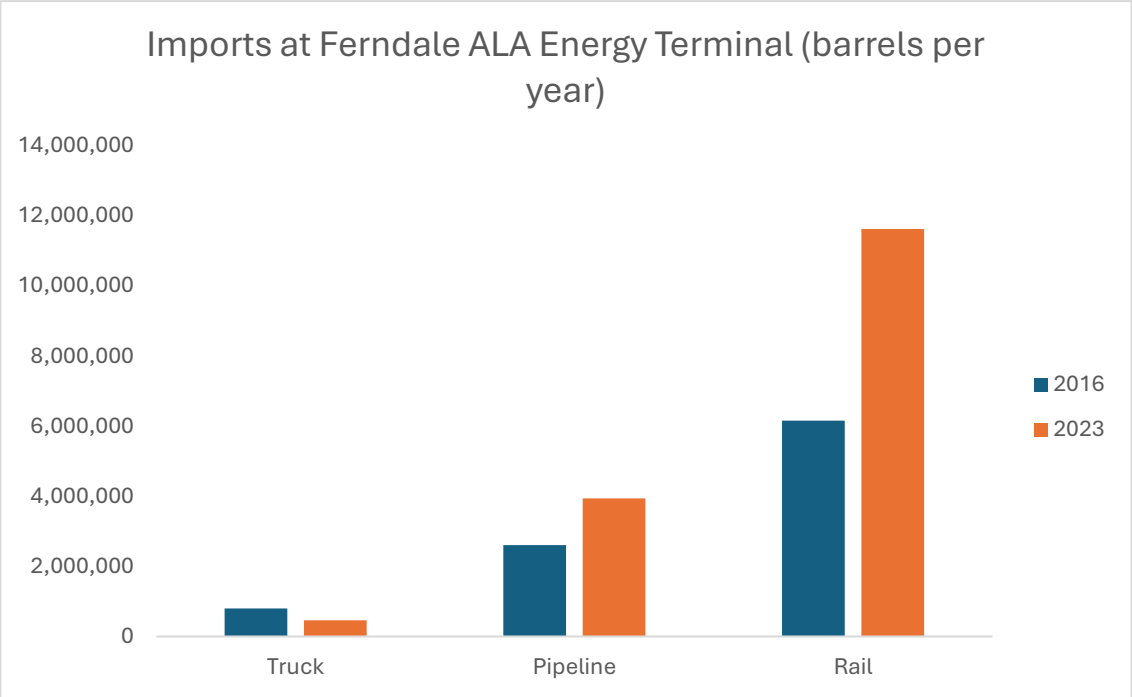
> Defining Capacity vs. Throughput: Some of the commenting organizations confused throughput (which is not regulated by the County code) with capacity (which is regulated). To keep it simple, imagine a hotel with 100 rooms. The capacity is 100, but the throughput is how many rooms are actually occupied at any given time. Our projects reduced capacity.[72]

These statements are meant to highlight the fact that capacity, not throughput, is the only permitting concern for Whatcom County. However, throughput and the total amount of propane and butane imported and exported at the Ferndale Terminal, can dramatically impact the environment and should be considered when determining whether an EIS is needed. While the County code addresses capacity, SEPA is concerned with impacts. Our review of the file reveals that the unpermitted projects increase the amount of product handled by the terminal, which has impacts that must be reviewed. The facts on the ground–significantly increased rail and vessel transits since 2016–support this

[71] *Ibid*.
[72] AltaGas. (2024). *ALA Energy Response to Comments.* Page 1. https://www.whatcomcounty.us/DocumentCenter/View/90881/ALA-Energy-response-to-Comments-20241101.

assessment. To use ALA's hotel analogy: the 100-room hotel has for the last few years never had more than 20 rooms occupied, because the local health code requires one housekeeper for every 20 rooms, and the hotel only had one housekeeper. When the hotel hires a second housekeeper, it can now fill 40 rooms, effectively doubling its practical capacity as well as its actual throughput of guests.

Data provided by ALA Energy shows that the Ferndale Terminal's exports increased from 2016 to 2023 by 6,294,640 barrels; 5,868,683 barrels by Very Large Gas Carriers.[73] The total number of propane and butane barrels (bbl) imported by sector in 2016 and 2023.[74] The total number of propane and butane barrels (bbl) exported by sector in 2016 and 2023.[75]

