

# Northwest Ports Clean Air Strategy Implementation in Puget Sound

## *Engagement Feedback Summary*

*September 24, 2021*

The Northwest Ports of Vancouver, British Columbia, Seattle, Tacoma, and the Northwest Seaport Alliance (NWSA), a marine cargo operating partnership of the Ports of Tacoma and Seattle, work together on climate and clean air action through the Northwest Ports Clean Air Strategy (NWPCAS). In 2021, the four port organizations jointly committed to a new vision to phase out emissions from their seaport-related activities by 2050, supporting cleaner air for local communities and fulfilling the ports' shared responsibility to help limit global temperature rise to 1.5°C. To implement the NWPCAS vision and objectives, each port committed to releasing a port-specific plan to guide the port's actions, investments, and activities to achieve the goals. Port-specific implementation plans enable the ports to identify, prioritize, and focus resources on actions in a way that is strategic and relevant to their business and policy contexts, and to the regions where they operate while still maintaining the long-standing collaborative NWPCAS effort.

The Port of Seattle, Port of Tacoma, and the NWSA (henceforth referred to as the "ports") are each developing their own implementation plans. After adopting the 2020 NWPCAS in April 2021, the ports aligned their implementation plan development processes and timelines to support cohesive and accessible community involvement and inform efforts to achieve the NWPCAS goals. In addition to community engagement, the ports also engaged key industry, government, and non-government stakeholders in both the NWPCAS and implementation plan development process. This summary provides an overview of the ports' engagement process conducted jointly by Port of Seattle, Port of Tacoma and the NWSA to inform the development of each organization's 2020 NWPCAS implementation plans.

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## About the NWPCAS Implementation Plans

The Port of Seattle, Port of Tacoma, and the NWSA are each developing a port-specific implementation plan to identify actions the organizations will take to implement the 2020 NWPCAS vision and objectives locally. Each port organization is responsible for different types of maritime-related businesses, so the plans will be tailored to the sources of emissions within each port's operations. For example, Port of Seattle's plan will address emissions from cruise ships, as the port operates the largest cruise terminal on the West Coast. As NWSA operates the marine cargo terminals in both Seattle and Tacoma; NWSA's implementation plan will address emissions from cargo operations. Each Port's specific operations are outlined in Table 1.

The implementation plans for each port cover the first 5-10 years of implementation towards achieving the 2050 vision. The NWSA and Port of Tacoma implementation plans identify actions for the next 5 years, in alignment with their capital budget planning horizons, and Port of Seattle's plan identifies actions through 2030. Each plan will be updated at least every five years and the ports will take an adaptive management approach to adjust the action plans and interim goals or milestones as the policy, funding, and technology landscapes change. These updates to the plans will fill in actions and milestones for future implementation periods.

**Table 1. Overview of NWPCAS Implementation Plans for Ports of Seattle, Tacoma, and the NWSA**

Organization	Location	Relative contribution to total seaport-related emissions	NWPCAS Implementation plan title	Operations covered by implementation plan
Port of Seattle	Seattle, WA	12% of DPM and 11% of GHG emissions	<a href="#">Charting the Course to Zero: Port of Seattle's Maritime Climate and Air Action Plan (MCAAP)</a>	<ul style="list-style-type: none"> <li>• Cruise vessels and operations</li> <li>• Grain Terminal operations,</li> <li>• Commercial fishing</li> <li>• Recreational boating, marinas</li> <li>• Buildings, facilities, port-owned vehicles, employee commuting, solid waste</li> <li>• Habitat restoration</li> </ul>
The Northwest Seaport Alliance	Seattle (North Harbor) and Tacoma (South Harbor), WA	86% of DPM and 87% of GHG emissions	<a href="#">Northwest Ports Clean Air Strategy Implementation Plan</a>	Cargo terminals in Seattle (North Harbor) and Tacoma (South Harbor): <ul style="list-style-type: none"> <li>• Container cargo ships</li> <li>• Drayage trucks</li> <li>• Cargo-handling equipment</li> <li>• Rail</li> <li>• Harbor vessels</li> </ul>
Port of Tacoma	Tacoma, WA	2% of DPM and GHG emissions	<a href="#">Port of Tacoma Northwest Ports</a>	<ul style="list-style-type: none"> <li>• Grain terminal operations</li> </ul>

			<a href="#">Clean Air Strategy Implementation Plan</a>	<ul style="list-style-type: none"> <li>Buildings, facilities, and port-owned vehicles</li> </ul>
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## Purpose for Engagement

The ports identified the following objectives for engagement on the NWPCAS implementation plans:

1. Strengthen Port of Seattle, Port of Tacoma, and NWSA implementation plans by identifying and, where possible, integrating priorities, perspectives, and ideas of near-port communities, maritime-related industries, government, and non-government stakeholders;
2. Equitably incorporate community priorities into the implementation plans by prioritizing the most affected communities;
3. Promote education about the Port of Seattle, NWSA, implementation plans, and associated maritime emissions reduction goals and strategies; and,
4. Strengthen relationships with near-port community stakeholders and begin to inform an approach for ongoing engagement in implementation.

Intended outcomes from the engagement process included the following:

1. Authentic, accessible opportunities for interested community members and groups to provide feedback on each organization’s implementation plans, ask questions, and to share their priorities, perspectives, and ideas for engagement and port action.
2. Final NWPCAS implementation plans reflect issues of community importance, have community, government, non-government stakeholder, and industry buy-in, and are feasible for ports and industry to implement.
3. Begin building a framework and audience for ongoing engagement, communications, and accountability and establish a clear understanding among stakeholders that engagement will continue after adoption through a process that is co-developed by community members and ports.

## Engagement Activities

Engagement on the Northwest Ports Clean Air Strategy implementation plans followed a two-year process to develop the 2020 NWPCAS. For the 2020 NWPCAS development, the ports set up a representative panel of community, industry, and government representatives for key interest groups and convened three rounds of engagement, described in Table 2. In each of these rounds of engagement, the ports collected feedback through workshops, virtual meetings, individual phone calls, and written comments.

In addition to seeking feedback on the 2020 NWPCAS, the ports also began soliciting feedback on draft actions that were being considered for the Implementation Plans. Much of the feedback received during the engagement process for the 2020 NWPCAS was relevant for the creation of the implementation plans and has been considered in their development.

**Table 2. 2020 Northwest Ports Clean Air Strategy Engagement**

Timeline	Engagement Milestone
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<b>Summer 2019</b>	<ul style="list-style-type: none"> <li>Engagement kick-off</li> <li>Collected feedback on vision, targets, and objectives.</li> </ul> <p>For more detail: <a href="#">Engagement Part I Summary: Project Kickoff, Visioning (Summer 2019)</a></p>
<b>Spring 2020</b>	<ul style="list-style-type: none"> <li>Reviewed draft conditions for success, objectives, and port authority actions in three virtual workshops focused on each sector of maritime activity</li> <li>Performed a survey of the trucking community that elicited over 100 responses</li> </ul> <p>For more detail: <a href="#">Engagement Part II Summary: Sector-specific workshops and defining conditions for success, objectives, metrics (Spring 2020)</a></p>
<b>Fall 2020</b>	<ul style="list-style-type: none"> <li>Sought feedback on the full draft 2020 NWPCAS and proposed port-specific implementation actions</li> </ul> <p>For more detail: <a href="#">Engagement Part III Summary: Review full draft 2020 Strategy (Fall 2020)</a></p>
<b>April 2021</b>	<ul style="list-style-type: none"> <li>Final 2020 Northwest Ports Clean Air Strategy adopted by Port of Seattle, Port of Tacoma, and the NWSA</li> <li>Community Briefing Webinar held on the Northwest Ports Clean Air Strategy and implementation in Seattle and Tacoma</li> </ul>

In early 2021, the ports began collecting feedback on the proposed actions for the first 5-10 years of local implementation towards the NWPCAS vision to phase out seaport-related emissions by 2050 within the Seattle and Tacoma harbors, building on the input collected during the NWPCAS process. The three port entities (Port of Seattle, the NWSA, and Port of Tacoma) began developing their implementation plans on different timelines. The Port of Seattle completed a draft of its Maritime Climate and Air Action Plan in March and posted it online with a community review guide and survey to collect input. The NWSA and Port of Tacoma solicited target feedback from key community-based organizations, industry groups, and governments in spring of 2021 and completed their draft Implementation Plans in May and posted them online for review in June. Through the process of adopting the NWPCAS, the ports received feedback that additional community engagement opportunities were needed over an extended timeframe to ensure that the public had ample time to review and opportunity to provide meaningful input. In response to this feedback, the ports developed a more robust and coordinated community engagement process that spanned the summer of 2021 focused on engaging near-port community members. Syncing each ports’ timeline also helped reduce confusion about the differences between each plan document to make it easier for community members to engage and share feedback. The extended community engagement period launched in early July and concluded in mid-August 2021. As outlined in Table 3, the process included a dedicated webpage with links to each organization’s implementation plan, an online survey, public webinar, targeted outreach to neighborhood groups, and interactive workshops.

**Table 3. Northwest Ports Clean Air Strategy Implementation Plan Engagement**

<b>Timeline</b>	<b>Engagement Milestone</b>	<b>Participation</b>
<b>March 2021</b>	<ul style="list-style-type: none"> <li>Full draft Port of Seattle Maritime Climate and Air Action Plan posted online for public feedback</li> </ul>	<ul style="list-style-type: none"> <li>Received 6 comment letters: Duwamish River Cleanup Coalition (DRCC),</li> </ul>

	<ul style="list-style-type: none"> <li>• NWSA conducts series of calls and meetings with key stakeholders to discuss proposed implementation actions for marine cargo terminals</li> <li>• Extended implementation plan development timeline through Fall 2021 to allow additional time for review and community engagement</li> </ul>	DRCC Joint Letter, Puget Sound Clean Air Agency (PSCAA), City of Seattle Office of Sustainability and Environment (OSE), 350.org Seattle, Climate Solutions
<b>March-August 2021</b>	<p>Extended engagement process launches:</p> <ul style="list-style-type: none"> <li>• Targeted engagement with key community government, and industry groups (March – May)</li> <li>• Online survey (open Jul 6-Aug 15)</li> <li>• Community webinar (Jul 15)</li> <li>• Presentations to Georgetown Community Council, South Park Neighborhood Association, and the Terminal 91 Neighborhood Advisory Committee</li> <li>• Virtual workshops for Tacoma (Jul 26) and Seattle (Jul 27) community members</li> <li>• Virtual workshop for non-profit and community-based organizations (Aug 3)</li> </ul>	<ul style="list-style-type: none"> <li>• One on one consultations: 16 meetings</li> <li>• Online survey: 139 respondents</li> <li>• Community webinar: 33 attendees</li> <li>• Tacoma virtual workshop: 10 attendees</li> <li>• Seattle virtual workshop: 20 attendees</li> <li>• Non-profit and community-based organization workshop: 7 attendees</li> <li>• Received 5 comment letters/written comments: DRCC, City of Seattle OSE, 350.org Seattle, Puyallup Tribe, Washington Department of Ecology</li> </ul>
<b>September 2021</b>	Report-out webinar to share survey results and how engagement feedback informed final implementation plans	<i>Future activity planned for 9/28</i>

## What We Heard: Key Themes

This section summarizes six common themes raised during engagement on the NWPCAS and implementation plans.

### **Strong consensus on the need to achieve zero emission operations by 2050 and to prioritize clean energy transition.**

The ports received comments reflecting strong support for transitioning port operations to clean and renewable sources of energy, such as electrifying vessels, equipment, and drayage trucks to achieve the 2020 NWPCAS vision. While some feedback has indicated desire to move more quickly in some areas, and other commenters have expressed concern over the costs and feasibility of implementing zero emission technologies, especially in the short term, the vision of achieving zero emissions by 2050 strikes a balance between moving aggressively towards the zero emission future while providing

adequate time for technologies to mature and for the investments in infrastructure, equipment, vehicles, and vessels to be made. Additionally, commenters urged ports to prioritize planning for the zero-emission transition in the near-term over seeking interim solutions, such as cleaner diesel equipment.

Themes of zero-emission energy, fuels, technology, and/or shore power were mentioned 65 times in response to the question *“When you envision seaport activity in Seattle in the future, what would you like to see?”*, and 48 times in response to the question, *“What do you think is the most important thing that the seaports can do to address climate change and air quality while still continuing to provide jobs, trade, tourism, and economic benefits to the region?”* Similarly, comment letters received emphasized the need to prioritize waterfront electrification to reduce diesel emissions.

### **Feedback on interim emission reduction targets**

The implementation plans received comments urging ports to set interim 2030 and 2040 targets for air and GHG emission reduction. Commenters also requested that the ports provide more detail on the trajectory and decarbonization pathways for maritime-related sectors.

Other commenters raised concerns about the costs of zero emission technologies, including the equipment, vehicles, and vessels themselves and the infrastructure needed to support them. More broadly, there were also concerns that raising costs to transport cargo through the Pacific Northwest Gateway could cause cargo to be diverted to other ports, which could have the unintended consequence of increasing emissions and have negative economic impacts. This highlights the desire of some for national and/or international standards to be established that create a level playing field for air quality and climate action.

There were also concerns around setting achievable interim targets given the uncertainty around the timelines for zero emission technologies to be fully demonstrated and cost competitive, and that the ports are still in the process of doing the planning work to analyze the infrastructure needed to support zero emission technologies. Concerns were also raised about the availability of clean power generation and distribution infrastructure. Concerns about stranded assets were also raised, especially with relation to earlier timelines, since accelerated timelines may require equipment, vehicles, and vessels to be retired before the end of their useful lives or investing too soon in technologies that may become obsolete. There were also concerns about technology readiness, as there are many areas in which zero emission technology has not yet been demonstrated to do the job in a port environment. Some commenters urged the ports to embrace so called “near zero” technologies, like diesel electric hybrid equipment, that could reduce emissions in the interim, as zero emission technologies mature.

### **Desire for ports to lead by example and prioritize climate/clean air investments to address health disparities in environmental justice communities.**

The need to prioritize communities most impacted by port activity and air emissions emerged as a top theme in comment letters and community workshops. Commenters urged the ports to prioritize the goals and strategies within the [Duwamish River Cleanup Coalition Clean Air Program Action Plan](#). Comments also highlighted [Resolution 3767: The Duwamish Valley Community Benefits Commitment](#), requesting that ports center an equity approach in implementation in alignment with the commitments within Resolution 3767. Other comments highlighted the need to address health disparities, prioritize

job creation and workforce development within and hiring from near-port communities, increase youth opportunities, improve community engagement practices, and for ports to lead by example by electrifying port-owned fleet vehicles and heavy-duty equipment.

### **Desire for more accountability, communication, and transparency in reporting and decision-making.**

How the ports would remain accountable to the 2020 NWPCAS goals and implementation plan commitments and measure success emerged as a key theme of comments and survey responses received. Of particular concern was how the ports would remain accountable to centering equity and addressing health disparities in local communities.

Additionally, some called for changes to current methods for tracking and reporting on seaport-related air and GHG emissions. Responses included disaggregating emissions inventory data to show local level impact and trends, collecting localized data, conducting real-time air quality monitoring, accounting for lifecycle GHG emissions for alternative fuels, and increasing the scope of inventory to include emissions beyond the airshed.

Reflected within comments about accountability and data collection was a strong emphasis on transparency in reporting and decision-making. Comments expressed a desire for more communication to the public and notification about key decision points, such as lease agreements, Requests for Proposals (RFPs), port budgets, and how the ports are working with other agencies and organizations, such as federal, state, and local government agencies.

This theme was echoed in responses to the online survey as accountability and progress reporting were the top mentioned response theme to the question, *“In addition to annual reporting on progress, what kind of seaport outreach or engagement would be most valuable to you or your community?”*

Respondents cited frequent monitoring, transparent metrics and reporting, air quality sensors, and accountability toward achieving goals.

### **Consensus on the importance of reducing emissions from trucks, concerns about cost, feasibility, and equity**

Many comments specifically mentioned drayage trucks as a priority for emission reduction, highlighting the need for ports to continue focusing on reducing emissions from trucks. Additionally, commentors identified truck traffic in neighborhoods as an area of concern. Commenters urged the ports to develop a comprehensive plan to deploy charging infrastructure to support the electrification of drayage trucks, leverage partnerships with City of Seattle and others, pursue financial support for truck drivers, and address truck traffic and idling within near-port communities.

Other commenters encouraged the ports to design the programs for reducing truck emissions in ways that minimize and ideally avoid negative financial impacts to truckers. Specifically, asking that the ports not mandate a shift to zero emission technology until the costs of purchasing zero emission trucks is comparable to the trucks they are currently driving and/or other funding can make up the difference.

A number of comments were received that illustrated the state of the short-haul trucking industry that hauls loads to and from the ports. In summary, the port trucking industry is a very competitive, low-margin industry. Most of the trucks are purchased second hand and many of the drivers are owner operators or members of very small fleets. Furthermore, many of these drivers are new Americans and

people of color, many of which have limited access to capital. Currently, zero emission trucks are at least 2-3 times more expensive than a new diesel truck and in the neighborhood of ten times as expensive as the used trucks that many of the drivers operate. While some reputable sources expect the total cost of ownership of battery-electric trucks to reach parity with new diesel trucks in the next 10 years, it is unlikely that they will reach parity with used diesel trucks.

Comments were received that indicated that the increase in upfront costs posed by zero emission technology is a significant barrier to entry, even when the total cost of ownership is equivalent, for those that have limited access to capital. Related to these cost concerns, equity concerns were raised, suggesting that requirements for zero emission trucks could give larger companies with more access to capital, a significant competitive advantage and could force independent owner operators out of business.

### **Concern about ocean-going vessels as a major source of emissions and impacts of vessel traffic on marine life**

As ocean-going vessels contribute more GHG and DPM emissions than any other sector of maritime activity, commenters and survey respondents expressed particular concern with ocean-going vessels, including cruise and container ships.

Commenters generally supported the ports' emphasis on shore power use, with some urging the ports to require shore power use. Others expressed concern over the costs and operational complexity of using shore power and were not supportive of shore power requirements. In addition to the focus on shore power, commenters requested ports add additional detail about how they will influence reductions in emissions from ocean-going vessels in transit (as the vessels journey through the airshed after leaving or before arriving at the dock).

Concern with emissions from large ships, especially cruise ships, also emerged as a primary theme in the online survey responses. Addressing cruise ship emissions had the most mentions in responses to the online survey question, *"While the port is committed to working to phase out seaport-related emissions from all these sources by 2050, what sources of emissions should the port prioritize now?"* Some comments noted a desire for ports to ban cruise ships or end business until zero carbon cruise ships are available, limit port activity, limit imports, and/or reimagine port mandates for economic growth.

The impact of large ships and maritime activity in general on the Puget Sound ecosystem was also noted several times in the online survey in response to the questions, *"What images come to mind when you think of seaport activity in Seattle?"* and *"When you envision seaport activity in Seattle in the future, what would you like to see?"* Respondents mentioned habitat restoration, clean water, and restored, healthy marine life as desired outcomes for the future. While the NWPCAS and implementation plans focus on air quality and emission reduction, survey respondents and community workshop participants also expressed concerns about water quality.

## **Changes to the Implementation Plans in Response to Feedback**

The ports appreciate the time and effort spent to respond to the survey, participate in webinars and workshops, and provide thoughtful feedback on the proposed actions and draft plans. The ports were able to incorporate many of the comments received as they finalize each NWPCAS implementation plan. The feedback not included in the plans may still be under consideration and the ports welcome ongoing



engagement throughout implementation to address concerns or inform approaches to achieve the NWPCAS vision. This section highlights the key changes proposed to be made across each port’s implementation plans to address the comment themes discussed in the previous section.

**Continuing to plan for the clean energy transition and waterfront electrification**

The implementation plans include near-term cross-cutting implementation priorities for holistic clean energy planning in for the Seattle Harbor through the completion of the Seattle Waterfront Clean Energy Strategy and the Tacoma Harbor through the completion of the South Harbor Electrification Roadmap. Once completed, these strategies will represent detailed pathways to achieve decarbonization in maritime industries and will inform future implementation actions for each organization. The strategies will identify the type, location, and timing of infrastructure needed and evaluate electrical grid capacity, costs, technology and energy choices, business models, enabling policy, resilience, and other elements essential to decarbonize maritime operations in Seattle and Tacoma.

Port Implementation Plan	Proposed Changes After Engagement
<b>Port of Tacoma</b>	Tying the development of a sustainable fleet plan directly into the port purchasing policy for all future vehicle purchases.
<b>Northwest Seaport Alliance</b>	The NWSA added an action to develop an infrastructure development plan by the end of 2023; to incorporate the results of the Seattle Waterfront Clean Energy Strategic Plan and the South Harbor Electrification Roadmap to summarize and prioritize the investments needed across both harbors.
<b>Charting the Course to Zero: Port of Seattle’s Maritime Climate and Air Action Plan</b>	Completing the Seattle Waterfront Clean Energy Strategy was already a priority action in the MCAAP under Section 4: Cross-Sector Maritime Activity, <i>Facilitate cross-industry clean energy planning</i> . Additional actions were added to form maritime clean energy partnerships and develop coordinated funding strategies for infrastructure upgrades.