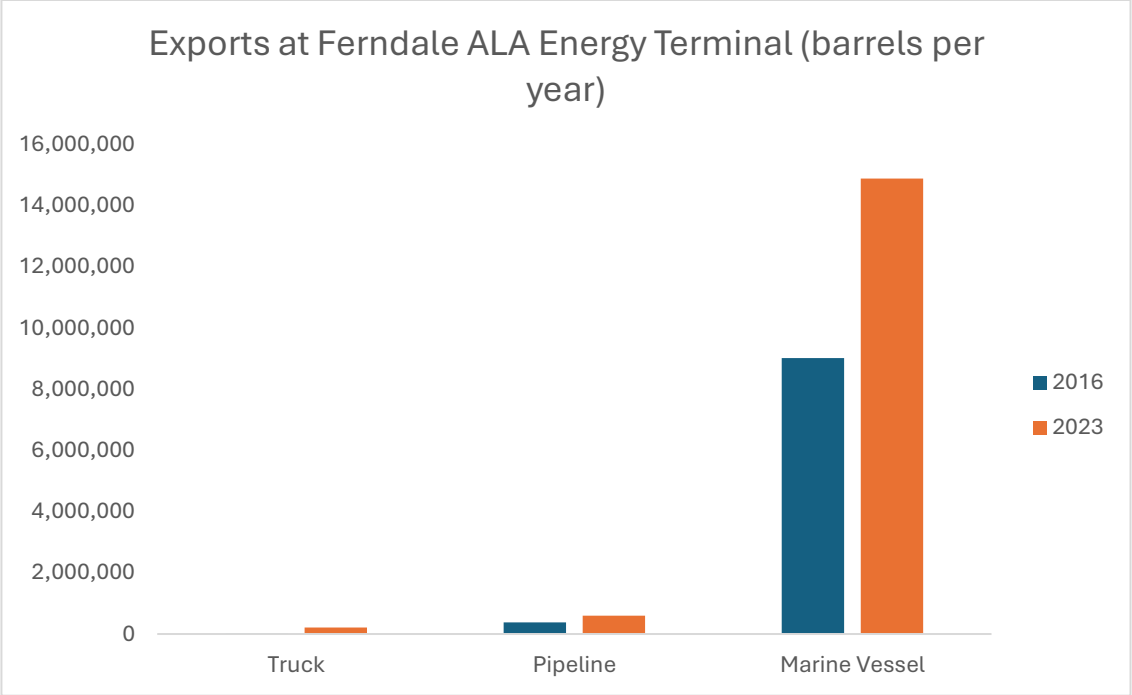


The total amount of propane and butane barrels (bbl) imported by sector in 2016 and 2023. Data source: ALA Energy, Green House Gas Analysis.

[73] NOAR Appendix E-ALA Energy Ferndale Green House Gas Analysis. (2025). *ALA Energy Ferndale Greenhouse Gas Emissions Analysis, Table 2-4. Import and Export for 2016 and 2023 by Product and Mode.* Page 8. https://www.whatcomcounty.us/DocumentCenter/View/99245/NOAR-Appendix-E-ALA-Energy-Ferndale-Green-House-Gas-Analysis.

[74] NOAR Appendix E-ALA Energy Ferndale Green House Gas Analysis. (2025). *ALA Energy Ferndale Greenhouse Gas Emissions Analysis.* https://www.whatcomcounty.us/DocumentCenter/View/99245/NOAR-Appendix-E-ALA-Energy-Ferndale-Green-House-Gas-Analysis.

[75] *Ibid.*



The total amount of propane and butane barrels (bbl) exported by sector in 2016 and 2023. Data source: ALA Energy, Green House Gas Analysis.

Throughput and the total amount of propane and butane imported and exported at the terminal can dramatically impact the environment and should be considered when determining whether an EIS is needed. The prior unpermitted projects' increase in both capacity and throughput from 2016 to 2023 have been omitted from the environmental review process to date. The increase in capacity may have a probable significant impact on the environment, requiring a threshold determination of significance and preparation of an EIS.

Vessel Traffic and Cargo

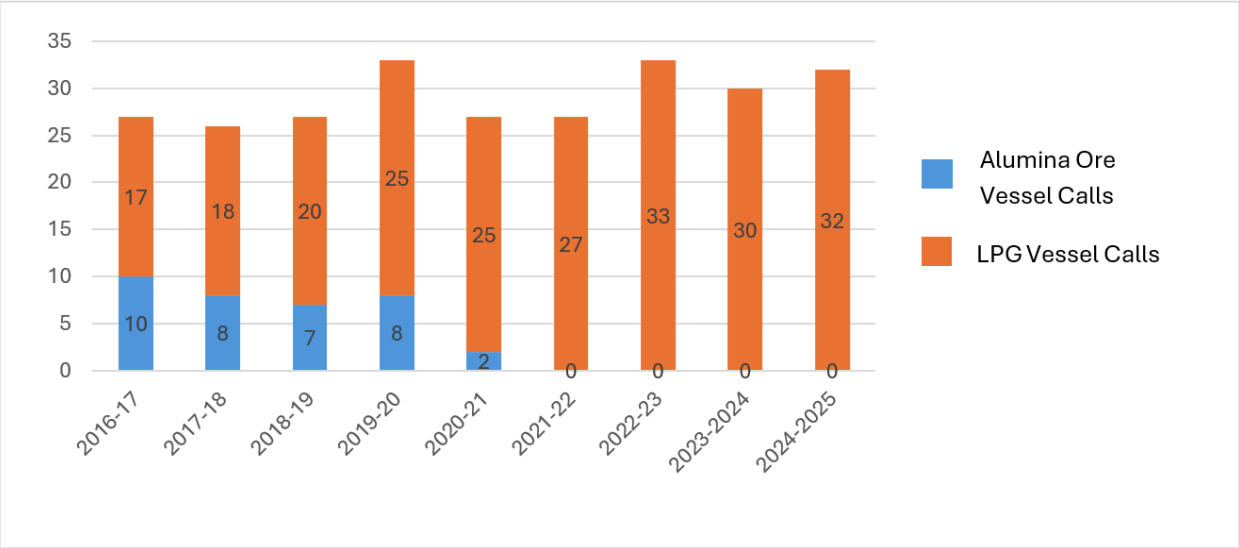
AltaGas's ALA Energy claims they have the lease rights for up to 48 Very Large Gas Carriers per year. AltaGas states that "the marine vessel traffic from the Terminal … is existing vessel traffic that has been in operation with an imposed vessel limit since February 1, 2003."[76]