**Timelines and interim targets**

Engagement feedback and the latest climate science emphasize the need for strong, science-based GHG reduction targets. In response, the NWSA and Port of Tacoma added interim GHG emission reduction targets and Port of Seattle is considering accelerating port wide GHG reduction targets in the fall of 2021 and also including 2025 and 2030 interim milestones in its implementation plan.

The NWSA implementation plan was updated to acknowledge the organization’s 50% by 2030 GHG reduction target and the Washington state 70% by 2040 GHG reduction target, along with the vision to achieve zero emissions by 2050.

Port of Seattle’s MCAAP remains oriented around the Port’s 2030 GHG target (a 50% reduction in GHG emissions). The Port is considering accelerating its port wide GHG emission reduction targets, and the proposed accelerated targets are now included in the MCAAP. Accelerating the organization’s GHG targets which would increase the level of emission reduction ambition for not only the Port of Seattle’s

maritime emissions from cruise, grain, commercial fishing, and marinas, but also for GHG emissions associated with Seattle-Tacoma International Airport. The accelerated targets are currently scheduled to be presented to Port Commission prior to the first reading of the resolution to adopt the MCAAP.

The ports will continue to evaluate the state of technology, policy, funding, and other factors to take an adaptive management approach to update strategies and actions, including the potential to further accelerate targets, in service to phasing out emissions by 2050.

Port Implementation Plan	Proposed Changes After Engagement
<b>Port of Tacoma</b>	Updated to include interim targets ahead of the NWPCAS vision to phase out emissions by 2050, including: <ul style="list-style-type: none"> <li>• 50% reduction in GHG emissions by 2030</li> <li>• 70% reduction in GHG by 2040, set by state of Washington</li> </ul>
<b>Northwest Seaport Alliance</b>	Updated to include interim targets ahead of the NWPCAS vision to phase out emissions by 2050, including: <ul style="list-style-type: none"> <li>• 50% reduction in GHG emissions by 2030</li> <li>• 70% reduction in GHG by 2040, set by state of Washington</li> </ul>
<b>Charting the Course to Zero: Port of Seattle’s Maritime Climate and Air Action Plan</b>	<ul style="list-style-type: none"> <li>• The MCAAP focuses on the Port of Seattle’s 50% by 2030 GHG reduction target. The plan identifies actions by 2025 and 2030 to reach that target.</li> <li>• Discussion of the Port’s long-term GHG reduction targets were updated to include accelerated GHG reduction targets, that are proposed and under consideration by Port of Seattle (See: Introduction: The Port’s greenhouse gas reduction targets):           <ul style="list-style-type: none"> <li>○ Accelerate the scope 1 and 2 emission reduction efforts by 10 years to be net-zero or better by 2040 instead of carbon neutral by 2050.</li> <li>○ Increase the magnitude of the scope 3 reduction goal to be carbon neutral or better by 2050 instead of an 80 percent reduction below 2007 by 2050.</li> </ul> </li> </ul>

**Aligning port implementation plans with community priorities, establishing commitment to ongoing engagement**

The ports are committed to engaging with our near port communities and the general public in an authentic and accessible way and incorporating these perspectives where possible. To that end, the NWSA, Port of Tacoma’s, and Port of Seattle’s implementation plans contain specific actions to develop and implement community engagement and partnership programs by the end of 2022, in collaboration with near port communities. The ports will continue to engage and partner with near port residents and communities in the Seattle and Tacoma and Seattle harbors, to ensure that clean air and climate work incorporates community experience, ideas, perspectives, and priorities – and to continuously improve mutual understanding, trust, and collaboration. The following proposed actions were added to each implementation plan:

- Produce and broadly disseminate regular updates on clean air strategy implementation, beginning in the first quarter of 2022; and,
- Collaborate with near-port residents and communities to develop and begin implementation of an on-going engagement and partnership program starting before the end of 2022.

Responding to the feedback to align the implementation plans with community priorities, changes were made to the NWSA and Port of Seattle implementation plans to incorporate the goals within Resolution 3767: Duwamish Valley Community Benefits Commitment and the Duwamish Valley Clean Air Program Action Plan (June 2021 draft).

Port Implementation Plan	Proposed Changes After Engagement
<p><b>Port of Tacoma (PoT)</b></p>	<ul style="list-style-type: none"> <li>The ports will jointly begin quarterly updates on NWPCAS progress to communities and other interested parties in 2022</li> <li>The PoT will collaborate with the NWSA on a “Clean Air &amp; Climate Community Resource Guide” by the end of 2022, to provide education on the ports, the NWPCAS, and how to get involved.</li> </ul>
<p><b>Northwest Seaport Alliance (NWSA)</b></p>	<ul style="list-style-type: none"> <li>The NWSA will add a reference to the Port of Seattle’s Community Benefits Resolution 3767, acknowledging that the commitments made in the resolution are a motivator of our work under the NWPCAS.</li> <li>The ports will jointly begin quarterly updates on NWPCAS progress to communities and other interested parties in 2022</li> <li>The NWSA will develop a “Clean Air &amp; Climate Community Resource Guide” by the end of 2022, to provide education on the ports, the NWPCAS, and how to get involved.</li> </ul>
<p><b>Charting the Course to Zero: Port of Seattle’s Maritime Climate and Air Action Plan (MCAAP)</b></p>	<ul style="list-style-type: none"> <li><b>Introduction: Strategic Alignment:</b> The May 2021 draft of Port of Seattle’s implementation plan referenced the goals within Resolution 3767 in the section “Introduction: Alignment with Port Policies.” This content was re-organized into a new section in the Introduction titled, “Strategic Alignment,” to demonstrate alignment between the MCAAP objectives, Resolution 3767, and the Duwamish Valley Clean Air Program Action Plan.</li> <li><b>Section 4, Cross-Sector Strategy XS4 - Engage with community, industry, and government:</b> Added an action to support youth engagement and professional development, and an action to prioritize local and women and minority-owned business enterprises (WMBE) in contracting specific to MCAAP related work and to advance the Port’s WMBE priorities overall.</li> <li><b>Implementation: Prioritizing Actions for Implementation:</b> This section communicates the Port of Seattle’s commitment to prioritize areas that experience health disparities in implementation of the MCAAP, and highlights tools that will support this effort, including the Equity Index and the Sustainable Evaluation Framework.</li> </ul>

**Clarification of accountability measures, monitoring, and reporting**

To highlight how the ports will remain accountable to the commitments of the NWPCAS implementation plans, changes were made to each plan to include a proposed Accountability Framework that identifies the following:

- Performance measures or milestones for each sector by which success will be measured;
- Commitment to annual reporting to executive leadership, the Managing Members (Port of Seattle and Port of Tacoma commissions), and the public;
- Reporting of implementation progress by harbor (North and South), to provide visibility to near-port residents and communities in Seattle and Tacoma, respectively
- Commitments to an adaptive management approach where implementation plans will be reviewed and updated annually in alignment with the annual workplan and budget processes with a larger renewal of the Northwest Ports Clean Air Strategy every five years.

As the ports monitor the impacts of NWPCAS implementation, the Port of Seattle, Port of Tacoma, and NWSA support local air monitoring projects led by other agencies, mainly the Puget Sound Clean Air Agency and the Washington State Department of Ecology. The ports believe air quality monitoring is best done by the experts at these agencies that have the experience and resources to lead expanded monitoring programs. As results from these efforts are made available, the ports will use local air monitoring data and community-based research to inform decision-making. Further, in response to feedback that the implementation plans did not address lifecycle GHG emissions, the ports added actions to evaluate lifecycle emissions of alternative fuels.

Port Implementation Plan	Proposed Changes After Engagement
<p style="text-align: center;"><b>Port of Tacoma</b></p>	<ul style="list-style-type: none"> <li>• Created an accountability framework section, replacing the adaptive management and reporting sections that includes:               <ul style="list-style-type: none"> <li>○ Emission Reduction Targets</li> <li>○ Milestones against which year to year progress will be assessed</li> <li>○ The reporting framework</li> <li>○ The adaptive management framework</li> </ul> </li> <li>• A commitment to including lifecycle GHG emissions in future emission inventories using the latest science was included in the accountability framework section.</li> </ul>
<p style="text-align: center;"><b>Northwest Seaport Alliance</b></p>	<ul style="list-style-type: none"> <li>• Created an accountability framework section, replacing the adaptive management and reporting sections that includes:               <ul style="list-style-type: none"> <li>○ Emission Reduction Targets</li> <li>○ Milestones against which year to year progress will be assessed</li> <li>○ The reporting framework</li> <li>○ The adaptive management framework</li> </ul> </li> <li>• A commitment to including lifecycle GHG emissions in future emission inventories using the latest science was included in the accountability framework section.</li> </ul>
<p style="text-align: center;"><b>Charting the Course to Zero: Port of Seattle’s Maritime Climate and Air Action Plan</b></p>	<ul style="list-style-type: none"> <li>• <b>Section 5: Implementation</b> discusses Port of Seattle’s accountability framework, which was updated to align with the NWSA and Port of Tacoma. It includes performance metrics (full detail on metrics in Appendix A), annual progress reporting, and commitment to adaptive management in monitoring results and identifying updates.</li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Section 4: Cross-sector strategy (XS1) - Facilitate cross-industry clean energy planning:</b> See priority action to “evaluate lifecycle emissions of alternative fuels used in seaport application.”</li> <li>• <b>Section 4: Cross-sector strategy (XS4) – Engage with community, industry, and government.</b> Updated ongoing action to continuously improve regional air quality information to mention lifecycle emissions: “Continuously improve regional air quality information, including evaluating options to inventory maritime emissions at the Port annually, quantify lifecycle emissions, and improve equity indicators to measure and inform implementation.”</li> <li>• <b>Section 5: Implementation, Continuous Improvement of Emissions Data.</b> Section updated to add discussion of lifecycle emissions and incorporation of community knowledge and local sources of emissions data to inform decision-making.</li> </ul>
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### Sustaining a strong focus on drayage trucks

The NWSA’s draft implementation plan includes a robust suite of actions designed to reduce truck emissions and begin the process of developing a comprehensive roadmap for moving trucking to zero emissions, leverage partnerships with industry and governments, pursue financial support for truck drivers, and working on truck traffic and idling issues within near-port communities. We believe this action plan is aggressive, yet achievable given our available resources. Highlights of the action plan include:

- Providing scrap bonuses to approximately 60 drivers of pre-2007 trucks to replace their trucks with newer cleaner trucks, working towards phasing out all trucks older than 2007 from our gateway.
- Leading the creation of a regional clean truck collaborative that will focus on moving trucking towards zero emissions by 2050. This collaborative will work on understanding the regional infrastructure needs to support zero emission trucks, work on delivering that infrastructure, and work on collaborating with others on demonstrations of zero emission truck technology.
- Working with other trucking stakeholders to implement at least one major zero emission truck demonstration project in the gateway by 2025, with the goal of demonstrating at least 10 zero emission trucks.
- Collaborate with other stakeholders on truck parking solutions. Continuing our efforts to reduce wait times at our terminals, reducing idling and congestion.
- Strengthening our efforts to engage with and support the trucking community.
- Engage with the City of Seattle on their Seattle Zero-Emission Drayage project.