No historical records of 48 vessels calling at the terminal in any year have been provided, nor is there any SEPA review that shows that the environmental impacts of 48 vessels per year have ever been evaluated and/or whether those adverse impacts are adequately mitigated by the MDNS. AltaGas states:

[76] Letter to Whatcom County from Nicole Finnamore, Director, Export Development, Regulatory, AltaGas Ltd. June 10, 2025. Page 1.

Since 2016, the total vessel traffic at the Pier has ranged between 26 and 35 vessels annually.[77]

However, until 2022, this vessel traffic included both Very Large Gas Carriers and ships transporting alumina ore. The annual number of Very Large Gas Carriers that exported propane and butane from AltaGas's ALA Energy Terminal almost doubled from February 1, 2016 to January 31, 2025. [78]



The annual number of Very Large Gas Carriers at the Ferndale Terminal has nearly doubled since 2016.[79]

The change in cargo and number of vessels berthing at the pier needs to be evaluated as part of the environmental review process because the potential is for:

1. Explosion risks and subsequent impacts,
2. Underwater noise, ship strikes and physical disturbance, and pollution/contaminants impacts.
3. Cumulative impacts and accident risks.

1) <u>Explosion Risks and Subsequent Impacts</u>

The potential environmental impacts and risk profile of Very Large Gas Carriers as compared to ships that transport alumina ore needs to be thoroughly reviewed. Very Large

[77] Letter to Whatcom County from Nicole Finnamore, Director, Export Development, Regulatory, AltaGas Ltd. June 10, 2025, and AltaGas. (2024). *Appendix B.3: Marine Vessel Operations.* https://www.whatcomcounty.us/DocumentCenter/View/86973/Appendix-B3-Marine-Vessel-Analysis.

[78] Public records request received by Friends of the San Juans from DNR on March 13, 2025. Note that the DNR lease year is February 1 to January 31. The data provided begins February 1, 2016 and ends on January 31, 2025. The numbers included omit any vessels at the pier in January 2016.

[79] *Ibid.*

Gas Carriers have a higher risk of catastrophic explosions compared with ships that transport alumina ore, given that propane is highly flammable.[80] Alumina doesn't pose a combustion or explosion risk under normal shipping conditions.
In January 2019, a deadly at-sea explosion occurred during the transfer of LPG between two tankers in the Black Sea, the VENICE and the MAESTRO. Of the 32 crew that were onboard the ships at the time of the incident, 10 perished in the fire, and another 10 remained missing after the incident and are presumed dead.[81]

On July 6, 2025 the LPG tanker ECO WIZARD exploded in the Gulf of Finland while berthed and carrying out LPG unloading and loading operations at the port of Ust-Luga, Russia. All 23 crew members were evacuated safely, but the explosion caused liquid ammonia to leak from the vessel. The extent of damage to the vessel and the amount of ammonia that leaked into the environment before being contained is unclear. Ammonia spills can kill marine life, enhance eutrophication, deoxygenate waters, and impact air quality by releasing nitrous oxides – potent greenhouse gases. LPG is highly flammable and poses a significant threat to health, safety, and the environment.

The environmental review does not identify the probable adverse environmental impact of the propane and butane, which are heavier than air[82] and odorless, on surface dependent air-breathing organisms such as marine mammals, resident and migratory birds, let alone the public who may be fishing, crabbing or walking the nearby public beaches. What possible mitigation measures might there be in the event that propane escapes from the Terminal pipeline or a marine vessel?

2) <u>Underwater Noise, Ship Strikes and Physical Disturbance, and Pollution/Contaminants Impacts</u>

The DNV report, *ALA Energy Ferndale Terminal: Analysis of Vessel Noise Impacts on Southern Resident Killer Whales*, does not address the additional information and analysis

[80] Superior Propane. (2021). *Propane Safety Data Sheet*. https://www.superiorpropane.com/-/media/spcw/pdf/propane-ghs-sds-2021-09-17_en.ashx and ScienceLab.com. *Alumina Safety Data Sheet*. https://sds.chemicalsafety.com/sds/pda/msds/getpdf.ashx?action=msdsdocument&auth=200C200C200C200C2008207A200D2078200C200C200C200C200C200C200C2008&param1=ZmRwLjFfMjAzMDMwMDNORQ==&unique=1757427410&session=fef67e7f278dec100c9c3091b34efe3e&hostname=172.56.107.220

[81] SAFETY4SEA. January 22, 2019. *At least 10 dead from LPG tanker explosion in Kerch Strait*. https://safety4sea.com/at-least-10-dead-from-lpg-tanker-explosion-in-kerch-strait/.

[82] Massachusetts Department of Fire Services, Massachusetts Firefighting Academy. *Liquefied Petroleum Gas (LPG) Awareness*. https://www.mass.gov/doc/417-propane-awareness-0/download

as required in Whatcom County's Notice of Additional Requirements #2.[83] Friends of the San Juans has previously provided comments to Whatcom County on those omissions.[84]

This DNV report focused on vessel noise impacts even though the report states that in addition to underwater noise, ship strikes, physical disturbance, and pollution/contaminants are the main sources of anthropogenic impacts to Southern Resident killer whales. [85] The DNV report has listed two of the "three primary concerns raised as potential factors in the decline of Southern Residents … contaminants/pollution, and vessel effects" with vessel effects being inclusive of underwater noise, ship strikes, and physical disturbance.[86] A thorough "[a]nalysis and explanation of vessel related impacts associated with the Projects"[87] should address ship strikes, physical disturbance, pollution/contaminants, and vessel impacts to the critical habitats that are essential to the conservation of Southern Resident killer whales.

On or around September 10, 2025, another orca calf from the J-pod died, with the dead calf being pushed through Rosario Strait.[88] The most recent vessel at the terminal, the BOREAL VOYAGER, transited through Rosario Strait on September 8th at a speed of 17.3 knots. It's impossible to know the cause of death for the calf without first doing a necroscopy, any of the threats listed above could be responsible for this calf's death.

The report, *Pathology findings and correlation with body condition index in stranded killer whales (Orcinus orca) in the northeastern Pacific and Hawaii from 2004 to 2013*, states that ship strike-related trauma is a significant cause of morbidity or mortality in killer whales, and that it may be an important threat to Southern Residents near shipping lanes. [89] This report also documents ship strikes or suspect ship strikes in whales that are not

[83] Whatcom County. (2025). *Notice of Additional Requirements (mpp2024-00002-NOAR-v2-20250116).* Page 4. https://www.whatcomcounty.us/DocumentCenter/View/99237/mpp2024-00002-NOAR-v2-20250116.
[84] Email sent on August 4, 2025, 3:22 PM from Lovel Pratt, Friends of the San Juans, to Mark Personius and Amy Keenan, Whatcom County.
[85] NOAR Appendix F - Marine Vessel Analysis. (2025). *ALA Energy Ferndale Terminal, Analysis of Vessel Noise Impacts on Southern Resident Killer Whales.* Page 46.
https://www.whatcomcounty.us/DocumentCenter/View/99246/NOAR-Appendix-F---Marine-Vessel-Analysis.
[86] NOAA National Marine Fisheries Service. (2021). *Revision of the Critical Habitat Designation for Southern Resident Killer Whales Final Biological Report*. Page 30. https://repository.library.noaa.gov/view/noaa/31587.
[87] mpp2024-00002 NOAR v.2 20250116.
[88] The Seattle Times. September 13, 2025. *Another orca pushes a dead calf through the Salish Sea in WA*. https://www.seattletimes.com/seattle-news/environment/orca-pushes-another-dead-calf-through-salish-sea-in-wa/.
[89] Raverty S, et al. (2020). *Pathology findings and correlation with body condition index in stranded killer whales (Orcinus orca) in the northeastern Pacific and Hawaii from 2004 to 2013*. PLoS One. 2020 Dec 2;15(12):e0242505. doi: 10.1371/journal.pone.0242505. PMID: 33264305; PMCID: PMC7710042. Page 8. https://pubmed.ncbi.nlm.nih.gov/33264305/.

identified in the DNV study, including the Southern Resident killer whale L112, where ship strike as the cause of death could not be ruled out.[90]

The 2021 study, *Effects of Vessel Distance and Sex on the Behavior of Endangered Killer Whales*, found that vessel traffic within 400 yards of Southern Resident killer whales significantly disrupts foraging, especially in females. Findings include:

- Female whales often cease feeding when vessels approach.
- Disruption is most pronounced in deep foraging states, critical for capturing the Southern Residents' primary prey, Chinook salmon.
- The impact is compounded for pregnant or lactating females, potentially affecting reproductive success.[91]

The DNV report's vessel noise impacts analysis is woefully inadequate. The report only considers underwater noise levels that could cause auditory injuries to Southern Resident killer whales. The report omits any analysis of behavioral or physiological impacts from underwater noise and omits any evaluation of the effects of vessel noise on communication masking and echolocation masking. It is appalling that this report only considers noise levels that could cause auditory injuries when behavioral or physiological impacts from underwater noise and the Southern Residents' reliance on communication and echolocation are so well documented. The DNV report's analysis should have included the three frequency bands that were identified as being particularly relevant to the acoustic quality of the Southern Resident killer whales' habitat.[92]