To acknowledge the NWSA’s role in helping to find funding for demonstration projects, we have included a sub-action to pursue grant funding to help facilitate a zero-emission truck demonstration project.

### Addressing emissions from ocean-going vessels

#### ***Cruise ships at Port of Seattle:***

Comments related to cruise and requests that the Port of Seattle ban cruise ships were some of the most common responses to the online survey. As the largest cruise port on the West Coast, cruise sailings represent an important line of business for the Port and a \$900 million industry for the region. Port of Seattle's Maritime Climate and Air Action Plan (MCAAP) does not propose measures to ban or limit cruising in Seattle but does include strategies and actions to reduce air and GHG emissions from cruise operations and facilitate the transition to zero-emission cruise vessels as soon as possible.

Highlights of proposed actions include:

- Installing shore power at all cruise berths by 2023
- Requiring all homeport cruise ships equipped with shore power to connect
- Setting a goal to reach 100% of homeport cruise ships with shore power and a 100% connection rate by 2030

In response to feedback shared during engagement, Port of Seattle updated ocean-going vessel (OGV) actions in the MCAAP to clarify how the Port will address emissions from cruise ships underway.

Changes were made within Section 4, Waterside - OGV2: *Support domestic and international efforts to phase out emissions from ocean-going vessels* to add four new proposed actions for implementation by 2025 to support emission reductions from cruise vessels:

- Develop a national and international engagement strategy to advocate for strengthened standards, sustainable fuels, and the transition to zero-emission ocean-going vessels, specifically cruise ships.
- Evaluate and align with international decarbonization initiatives.
- Identify partnerships for policy alignment and amplification, including with industry and other ports.
- Conduct a maritime zero carbon energy source assessment to evaluate the status of supply and delivery options, off-takers, policy and economic drivers, Port roles and other considerations to advance deployment of energy sources to replace fossil fuels for cruise ships and other vessels in the Pacific Northwest.

#### ***Container ships at NWSA marine cargo terminals:***

The NWSA has a number of actions in their implementation plan to reduce emissions from OGVs. We believe that this suite of actions represents aggressive action to reduce emissions from the OGV sector.

Highlights of proposed actions include:

- Installing shore power at Terminal 5 (T-5) by the end of 2023
- Installing shore power at Husky Terminal by the end of 2023
- Completing design of a shore power system at Terminal 18 (T-18)
- Planning for shore power installations at the other major international container terminals in the gateway
- Developing and implementing an international engagement strategy to advocate for more rigorous emission reduction policies and to support the shipping industry in its efforts to deploy lower emission fuels
- A study to assess methods not yet employed to reduce emissions from vessels as they transit through the Puget Sound

In response to comments urging the ports to require shore power use, the final draft of NWSA's implementation plan will include an action for the ports to work with terminal operators to incorporate a requirement into terminal leases that requires shore power-capable ships to use shore power. This requirement will be incorporated into leases as shore power systems are built, with priority on the terminals with shore power systems installed or under construction.

### ***Ocean-going vessels at Port of Tacoma:***

Because the vast majority of the vessel calls (and emissions) occurring in the Tacoma Harbor are under the operational scope of the NWSA, not the Port of Tacoma, the Port of Tacoma's primary role in reducing emissions from OGVs is to collaborate with and support the NWSA in its efforts in this sector. For example, Port of Tacoma staff manage construction projects in the Tacoma harbor and will play a critical role in helping the NWSA install shore power systems.

The only vessel calls under Port of Tacoma's operational control are bulk grain ships, which are a very difficult sector to influence because they generally do not make repeat calls to the same port in a given year and are not equipped with infrastructure to connect to shore power. This being the case, Port of Tacoma's plan is to collaborate with the NWSA on development of an international engagement strategy, to advocate for vessel emission reductions, and participate in the vessel emission reduction study to assess methods of reducing emissions from vessels transiting through the Puget Sound.

## **Next Steps**

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Port of Seattle, Port of Tacoma, and the Northwest Seaport Alliance will each follow a similar but separate process to present the final NWPCAS implementation plans to commissioners for adoption, as described below. The adoption process requires that the plans are each accompanied by a resolution.

- **Port of Seattle:** The first reading of the resolution to adopt *Charting the Course to Zero: Port of Seattle's Maritime Climate and Air Action Plan* is scheduled for Tuesday, November 9. The second reading and adoption vote is scheduled for Tuesday, November 16.
- **Port of Tacoma:** The resolution to adopt the Port of Tacoma implementation plan only requires one reading and will be presented to Port Commission on November 17.
- **NWSA:** The first reading of the resolution to adopt the NWSA Implementation Plan is scheduled for Tuesday, November 2. The second reading and adoption vote is scheduled for Tuesday, December 7.

## Appendix I. Online Survey Response Summary

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### 1. What images come to mind when you think of seaport activity in Seattle?

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#### Summary of Survey Results

Topic Theme	Number of Mentions	Percentage of total
Pollution	52	18%
Cargo Ships / Container Ships / Barges	51	18%
Cruise Ships	45	16%
Cargo / Commerce / Industry / Economy	38	13%
Cranes	15	5%
Ferries	14	5%
Traffic	14	5%
Marine Life	12	4%
Trains / Rail	9	3%
Boats / Kayaks / Sailboats	8	3%
Activity / Crowds / Busy	8	3%
Noise	6	2%
Other / Misc.	5	2%
Jobs	5	2%
Waterfront Recreation	4	1%
Aspirations (Clean air/water)	4	1%
<b>Total</b>	<b>290</b>	

The number one image cited relative to seaport activity in Seattle in response to *Question #1* related to pollution, with nearly 18 percent of mentions. Specifically, responses identified air pollution, water pollution, diesel exhaust/fumes, cruise ship pollution, and industrial/shipping-related pollution. A similarly high percentage of responses (17.6 percent) cited cargo ships, container ships and/or barges as a top image that comes to mind. Cruise ships were identified in approximately 15.5 percent of comments. Commerce-related responses rounded out the top tier of images cited, with 13 percent of responses, including things such as trade, cargo, cargo handling, shipping containers, industry, and economy. Remaining images that were noted in survey responses generally comprised five percent or less of total responses and included: cranes (5.2 percent), ferries (4.8 percent), traffic (4.8 percent), marine life (4.1 percent), trains (3.1 percent), boats/kayaks/sailboats (2.7 percent), activity/crowds/busyness (2.8 percent), noise (2.1 percent), miscellaneous/other (1.7 percent), jobs (1.7 percent), and waterfront recreation (1.4 percent). Several responses also mentioned future aspirations for the seaport as related to sustainability, access, and clean air/water (1.4 percent).

### 2. How do you notice or interact with the seaport in Seattle in your daily life?

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#### Summary of Survey Results



Topic Theme	Number of Mentions	Percentage of total
Transportation-Associated Pass-by (drive, walk, bike, commute, ferry or cruise)	50	24%
Traffic Impacts	33	16%
Pollution	30	14%
Views	22	10%
Live or Work Nearby	20	10%
Commerce	19	9%
Recreation	17	8%
No Interaction	8	4%
Noise	7	3%
Engagement / Advocacy	3	1%
Crowds	2	1%
<b>Total</b>	<b>211</b>	

The highest number of mentions for *Question #2* (23.7 percent) cited transportation-associated pass by seaport interactions related to: driving past, through or nearby the seaport; commuting; walking by the seaport; biking by the seaport; and/or taking a ferry or cruise. The second highest number of seaport-related interactions mentioned traffic interactions (15.6 percent). Many comments (approximately 14.2 percent) cited pollution-related interactions and/or observations, primarily associated with experiencing emissions (breathing and/or seeing) from seaport-related sources. Related comments also identified water quality impacts, water habitat impacts and marine-life impacts. Approximately 10.4 percent of the responses identified view-related observations or interactions with the seaport, noting views of cruise ships, container/freight ships, cranes and ferries. Approximately 9.5 percent of responses mentioned living or working nearby. Commerce-related responses totaled approximately 9 percent, citing jobs/employment, the economy, supply chains, and the shipping/processing/purchasing of goods through the seaport. Recreation-related references were approximately 8.1 percent of total comments citing visits to the waterfront, kayaking, boating and/or walking or biking for enjoyment. Approximately 3.8 percent of responses indicated having no interaction with the seaport in their daily life. Noise-related interactions were cited in approximately 3.3 percent of the mentions and approximately 1.4 percent of mentions cited engagement and/or advocacy interactions, while crowds associated with seaport activity came in at under one percent of mentions.

### 3. When you envision seaport activity in Seattle in the future, what would you like to see?

#### Summary of Survey Results

Topic Theme	Number of Mentions	Percent of total
Zero emission energy / fuels / technology / shore power	65	29%
Limit or ban cruises / general reduced operations	50	22%
Healthy Puget Sound / marine ecosystem	27	12%
Emissions reductions / clean air	26	12%
Community / social equity / livability	17	8%

Jobs / economic opportunity	15	7%
Address traffic impacts	11	5%
Noise reduction	7	3%
Policy / regulatory change / operational efficiency	7	3%
<b>Total</b>	<b>225</b>	

The highest number of mentions for *Question #3* (28.9 percent) cited a desire for some form of renewable/clean or zero emission energy powering seaport activity in the future. References were made to clean energy/fuels, electric ships, electric cranes/cargo handling, electric trucks, solar power and shore power. Approximately 22.2 percent of comments mentioned limiting or banning cruise ships or reducing operations in general. Around 12 percent of responses focused on the health of Puget Sound and the marine ecosystem, with mentions of habitat restoration, clean water, and restored/healthy marine life. Many responses (approximately 11.6 percent) mentioned a desire for cleaner air and/or reducing emissions. Approximately 7.6 percent of responses related to community/social equity or livability desires that included: increased public access, inclusion of nature, more trees, artwork, public transit, waterfront access, treating workers well, community engagement and walkability. The desire for additional jobs and/or economic opportunities was mentioned in approximately 6.7 percent of responses. Addressing traffic impacts came up in approximately five percent of mentions. Noise reduction was cited in approximately 3.1 percent of responses. And approximately 3.1 percent of responses addressed policy changes, regulatory changes or operational efficiencies that could be implemented.