The 2025 study, *Using masking metrics as a means to quantify effect and guide mitigation measures of underwater anthropogenic noise*, assesses how vessel noise interferes with Southern Resident killer whales' echolocation and communication. [93]

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[90] *Ibid*. Page 9.
[91] Holt, M., et al. (2021). *Effects of Vessel Distance and Sex on the Behavior of Endangered Killer Whales. Frontiers in Marine Science.* Volume 7. https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2020.582182.
[92] Heise, K., et al. (2017). *Proposed Metrics for the Management of Underwater Noise for Southern Resident Killer Whales*. Coastal Ocean Report Series, pp. 1–29. Coastal Ocean Research Institute. 10.25317/CORI20172. https://www.researchgate.net/publication/319991492_PROPOSED_METRICS_FOR_THE_MANAGEMENT_OF_UNDERWATER_NOISE_FOR_SOUTHERN_RESIDENT_KILLER_WHALES_Coastal_Ocean_Report_Series.
[93] Burnham, R. E., and S. Vagle. (2025). *Using Masking Metrics as a Means to Quantify Effect and Guide Mitigation Measures of Underwater Anthropogenic Noise*. Ecosphere 16(7): e70314. https://doi.org/10.1002/ecs2.70314.

> Human-derived sound emissions into marine soundscapes are increasing; commercial shipping accounts for much of this increase, with several comparative studies showing an increase of at least 20 decibels (dB) in the low frequencies (<1 kHz) compared to pre-industrial levels (Andrew et al., 2002, 2011; Frisk, 2012; Hildebrand, 2009; McDonald et al., 2006). This is a growing concern for marine life that rely on their acoustic sense for navigation, foraging, predator avoidance, and conspecific communication (Cure et al., 2013; Erbe et al., 2016; Nowacek et al., 2007; Weilgart, 2007). Increasingly, acoustic disturbance is being recognized as a threat to marine species by hindering the success and survival of the individual, group, or population (Erbe et al., 2016; Weilgart, 2007). ...
>
> Southern residents produce a variety of pulsed calls and whistles to retain group integrity during foraging and traveling (Ford, 1989; Miller, 2002; Thomsen et al., 2002) and use ultrasonic echolocation "clicks" to navigate and capture prey. However, in areas of the Salish Sea, shipping noise dominates the soundscape, limiting the effectiveness of these signals (Burnham et al., 2021, 2023; Veirs & Veirs, 2006). At times, the amplitude of the signals at the receiver may not exceed the level of ambient noise as a result of introduced anthropogenic noise, thereby impacting their ability to detect, capture, and share prey (Burnham et al., 2023; DFO, 2021).[94]

This study found that vessel noise in the Salish Sea can reduce the space or acoustic range within which Southern Residents' can send, receive, and interpret acoustic signals by up to 75%, especially in foraging areas. This finding highlights the need to evaluate any increase in underwater noise and its associated impacts.

The methodology of the DNV report is flawed according to its own recommendation:

> *For ships in operation, it is generally recommended to carry out full-scale measurements to document actual radiated noise rather than relying solely on predictions*.[95]

In addition to the analysis needs identified above, the report "conducted a generalized prediction of the underwater radiated noise from vessel traffic in the Salish Sea. This

[94] *Ibid*. Pages 1-2
[95] NOAR Appendix F - Marine Vessel Analysis. (2025). *ALA Energy Ferndale Terminal, Analysis of Vessel Noise Impacts on Southern Resident Killer Whales.* Page 46. https://www.whatcomcounty.us/DocumentCenter/View/99246/NOAR-Appendix-F---Marine-Vessel-Analysis.

analysis relies on generalized prediction methods applied to all vessels"[96] while acknowledging that "additional research into the actual underwater radiated noise levels from Terminal Vessels and general maritime traffic in the area could provide more nuanced insights and help strengthen the findings."[97] The documentation of actual radiated noise is also important because ships' noise changes with the aging of, and/or damage to, various ship components.

The DNV report states:

> Additionally, this report assesses the impact of increasing from current actual vessel traffic to the 48 port calls allowed pursuant to the existing lease agreement. Assuming similar vessel types and sizes as the Terminal Vessels considered in this analysis, and if every vessel emits noise levels in the same range as those predicted, expanding the port calls from 30 to 48 would add about 2 dB to the total sound energy (approximately 55% increase of sound energy from the Terminal Vessels isolated). However, relative to the total vessel traffic in the area, this increase in sound energy is immaterial in the context of the background noise resulting from the general vessel traffic in the area.[98]

The report finds that the average 24-hour cumulative underwater noise level from shipping operations to and from the ALA Energy Terminal is 140 – 150 decibels (dB) –a range that is 20 – 30 dB above the regulatory threshold designated as a "Level B" behavioral harassment to killer whales by the U.S. Marine Mammal Protection Act.[99]

The analysis fails to address the ALA Energy Ferndale Terminal's contribution to cumulative vessel traffic impacts. If all project proposals claimed that their increase in project-related sound energy by approximately 55% was "immaterial" the cumulative impacts would be catastrophic. A cumulative impact analysis is needed when a proposal will facilitate future action that will result in additional impacts.[100] The future action includes a clear increase in the number of Very Large Gas Carriers. The cumulative impacts of additional vessel traffic in the Salish Sea, including projects permitted and pending in British Columbia, is not

[96] *Ibid*. Page vii.
[97] *Ibid*. Page vii.
[98] *Ibid*. Page 58.
[99] NOAA Fisheries. *ESA Section 7 consultation tools for marine mammals on the West Coast*. U.S. Department of Commerce. Retrieved September 5, 2025, from https://www.fisheries.noaa.gov/west-coast/endangered-species-conservation/esa-section-7-consultation-tools-marine-mammals-west
[100] MRSC. (2002). *Boehm v. City of Vancouver*. https://scholar.google.com/scholar_case?case=15907041815144836130&q=111+wash+app+711&hl=en&as_sdt=6,48.

"merely speculative" and should be included in the environmental review, as required by SEPA.

This analysis of "the impact of increasing from current actual vessel traffic to the 48 port calls" is also flawed in that:

1) The analysis only considers underwater noise levels that could cause auditory injuries to Southern Resident killer whales (see more above).
2) There is no analysis of the underwater noise impacts of ships used to transport alumina ore as compared with Very Large Gas Carriers.
3) Cumulative impacts and associated accident risks are not addressed.

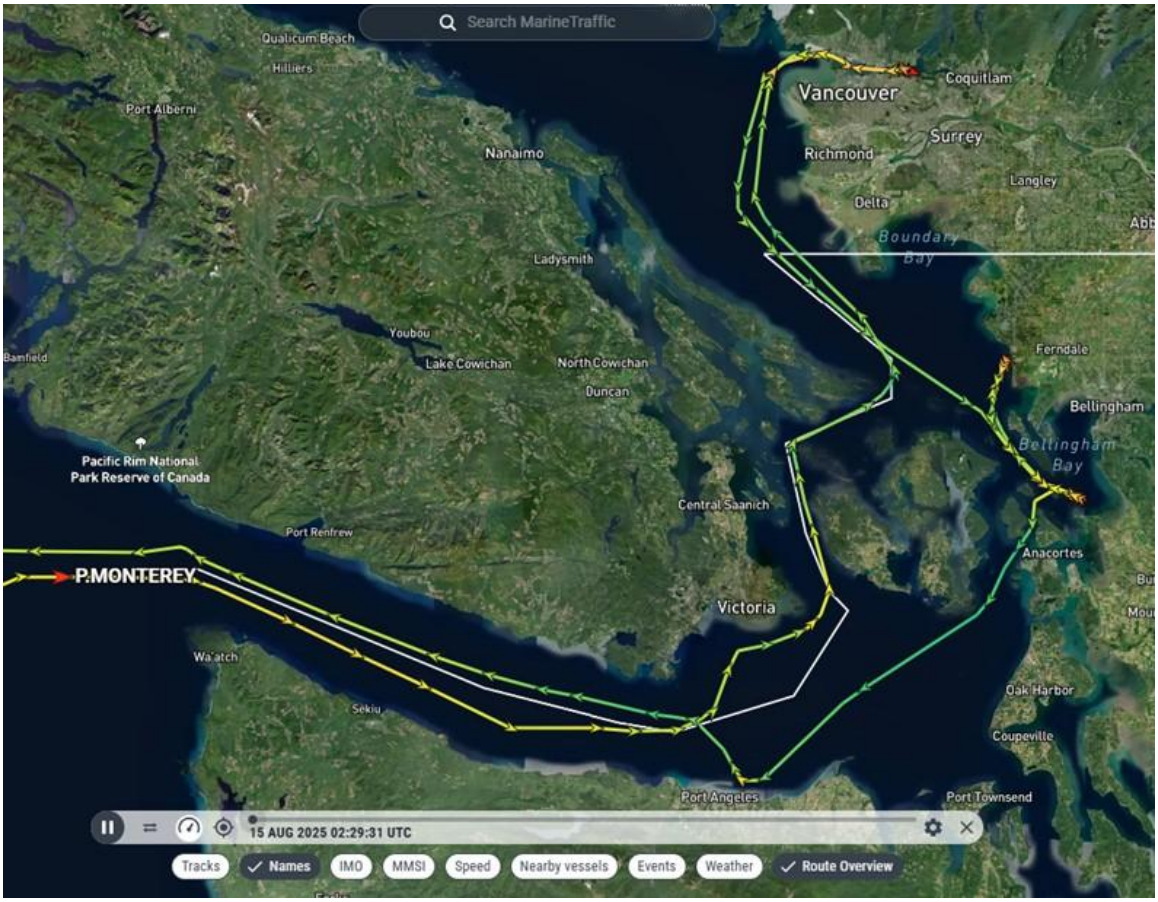
3) <u>Cumulative Impacts and Accident Risks</u>