**4. While the port is committed to working to phase out seaport-related emissions from all these sources by 2050, what sources of emissions should the port prioritize now?**

**Summary of Survey Results**

Topic Theme	Number of Mentions	Percent of total
Limit cruise ship emissions	64	33%
Shore power	19	10%
Limit container ship emissions	16	8%
Clean fuels / electrification / renewable energy	14	7%
Electrify trucks / truck driver support	12	6%
Port administration (buildings and fleet vehicles)	11	6%
Cargo-handling equipment	10	5%
Reduce emissions (general)	10	5%
Focus on largest source of emissions	10	5%
Move faster	9	5%
Focus on near-port communities	8	4%
Misc. / Other (Operational efficiency, rail, slow steaming, marinas, regulatory advocacy)	10	5%
<b>Total</b>	<b>193</b>	

The highest number of mentions for *Question #4* (33 percent) cited that ports should prioritize limiting or banning cruise ships, with the second-highest mentioning shore power (10 percent), and the third-highest mentioning limiting container ship emissions (8 percent). Seven percent cited clean fuels, electrification, and using renewable energy, and 6 percent specifically mentioned truck electrification and driver support, followed by addressing Port Administration sources of emissions such as fleet vehicles and port buildings (6 percent), and cargo-handling equipment (5 percent). Some responses did not focus on specific sectors but cited the need to reduce emissions generally (5 percent), prioritize the largest sources (5 percent), move faster or take more urgent action (5 percent), and focus on near-port communities. Additional responses cited operational efficiencies, rail, slow steaming, marines, and regulatory advocacy (5 percent).

**5. What seaport-related sustainability improvements do you think would benefit you or your community most?**

**Summary of Survey Results**

Topic Theme	Number of Mentions	Percent of total
Zero emission energy / fuels / technology / shore power	42	25%
Limit / Ban Cruise	28	17%
Emissions reduction / air quality / climate action	27	16%
Water quality / discharge improvements / Noise reduction	17	10%
Policy / regulation change / Incentives / Fees	14	8%
Reduce operations or improve operational efficiency	11	7%
Habitat restoration / tree planting	10	6%
Community livability	6	4%
Mitigating truck traffic / trucks	5	4%
Misc. / Other (commerce, green jobs, waste reduction, superfund cleanup)	6	4%
<b>Total</b>	<b>166</b>	

The highest number of responses for *Question #5* (approximately 25.3 percent) cited use of clean or zero emission energy, clean fuels or green technology as the most beneficial seaport-related sustainability improvement that could be made. This theme included mentions of electric trains, cleaner burning fuels, electric semi's, use of renewable energy sources (solar power, tidal power), zero emission vehicles, fossil fuels elimination, and use of shore power.

The next highest number of responses were aimed at limiting or banning cruise ships (approximately 17 percent). Improvements related to emissions reductions, air quality improvements and/or climate action were also frequently mentioned, comprising approximately 16.3 percent of comments. Water quality improvements, discharge improvements or noise reduction were cited in approximately 10.2 percent of mentions. Nearly 8.4 percent of responses cited some type of policy or regulatory change, or the use of incentives or fees as a beneficial seaport-related sustainability improvement. Policies mentioned included restrictions on use of carbon-emitting fuels, pollution standards for vessels,

mandating use of green power or shore power, advocating for the Ocean Based Climate Solutions Act and Climate Smart Ports Act, and supporting repatriation of Tribal lands/waters. Reducing seaport operations or improving general operational efficiency accounted for another 6.6 percent of sustainability improvement responses. Some variety of habitat restoration and/or tree planting made up approximately 6 percent of responses. Approximately 3.6 percent of responses cited community livability improvements. Mitigating truck traffic or reducing use of diesel trucks comprised approximately 4 percent of mentions. Lastly, miscellaneous responses comprising just one or two mentions cited themes related to green jobs, waste reduction, superfund site cleanups and commerce.

**6. Which kinds of seaport sustainability projects or topics would you or your community want to be involved with?**

Topic Theme	Number of Mentions	Percent of total
Habitat/marine life	21	24%
Ban cruise ships / limit operations	14	16%
Zero-emission transition/clean fuels/electrification renewable energy	11	12%
Advocacy	8	9%
General climate/clean air action	7	8%
Job creation / workforce development	4	4%
Communication	4	4%
Education	3	3%
Trucks	3	3%
Fleet vehicles	2	2%
Tribal collaboration	2	2%
Noise	2	2%
Waste reduction / plastic	2	2%
Cargo-handling equipment	1	1%
Air quality monitoring	1	1%
Waste/Plastic Reduction	1	1%
Grain terminal	1	1%
Climate resilience	1	1%
<b>Total</b>	<b>204</b>	

The most mentions within responses to *Question #6* followed a theme of habitat or marine life, including habitat restoration, underwater noise, slow steaming, and cleanup of the Duwamish River (24 percent). The second most common theme mentioned in responses was to ban cruise ships or limit port operations (16 percent), followed by interest in zero-emission technologies, clean fuels, electrification, and/or renewable energy (12 percent). Advocacy was a theme in 9 percent of mentions with 8% of mentions along the theme of general climate and clean air action.

**7. What do you think is the most important thing that the seaports can do to address climate change and air quality while still continuing to provide jobs, trade, tourism, and economic benefits to the region?**

**Summary of Survey Results**

Topic Theme	Number of Mentions	Percent of total
Limit or ban cruises / general reduced operations	54	26%
Electrification / clean fuels / ban fossil fuels / renewable energy	48	24%
Reduce emissions / climate action	26	13%
More regulation / policy change/ legislative advocacy	17	8%
Address emissions from ocean-going vessels (e.g., Shore power / require shore power use / slow steaming)	16	8%
Habitat Restoration	11	5%
Jobs / workforce development	10	5%
Operational efficiency	6	3%
Public transit	4	2%
Work with supply chain partners	4	2%
Carbon offsets	2	1%
Community Involvement/education	2	1%
Incentives	2	1%
Waste Reduction	2	1%
<b>Total</b>	<b>204</b>	

The highest number of mentions for *Question #7* (26 percent) mentioned limiting or banning cruise ships or reducing operations in general as the most important thing ports can do to address climate change or air quality. Comments received included references to eliminate the cruise industry, reduce ship traffic, reduce imports, and limiting unnecessary fuel use. The second-highest number of mentions cited pathways to zero-emission operations, including electrification, use of clean fuels, transitioning away from fossil fuels, and using renewable energy (24 percent). Thirteen percent of responses focused on general suggestions to reduce emissions and act on climate change. Several responses included mention of regulatory or policy changes to reduce emissions (8 percent) and mentions of strategies to reduce emissions from ocean-going vessels, including shore power use and slow-steaming (8 percent). Habitat restoration and protecting wildlife came up in 5 percent of mentions. Promoting jobs and workforce development also came up in 5 percent of mentions. Operational efficiency, public transit, working with supply chain partners, carbon offsets, community involvement, incentives, and waste reduction each comprised fewer than 5 percent of mentions.

**8. In addition to annual reporting on progress, what kind of seaport outreach or engagement would be most valuable to you or your community?**

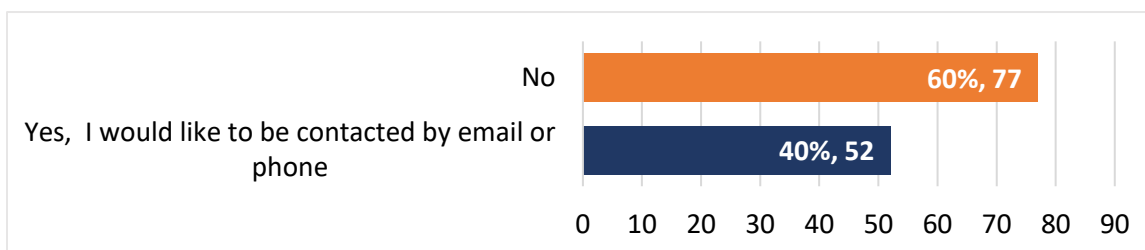
**Summary of Survey Results**

Topic Theme	Number of Mentions	Percent of total
Accountability / Progress Reporting	26	23%
Townhall Meeting	22	19%

Community Capacity-Building	14	12%
Tours / Open Houses / Community Events / Local Presence	13	12%
Electronic Contact (Email, listserv, newsletter)	11	10%
Targeted Outreach/ Coordination / Partnerships	11	10%
Social Media / Marketing, & Public Media / News	10	9%
Air Quality Monitoring	4	4%
Task Force / Committee / Forum	3	3%
<b>Total</b>	<b>115</b>	

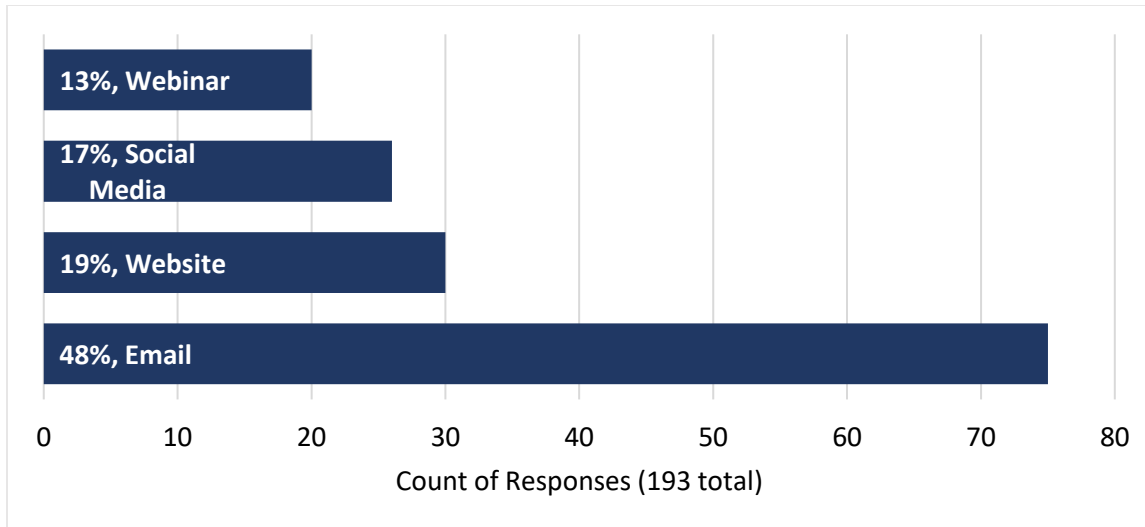
The most valuable type of outreach or engagement cited in survey responses to *Question #8* included some type of accountability and/or progress reporting with approximately 22.6 percent of responses mentioning this theme. Accountability/reporting categories included regular monitoring, communicating facts/plans, identifying metrics, updates on successes and failures, and transparency. Many responses (19 percent) stated that some type of in-person townhall meeting would be valuable. Community capacity-building was another high-value type of engagement that was mentioned frequently (12.2 percent of comments) with responses citing the need for more information about the port and its activities, education about environmental impacts, education about environmental mitigation, info on existing and developing technologies, youth/school community engagement, environmental justice and grants/donations. Community events, tours, open houses or some type of local presence was mentioned in approximately 12.2 percent of responses. Some type of electronic contact including email, newsletter, or listserv was cited in approximately 9.6 percent of responses as a valuable type of outreach/engagement. Targeted outreach and/or partnerships with specific communities or groups was mentioned in approximately 9.6 of responses. This included working with/reaching out to Tribes, BIPOC communities, nature/wildlife groups, local communities, waterfront communities, and the local marine science community. Social media engagement (i.e., Instagram, blogs, Twitter, Reddit), marketing, public media and/or news mentions comprised approximately 6 percent of responses. Air quality monitoring came up in 3.5 percent of responses as the most valuable type of engagement. Lastly, coming in at under 3 percent of responses, were mentions of some type of task force, committee and/or forum (2.6 percent).

**9. Would you be interested in participating throughout this process in a subcommittee or other advisory role on seaport climate change and air quality projects?**



**10. How would you like to receive updates and information on our progress? (check all that apply)**

**Summary of Survey Results**



**11. Please provide any additional comments or ideas that you would like the seaport to consider in developing an approach to reduce and eliminate climate emissions.**

**Summary of Survey Results**

Topic Theme	Number of Mentions	Percent of total
Limit/ban cruise / limit operations	12	20%
Reduce emissions/climate action	12	20%
Clean fuels / electrification / renewable energy	7	12%
Community input / Tribal involvement	3	5%
Better communication / transparency	3	5%
Shore power / require shore power	3	5%
Underwater noise / orcas	2	3%
Habitat Restoration	2	3%
Workforce development	1	2%
Incentives	1	2%
Idling trucks	1	2%
Nuclear Energy	1	2%
More regulation	1	2%
Lifecycle emissions	1	2%
Workforce development	1	2%
Cost benefit analysis	1	2%
Clean fuels / electrification	1	2%
Rail	1	2%
Include marinas	1	2%
Interim targets	1	2%
Resiliency	1	2%
Operational efficiency	1	2%
Clean Buildings	1	2%
Public Transit	1	2%
<b>Total</b>	<b>60</b>	

The highest number of mentions for *Question #11* (20 percent) mentioned limiting or banning cruise ships or reducing operations in general, similar to response themes reflected in other survey questions. The second-highest number of mentions cited general calls for reducing emissions and acting on climate change (20 percent), and the third-highest number of mentions cited clean fuels, electrification, and/or renewable energy (12 percent). Given that the open response nature of this question, responses spanned a wide range of topics and themes, as reflected in the table above.

## Appendix II. Northwest Ports Clean Air Strategy Implementation Workshops

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### Tacoma Community Workshop: July 26, 2021

The workshop consisted of a short presentation from port staff followed by a breakout session designed to solicit feedback from the public on the NWSA and Port of Tacoma's Northwest Ports Clean Air Strategy Implementation Plans. Ten members of the public attended the workshop.

The breakout sessions feedback on two questions, the responses to which are provided below.

#### **Question #1: Based on the proposed actions presented, what kind of actions, and in what areas, do you think the port should prioritize clean air and climate actions?**

- Which sources of emissions are most important to you?
- What are 1-2 things you'd like to see more of from the Port related to clean air and climate action?

#### **RESPONSES:**

- Important to measure/ focus on cumulative emissions...
- When I drive through the port, we need to close or window, it smells so bad...
- Also very important to me: City and Port should put in industry that doesn't threaten health and safety of the neighbors...
- I've studied LNG issue...They're going to be bringing in heavier, raw gas that will bring in more propane and methane...I've read some of the reports...Listened to somebody from PSE...They're going to put those excess chemicals up in the flare...That worries me...
- Worried about increasing fossil fuel activities on the Tidelands
- LNG in an urban area one of the top terrorist threats...I wish you could do something to make us feel safer. It's scary.
- Shipping is important; we're a port...but...
- September 27, 2019 IMO report...their own researchers said LNG GHG footprint is comparable to or worse than the cleanest existing fuel...
- I'm frustrated about all that. People aren't focused on health and safety...
- Idling trucks
- Seattle worked harder and quicker to get cleaner trucks...
- Not a fan of LNG...
- Excited about electrification
- Main concern: keep the Port clean. The port is a treasure...If we can somehow manage to skip any fossil fuel...



- Not familiar with port at all, eager to learn
- Vessels – diesel vs LNG – not clear on what vessels are using right now and questions about LNG
- Air quality monitoring (Purple Air - can check other neighborhoods) - question about how to find out % of emissions that the port responsible for (pointed back to Puget Sound Emissions Inventory)
- Trucks – I-5, lines of traffic, not obvious in our neighborhood (West End) but very obvious once hit I-5
- Two sources that bug me the most: ships at anchor, particularly bulkers and drayage trucks.
- Drayage trucks are the source that most affect the lived experience in the neighborhood
- [Trucks] move fast and want to get where they want to get and they're commuting with us
- Volume of trucks is a big issue, they're not making anything sitting there. Efficiency is really important
- 509 is such a nice commute, trucks disrupt that
- One of the other issues: can we do more cargo handling and truck traffic to night time? Highways are pretty empty at night.
- There are pockets of original habitat, they are very tiny. Is there a way that we can expand these? Make it more like before we are here.
- Liked the experience driving through the port. Now it's nearly impossible to drive across the Tideflats.
- The whole issue of climate change and sea level rise should both be considered. Need to build resilient infrastructure and work to prevent it.
- I worry about terminal operators shipping old cargo handling equipment up from CA
- Stargazer, love to appreciate the night sky. Light pollution is a big deal. Also concerns about wildlife.
- LNG kinda threw me for a loop. Felt like the process was not honored.

**Question #2: What kind of involvement in this effort would be most valuable to your community? What should ongoing engagement look like throughout implementation of the Northwest Ports Clean Air Strategy?**

- How frequently to you want to hear from the Port?
- What communication mechanisms do you prefer, e.g., newsletter, webinars, in-person roundtable discussions, etc.

**RESPONSES:**

- Emails and newsletters are best – can read them when it suits
- NextDoor – best way to reach neighbors, public health announcements, some people don't use social media but will use that
- Hybrid online/in-person - able to fit in with people's lives
- Not sure why I got this email, glad I did because I was available. Got the email from Citizens for a Healthy Bay
- Really liked the small groups and appreciated the presentation
- Educate the public on what the port does

## Seattle Community Workshop: July 27, 2021

Port of Seattle and Northwest Seaport Alliance (NWSA) hosted a workshop for members of the community to discuss the ports' implementation plans for the 2020 Northwest Ports Clean Air Strategy (NWPCAS) focused on the Seattle harbor. The interactive agenda featured live polling, a presentation from port staff, and small group break-out discussions using an interactive whiteboarding tool.

20 people attended the event, including community members, industry representatives, nonprofit representatives, and organizers for 350 Seattle. The workshop was advertised as part of the NWPCAS implementation plan engagement process via [press release](#), information on the Port's [website](#), and announced during a community webinar on July 15. Targeted invitations were sent to neighborhood associations for near-port neighborhoods, including the South Park Neighborhood Association, Georgetown Community Council, Georgetown Open Space, West End Neighborhood Association, and the Terminal 91 Neighborhood Advisory Committee, and community members signed up for the Northwest Ports Clean Air Strategy mailing list.

The breakout groups discussed two questions:

- Based on the proposed actions presented, what kind of actions or in what areas should the ports prioritize clean air and climate action?
- What kind of involvement in this effort would be most valuable to your community? What should ongoing engagement look like?

The following images show the detailed feedback collected during the breakout group discussions via a virtual whiteboarding tool:

**Group #1 (RYANN)**

The image displays two virtual whiteboard panels for Group #1 (RYANN). The left panel, titled '1. Based on the proposed actions presented, what kind of actions or in what areas should the ports prioritize clean air and climate action?', contains several sticky notes with feedback. The right panel, titled '2. What kind of involvement in this effort would be most valuable to your community? What should ongoing engagement throughout implementation of the Northwest Ports Clean Air Strategy look like? (e.g., structure and frequency or messaging, meetings, or updates)', contains sticky notes with suggestions for engagement and challenges.

**Panel 1: Based on the proposed actions presented, what kind of actions or in what areas should the ports prioritize clean air and climate action?**

- Add actions or share input using sticky notes! If you're having technical difficulties, your facilitator can add your ideas to the board.
- How do we impact the biggest GHG emissions source - ships in transit?
- How much of strategy goals is integrated into leases?  
permitted leverage in leases
- Address vessel in transit emissions
- More focus on international shipping - IMO
- Shift Focus of Port tenants away from high emission activities towards manufacturing and assembly of renewable energy infrastructure (offshore wind, green hydrogen fuels etc).
- Creatively integrate mandates for Zero Emission Trucking / Shipping in upcoming and possible amendments to lease agreements.
- I'd like to see the Port advocate in the state legislature for greater legal authority to regulate and eliminate negative air emissions (scope 3) of tenants.
- One strategy to reduce emissions from port activities, that is missing, should be the restoration of stewardship and control of Port land back to the Duwamish and Coast Salish people. #LandBack

**Panel 2: What kind of involvement in this effort would be most valuable to your community? What should ongoing engagement throughout implementation of the Northwest Ports Clean Air Strategy look like? (e.g., structure and frequency or messaging, meetings, or updates)**

- Please engage non-profits and community groups early and at every stage possible. Especially when it comes for RFP's, new lease agreements.
- Please engage the public/non-profits in visioning together what activities/industry our community feels should take place on Port property.
- Prior to any lease agreements being made, send 90 day (or more) notice to non-profits, community groups, and greater community seeking public input and comment.
- One challenge with the NPCAS right now, is some of the largest interventions the port can make happen in singular instances like a lease agreement, that lock in emissions for multiple decades. The public needs regular opportunities to give input and shift direction especially as new science underscores the changes we need to make and innovative technologies are developed.

## Group #2 (ALEX)

1. Based on the proposed actions presented, what kind of actions or in what areas should the ports prioritize clean air and climate action?

- Add actions or share input using sticky notes! If you're having technical difficulties, your facilitator can add your ideas to the board.
- What about emissions from ships and people traveling to and from Seattle
- Health Disparities Map and Support for DRCC clean air action plan. Trucks in streets to reduce emissions
- Shore power, EV infrastructure.
- Trucks: trucks in communities. Would like to see reduced emission in communities to reduce health hazards. Could use cleaner fuels and cleaner energy. This would help people with health issues
- Equipment in port areas are important to address. Warehouses and Port buildings.
- Push on things that the port has influence
- Trucks should be a priority—especially neighborhoods
- Impressed with in-house work that the Port is doing (work from home).
- 2 things that stand out: what is the locus of control—how much can the Port do directly? Focus on the things the port has direct control over, like electrification, and take action ASAP

2. What kind of involvement in this effort would be most valuable to your community? What should ongoing engagement throughout implementation of the Northwest Ports Clean Air Strategy look like? (e.g., structure and frequency or messaging, meetings, or updates)

- TV, radio, community based orgs can share with members
- flyers and info at community meeting and churches
- 350 Seattle: where are we doing our advocacy for things without direct control. Could 350 help? Tell how
- Miranda Marti, Wakacco, Steve Metruck.