The DNV report fails to accurately evaluate the cumulative vessel traffic impacts. Table 4-1 Potential Reasonably Foreseeable Projects that Might Affect Marine Traffic Volumes in the Salish Sea Study Area needs to be revised.[101] The project "Trans Mountain Pipeline and Terminal Expansion" is listed as having "No foreseeable change to existing vessels' sizes" and "No foreseeable change to existing vessels' routes." Contrary to the Trans Mountain application's stated tanker size, vessel traffic route, and the permitting processes' environmental impacts analysis which included an extensive oil spill risk analysis, Trans Mountain oil tankers are transiting directly to WA State via Rosario Strait and also Boundary Pass and Haro Strait, using WA State anchorage areas, and delivering Canadian tar sands crude oil to WA State refineries, including via tankers less than 40,000 DWT that are only subject to tug escort requirements in Rosario Strait and waterways east.[102] This change in both vessel sizes and vessel routes has significantly changed the Trans Mountain Pipeline and Terminal Expansion's oil tankers' accident and oil spill risk and vessel traffic impacts.

For example, the oil tanker P. MONTEREY entered the Salish Sea and arrived at Trans Mountain's Westridge Terminal in Burnaby, BC on August 15, 2025. On August 17, while laden with cargo, the oil tanker transited past the ALA Energy Ferndale Terminal, through Rosario Strait, to the Vendovi Island anchorage area, where it anchored, laden, for seven days. On August 24 - 25, the tanker was at the Phillips 66 Ferndale Refinery, just south of

[101] NOAR Appendix F - Marine Vessel Analysis. (2025). *ALA Energy Ferndale Terminal, Analysis of Vessel Noise Impacts on Southern Resident Killer Whales.* Page 38. https://www.whatcomcounty.us/DocumentCenter/View/99246/NOAR-Appendix-F---Marine-Vessel-Analysis.
[102] Washington State Board of Pilotage Commissioners. May 15, 2025. Meeting Materials and Pilotage Report. Pages 4-6. https://nebula.wsimg.com/266aa6cb88cc71a26a32213c789e09c2?AccessKeyId=F86D0A1E7A0091C2061F&disposition=0&alloworigin=1.

the Ferndale Terminal, and then transited back to the Vendovi Island anchorage area, in ballast (without cargo), where the oil tanker stayed for two weeks, until September 8, 2025.



P MONTEREY, 15 AUG 2025, Source: Marine Traffic

Another example is the NORDINDEPENDENCE that transited from the Trans Mountain terminal to the Vendovi Island on September 10, 2025, where it was at anchor, laden for almost 3 days before transiting to the Marathon Anacortes Refinery on September 12, and then back to the Vendovi Island anchorage area on September 14, 2025.

NORINDEPENDENCE, 15 SEP 2025, Source: Marine Traffic

The oil tanker traffic transiting to refineries at either Cherry Point or March Point are using different routes through Rosario and waterways east than tankers delivering oil from elsewhere. The cumulative impacts, including accident, oil spill, and explosion risks, of all the recent and proposed increases in vessel traffic that use different routes from other oil tanker traffic and the same vessel traffic routes and anchorage areas as the Very Large Gas Carriers that visit the Ferndale ALA Energy Terminal must be thoroughly evaluated for appropriate mitigations to be identified.

Whatcom County is required to consider more than the "narrow, limited environmental impact of the immediate, pending action."[103] Future action at the ALA Energy Ferndale Terminal includes up to 48 Very Large Gas Carriers being loaded with propane and butane for export each year, an increase from current activity. An EIS is needed to provide an accurate history of ship traffic at the pier, as well as improved, detailed understanding of the impacts from underwater noise, ship strikes and physical disturbance, and

[103] Cheney v. City of Mountlake Terrace. (1976). 87 Wn.2d 338, 344, 552 P.2d 184. https://law.justia.com/cases/washington/supreme-court/1976/43805-1.html.

pollution/contaminants that are the main sources of anthropogenic impacts to Southern Resident killer whales as identified in the DNV report,[104] and an accurate cumulative impacts assessment that includes an accident, oil spill, and explosion risk assessment. Clearly, the data shows a probable increase in vessel traffic attributable to the proposed action. An EIS should be required as is stated in this Court of Appeals decision:

> Here, Phillips 66 has conceded that environmental concerns, including harm to killer whales, could arise if vessel traffic increases. Phillips 66 "does not dispute that Southern Resident Killer Whales are endangered, or that increased vessel traffic poses a threat to that species." Expert opinions corroborated that increased vessel traffic would harm the whales. Clearly, if the evidence showed a probable increase in vessel traffic attributable to the project, an EIS would have been triggered. An MDNS would not have been an option.[105]

The Need for an EIS

An EIS is required when "the responsible official determines that a proposal ***may*** have a probable adverse environmental impact…"[106] (Emphasis added.) "If a proposal continues to have a probable significant adverse impact, even with mitigation measures, an EIS shall be prepared."[107] "When there are gaps in relevant information or scientific uncertainty concerning significant impacts, agencies shall make clear that such information is lacking or that substantial uncertainty exists."[108]