## Group #3 (STEVE)

1. Based on the proposed actions presented, what kind of actions or in what areas should the ports prioritize clean air and climate action?

- I would like to see more investment in improving health impacts for the communities along the Duwamish waterway
- Concerned about water quality...Georgetown is a small community that doesn't get a lot of attention
- There are many near zero emissions and efficiencies that will be available prior to zero emissions. We should continue to look at those as we look to the future. There are many new fuels and technologies being tested now, be careful not to settle on something before understanding pluses and minuses.
- Busy ports that are generating revenue are able to afford clean air and climate solutions...Most investments are made by private company...Looking for long-term profitability and economic viability
- Ports in CA are sometime asked not to use shore power because of energy shortages...
- I-5 and King County airport are sources of emissions, too...

2. What kind of involvement in this effort would be most valuable to your community? What should ongoing engagement throughout implementation of the Northwest Ports Clean Air Strategy look like? (e.g., structure and frequency or messaging, meetings, or updates)

- These small meetings on-line are effective, so that anybody can join no matter where they are...
- Social Media/Facebook
- What's the best way to reach people? No single place anymore. Social media is probably the best way...
- Georgetown Gazette is a good way; Andrew Schiffer

One group was not able to use Jamboard. Feedback was compiled in the following notes:

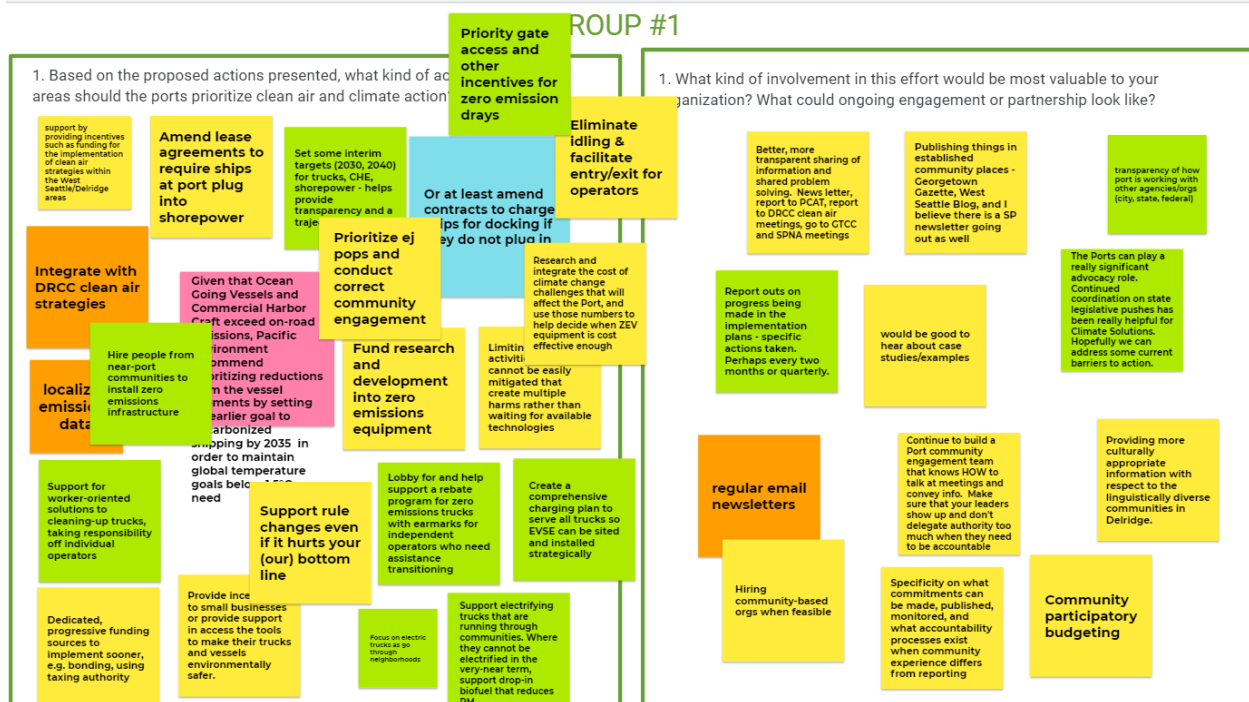
- Cruise free Salish Sea – want to have no cruise ships at all, want the cargo ships to be clean.
- Shore power is less than 1% of the total emissions, it would be fascinating to me to know better which are the cleanest ships. Can we lean more on the IMO to provide better information on ship emissions and which are the cleanest? Should be maximizing our effort.

- Need to allow the cargo owners better opportunity to make better decisions about the vessels they hire.
- Believe that most of the global warming is manmade, think we need to address the dumpster system, i.e. the waste management system.
- Don't want to hear us say that shore power is the answer to everything. Think we should message that differently.
- Need to consider water quality in addition to air quality

### Non-Profit and Community-Based Organization Workshop: August 3, 2021

Port of Seattle, NWSA, and Port of Tacoma jointly hosted a workshop for non-profit and community-based organizations to discuss the ports' implementation plans for the 2020 NWCAS focused on both the Seattle and Tacoma harbors. The agenda featured a presentation from port staff and a facilitated discussion using an interactive whiteboarding tool. Due to the small group size, the workshop did not include breakout groups. The following image shows the detailed feedback collected during the discussion via a virtual whiteboarding tool. The sticky notes were added in response to the following discussion questions:

- Based on the proposed actions presented, what kind of actions or in what areas should the ports prioritize clean air and climate action? (left side)
- What kind of involvement in this effort would be most valuable to your organization? What could ongoing engagement or partnership look like? (right side)



## Appendix III. Notes from individual consultations on the NWSA's Implementation Plan in spring 2021

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The following is curated list of notes from one-on-one consultations that occurred in spring of 2021 to solicit feedback on the NWSA's Implementation Plan. The notes are organized by emission sector they relate to where possible. More general comments are assigned to the "crosscutting" category.

### Organizations engaged:

- Climate Solutions
- Citizens for a Health Bay
- City of Seattle
- City of Tacoma
- Duwamish River Cleanup Coalition
- Everport
- Husky Terminal
- Matson In.
- Pacific Merchant Shipping Association (PMSA)
- Pierce County Sustainability Office
- Road One
- SSA Marine
- TOTE Maritime
- Tacoma Public Utilities
- Washington United Terminal
- Washington Trucking Association

### Comments:

#### Ocean-Going Vessels (OGV):

- Engage internationally – change to include 'near-zero' emission fuels.
- Puget Sound Maritime Shipping Association (PMSA) engaged previously with World Shipping Council but not been as directly involved on international level recently
- PMSA have members down the West Coast so would be interested in working with NWSA on a west coast collaboration, depends on what their members are trying to do
- Transiting – efficiency – lots to do – hull coatings, reduced drag, speed reduction – not a dirty word.
- Don't want to set up incentive where vessels increase emissions overall by speeding up as know have to slow down in the Pacific Northwest – look at whole picture. Port of Los Angeles/Long Beach (LA/LB) - 12 knot for safety reasons initially in 1990s, then for emissions.
  - 157 miles to Tacoma. Affects scheduling.
  - Have to specify which emission – SOx? NOx? GHG? Had to be specific down in CA.

Trickier than people think

- Pilot tariff now has hourly rate – will have direct impact on cost of pilotage if takes longer to transit

- ECHO program – govt funds help if creep into needing second pilot if take longer
- ‘Major’ terminals for shore power installations – rank order – would be good to see what terminal when – whole list
- Note somewhere what kind of vessels – not dealing with grain vessels, bulk etc - focus on container ships
- PMSA don’t track how many vessels are shore power capable – would be interested in NWSA data
- Echo program: will be some co-benefit to air quality but may end up at point where help orcas but increase emissions
- Reduce 3 knots, 3 decibel reduction where orcas are foraging
- Shipping companies have own fuel consumption plan for overall transit
- 80% of calls shore power – may be a hydrogen fuel cell vessel so wouldn’t want to count against the target if doesn’t plug in
- Be more specific about how we’ll increase number of shore power calls – incentives? Lease requirements?
- Q1 2022 first LNG vessel operational
- Already using shorepower, LNG coming
- Reefers – used to use 1.1 gallons an hour, now half a gallon an hour
- Key is getting one shorepower installation done – just don’t know, will help when one is funded and built
- Revenue – can build in increases into leases to fund projects, need to aggressively accelerate transition to decarbonization, reopen leases
- Want to make sure shorepower gets used, very expensive to put in and need to make sure it's worth it
- There is a cost advantage to plugging in here vs bunker fuel
- Resolve shore power issues at PCT and WUT in next 5 years, don’t wait until 2028
- Question – what funding sources for shorepower installation?
- Newest vessels are Tier 2 and Tier 3 for NOx – Matson to check if they’re coming to Tacoma
- OGV largest emission source – transiting emissions – asking what the plan is for that largest slice?. Vessel speed reduction incentives in LA/LB - anything planned? Discussed study planned for later this year.
- Incentives will overlap with shore power installation. Important to reach out to carriers as soon as possible.
- Everything starts with carriers. Need their feedback – without their buy-in all this work is pointless. Need to point out carriers specifically in Implementation Plan and pull in Commercial.
- Lot needs to happen after installation, whole relationship with labor, TPU and carriers – difficult to get to 80%, ‘build it and they will come’ may not be realistic, disruption to terminal during construction, needs to be addressed – presentation makes it seem easy, concerning if being presented everything is this simple
  - Add action around relationship with carriers, action about labor, action about billing
  - 80% milestone – add prior milestone about carriers/billing/labor issues resolved, then hit the 80%
  - Any interim goals in the run up to the 80% goal – 50% after a year? Make clear.

- Voluntary or required, carriers won't send vessels
  - Not clear on how many shorepower-capable vessels are coming to terminals
- What is our history with policy engagement internationally?
- It would be really good to get a more detailed understanding of what barriers are for owners of OGVs to have shore power capability. Could be helpful for thinking collaboratively.
- What are we doing on the infrastructure front outside of shore power?
- How much will the five-year plan cost for shore power?
- Really important to make the distinction that we are sourcing the power from a really clean grid to ensure we aren't just moving the emissions.
- T-30 shorepower? Meant to be T-18? Not heard any T-30 shorepower discussions.
  - who doing design? When? Engage SSA early during design of T-18, needs to work for terminal layout – 6 plug-ins.
- SSA have a few projects ready to go and be molded when grant hits the street, grant timelines are really tough
- Oakland – Amp extender, can't use a cable reel, can't use an 'extension cord' under Oakland regs – 'extender' OK, labor refuse to use it – safety hazard
- C40 ports forum could help with engagement on the international level
- Wanting to know about our connection to international stuff around getting maritime to zero by 2050, also curious as to whether we're tracking/supporting the advanced clean truck rule
- For OGV Priorities: It would be great to strengthen the language on #4 to be more action oriented in that way. Maybe "explore opportunities and take action"
- For OGV #9: Can we do anything that's mandatory related to vessel emission reduction for vessels while they're underway?