Information relevant to probable adverse impacts is essential to the reasoned choice amongst alternatives and as to whether the proposed mitigation measures for the proposal, which includes new and continuing activities, are sufficient. The information on the number and types of ships using the pier, the number of times each ship must berth and go to anchor in order to fully load the cargo, where they anchor, what cargo was loaded and unloaded, is not speculative or not known. It should be known by the applicant and disclosed in the environmental review; yet it is not. Similarly, the number of rail cars or unit

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[104] NOAR Appendix F - Marine Vessel Analysis. (2025). *ALA Energy Ferndale Terminal, Analysis of Vessel Noise Impacts on Southern Resident Killer Whales*. Page 3. https://www.whatcomcounty.us/DocumentCenter/View/99246/NOAR-Appendix-F---Marine-Vessel-Analysis

[105] Court of Appeals Division 1. (2022). *Phillips 66 Company vs Whatcom County Washington and Friends of the San Juans*. No. 82599-2-I. Page 10. https://www.courts.wa.gov/opinions/pdf/825992.pdf.

[106] Washington Administrative Code (WAC). (1971). *Determination of significance (DS)/initiation of scoping (197-11-360(1))*. https://app.leg.wa.gov/WAC/default.aspx?cite=197-11-360.

[107] Washington Administrative Code (WAC). (1971). *Mitigated DNS* (*WAC 197-11-350(2))*. https://app.leg.wa.gov/wac/default.aspx?cite=197-11-350.

[108] Washington Administrative Code (WAC). (1971). *Incomplete or unavailable information (197-11-080(1))*. https://app.leg.wa.gov/wac/default.aspx?cite=197-11-080.

trains that frequent the facility since the 2016 environmental review has clearly changed, but specific data and the resulting impacts of those changes are not provided.

An Environmental Impact Statement can also explore mitigation measures that would address the probable adverse environmental impacts. Some measures should be required on an ongoing basis, scaled each year to the actual lifecycle emissions (driven primarily by increases in throughput) as compared to the lifecycle emissions prior to the unpermitted projects. Mitigation should consider payments made on an annual basis based on the actual transshipment of fossil fuels above the historic baseline. Consideration could be given to support projects locally that reduce greenhouse gas emissions, improvements to public facilities or partnerships with Tribes to develop clean energy resources, while supporting other community priorities like reduced energy costs for low-income residents and jobs in the community. Such projects could align with the currently unfunded Whatcom County Climate Plan, Strategies 3, 4, and 5.[109]

The proposed mitigation measures don't address the probable significant adverse environmental impacts from the ALA Energy Ferndale Terminal's recent new and continuing activities, which include an increase in rail and vessel traffic from 2016 to 2023, without any environmental review, and proposed future increases.

- The MDNS Mitigating Conditions omit five significant mitigation measures that were included in the June 10, 2025, Table of Avoidance, Minimization, and Mitigation Measures.
- The MDNS Mitigating Conditions include unenforceable guidelines which have been shown to not reduce vessel traffic.
- The MDNS Mitigating Conditions would allow scrubber discharges to continue
- The MDNS Mitigating Conditions regarding non-dual fuel vessels conflicts with the Greenhouse Gas Analysis that all modes of transportation use diesel, with the exception of pipeline transportation.
- The MDNS Mitigating Conditions fail to provide for enforceable measures that are monitored by an independent third-party compliance reporting requirement in lieu of the applicant's compliance.
- The MDNS Mitigating Conditions fail to provide for measures such as expanded quiet zones through Rosario Strait, noise monitoring stations, limits on vessel size

[109] Whatcom County. (2021). *Whatcom County Climate Action Plan*. https://www.whatcomcounty.us/4243/Climate-Action-Plan.

and drafts, and restrictions on the number of transits and use to the Vendovi Island and Cherry Point anchorage areas.
- The MDNS Mitigating Conditions fail to include all wetland mitigations and stormwater mitigations.

But first, the public and Whatcom County need complete, verified data that considers reasonable alternatives and adequate mitigation measures that are provided for public and agency review in an EIS.

The opportunity for these emissions to be addressed exists only during this short window. If Whatcom County does not act to gather environmental information before imposing mitigation on these emissions as a condition of SEPA and underlying permits, we will likely never get the chance to revisit this decision.

For all of the above reasons, the undersigned request that Whatcom County withdraw the SEPA MDNS and issue a threshold determination of significance immediately. Further, while the EIS is being prepared, Whatcom County should require that the Ferndale Terminal vessel traffic be limited to the number of Very Large Gas Carriers that called on the Ferndale Terminal in 2016, which is prior to the construction of the unpermitted projects.

Sincerely,

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The Honorable Tulalip Tribes Chair Teri Gobin
The Honorable Nooksack Indian Tribe Chair Rosemary LaClair
The Honorable Washington State Representative Debra Lekanoff
The Honorable Washington State Representative Alex Ramel

The Honorable Washington State Senator Liz Lovelett
The Honorable Washington State Representative Alicia Rule
The Honorable Washington State Representative Joe Timmons
The Honorable Washington State Senator Sharon Shewmake
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