### **Cargo-Handling Equipment (CHE):**

- Zero-emission (ZE) pilots don't have power to get through two cycles (electric RTGs – 86% fuel reduction with near ZE - SSA) - hybrids a great bridge – glad near-zero in there
- Automation – ZE CHE may be impacted, future CHE will be remotely controlled or able to be, recently enacted state law prevents automation for the next 10 years
- Tenant engagement forum – all compete against each other so need to tread carefully
- Need to visit automated terminal in CA
- PMA and ILWU contract allows for automation, but jobs still provided
- Appreciate promotion of renewable fuels where possible
- Port-owned esp. CHE – share good story out, learn from our experience
- Electric yard tractors – interested, in a call with RMS a few weeks ago, learning about it, working with Orange EV – stop on the ramp - v. unique operations, don't know of any in CA, only a few in the world like that, make custom for TOTE? Repower?
  - Orange EV working on next generation truck that might have enough power to stop on ramp
  - Ottawa – reached out to see if familiar with ramp issues
  - 3 tons forklifts are gas/propane -a few they'd be interested in upgrading as old
- Tenant engagement – would definitely be interested, struggle with the short timeframe to pull everything together, would be interested in hearing from other tenants

- Should be lifecycle cost or total cost of ownership
- Introduce lease requirements
- Can we incentivize some other way to buy ZE CHE?
- Tacoma Public Utilities (TPU) brokered conversation with TOTE and RMS – huge cost savings using electricity
- TPU keen to partner in regular tenant meetings
- Green Transportation Expo – sponsor tenant attendance
- Add lease requirements to 5-year actions
- Need to be flexible and adaptive management – things change so quickly
- Interested in regular tenant meetings
- Oakland off-dock yards have ZE yard tractors but not sure of any on-terminal
- Would be interested in seeing RMS SIM yard tractors in action, keen to bypass a Tier 4 (regen issues)
- Enough power available? Think OK in Tacoma
- Good to hear about funding sources and timeline
- Renewable diesel being used at Port of Oakland in own maintenance fleet – can talk to Oakland for info
- Definition of ‘drop-in’ fuel?
- ZE projects - entirely grant-funded? Explained levels of funding
- Hybrid RTGs – SSA so busy right now, not able to take one out of action for a few months, 5-yr ROI, high-priority for SSA to get done in next year or two
- SSA have operations everywhere, not just Seattle – CA costs coming in next few years
- Need delta between ZE and Tier 4 UTR to come down
- Tenant meetings would be valuable – can't just be the only terminal operator going to meetings, think about timings so doesn't get dumped if terminal is busy
- Most T-5 equipment gone to Tacoma W. Sitcum this year (15-20 pieces)
- Asset management system – excel spreadsheets, naming of equipment
- Plug into Clean Cities (call them out as partner in IP) and other orgs resources, ride and drives – work with tenant forum to sponsor tenants to go to events/training
- Plan relies on getting a grant every other year, need to raise rents, can't keep doing incremental work
- Need electrification roadmap, need to get pre-engineering work done ASAP
- What leverage do we have with leases? Do we have anything in the lease agreements?
- Could terminal operators say no if we wanted to install CHE charging?
- Where is the industry going for OGV zero emission fuels?

## **Trucks**

- Trucks – reach out to agricultural community in eastern WA – regional freight strategy, WA Farm Bureau, Anderson Hay, deal with congestion
- Need a much broader look at trucking, not just port trucking – EPA restrictions make biggest impact, tightening up
- Whole range of type of people who work in drayage, also look at who is working in trucks, not just where they're going



- Dual transactions also reduce emissions
- Supports renewable fuels – Clean Fuel standard – report looking at Seattle port truck using B100
- Renewable Fuels – want to make sure used in existing equipment, not an excuse to keep buying diesel equipment
- Collaboration – keen to work after leg session. Should be involved in Advanced Clean Truck Rule.
- Trucker Outreach – keen for lots of grant support for truckers – communication will be key. Significant funding needs to go to truckers to help get into new vehicles.
- Would like to see sooner date than 2050 for ZE trucks, don't just keep revisiting and pushing out date. Appreciates flexibility of adaptive management approach, should allow for acceleration of adoption.
- Would mostly be a focus to customers
- Focus on idling and congestion but pretty good at TOTE (15-20 mins)
- Upgrading their gate and truck management system – would be interested in talking about RFID
- Make sure to mention hydrogen, not just electrification
- Have existing Clean Truck Program (CTP) in leases, there is a requirement – can require programs again, not just voluntary approach
- Require renewable fuels in trucks? How to enforce?
- BCOs – work with big shippers, contract out drayage, need to get them to care more, they're reporting out on GHGs
- Would be good to model how far these actions over 5 years get us toward the 2050 goal
- Lease 16 Class 8 Penske trucks that do drayage – operate themselves
- All trucks approx. 2018 MY, vendor comes in for fueling, no problems with goals
- Good to work on getting rid of the stragglers and last few remaining old trucks.
- any near-zero funding? Definitions of NZ difficult in CA. Recommend a clear definition of NZ so know what NWSA would and would not support.
  - Industrial idle reduction packs for CHE, would further reduce emissions, didn't qualify under CAAP definition but did under CARB definition
- Isn't there already an idle reduction program in place?
  - Is the port able to enforce anti-idling reqs?
  - Near-port communities – any concerns in Tacoma about trucks?
    - Tacoma complaints about noise, would suggest asking City of Fife, CHB is Pierce Co – wide but not as involved in Fife
- It's really important that we're able to articulate the other areas of port operations (not just trucks) that have to make changes so the trucking community isn't being singled out. Who else is complying, making sacrifices, taking action, etc.
- What is the mechanism by which we will work to phase out pre-2007s from domestics?
- Everybody wants the terminals to operate like a utility but pay for it like a business. I.e., system should be sized for peak demand but only pay for average or projected need. [For efficiency]. This is not realistic
- One of the struggles with the clean truck program is that there was a gap in the conversation. WTA very much wants to be part of the communication platform to reach out to the trucking community to make sure messaging is consistent and ongoing.
- Why can old dirty locomotives idle on the terminals, but older trucks can come in.

- Drayage community is mostly folks buying on the secondhand market so need to be realistic about that.
- Really challenging to add significant costs to the industry
- Need more funding
- Anti-idling – clear what that is, vehicles sitting in a queue for a piece of equipment, looks like idling but slow moving, AQMP for T-5, very different from leaving truck on and walk into break room. Distinction – make clear to community.
- Longshore won't accept anything that switches off during operation
- Planning for truck charging/fueling
- Opportunity for collaboration with City of Seattle ICCT study, particularly around truck locations/data
- Where is the industry going on zero emission fuels?

### **Locomotives and Tugs:**

- PSCAA have no mobile source authority – just grant support
- Foss tried hybrid in California but didn't work (performance and maintenance)
- Car is 5 wells – now 40 ft wells not 53 ft, save 13 ft, 5x13 saved – can build longer trains and reduce emissions – don't lose track of efficiency measures. 53ft are domestics – transload into 53ft containers, can go on train - match equipment up, transload have to be close to port, cutting down 20s and 40s – fewer trucks, can build much longer trains
- Need to talk to BNSF and UP to see what their funding strategy is, how they allocate their funds
- Good to focus on relationships and collaboration
- TPU proposed study to look at costs of converting locomotives at Tacoma Rail to hydrogen
- Green hydrogen production and infrastructure
- Renewable diesel? Could be easy to drop into existing fleet. City of Tacoma buying thousands of gallons a month for own fleet
- Tacoma Rail could use renewable diesel
- Add renewable diesel to rail section
- Anything NWSA put in would be in City/TPU plan. Tacoma Rail/ TPU Director reports to Utility Board, appointed by City Council. City Climate Action Plan is TPU Climate Action Rail. Related but separate.
- Foss owned by same company as TOTE, all related – approach through them
  - If became tenant, could install shore power
- Add language around supporting installation of tug shore power
- Isn't direct to rail cargo more efficient and lower emissions?

### **Fleets/Facilities:**

- Does NWSA have a fleet? May in the future so to make sure it'd be covered
- City of Tacoma considering a resolution to make all new City municipal buildings all electric, and a study to look at rolling out ban on natural gas in all city buildings
- Clarify fleet is about light-duty vehicles
- Opportunistic about building infrastructure during other infrastructure projects

- The Seattle Waterfront Clean Energy Strategy is to plan for all options, make sure utility is ready for anything the facility needs
- Lighting projects are a no-brainer, really well-received by labor and community, maintenance costs way down
- City fleet folks bring new equipment in for ride and drive, make sure NWSA/tenants know
- Partnership opportunities? Joint purchasing/peer learning?
- Utility funding for fuel switching
- Need a systematic approach to identifying lighting upgrades
- TPU to set up a Conservation Protection walkthrough of the Port – add as a potential action
- Add action to discuss at tenant forum

### **Cross cutting:**

- Importance of being in sync with federal, state and local policy and funding – can't go it alone
- Lots of vessels call at NWSA and Vancouver – emissions per TEU to PNW/West coast – huge vessel unloads all containers in one place rather than dotting all down the west coast, don't want vessels to go to other port out east to avoid and increase emissions
- Regional freight flow – questions about NWSA's position on reducing congestion, improving traffic flow, would help to have port voice in support of increasing transit à reduced congestion.
- Want kept up to date and keep in mind as a partner
- Port of the Future – green hydrogen – not just electrification
- Caution against making plans political, telling politicians dates and making them firm plans, people hold onto dates, no flexibility, yard tractors go down, barely used for 6 months, blanket rules – would work for everyone, different duty cycles,
- Need data and study on real-life costs, duty cycles, whether things are commercially available, not just demos available
- Relationship with near-port communities could be more systematic:
  - Not a lot of trust between env community and port but good to slowly work on improving that, more conversations, esp. with NWSA Air Quality and Sustainable Practices (AQSP) team
  - Tacoma Urban League, Central Latino, LatinX of South Sound, 350 Tacoma, Mayor's Youth Commission, Tacoma Community House, Shiloh Baptist Church
  - EJ Taskforce for City of Tacoma Climate Action Plan. Need to build trust, important to pay for participation
  - Host introductory meeting with large set of groups to give overview
  - Suggest talking to Tacoma-Pierce Co Health Dept get started
- Infrastructure planning – Seattle and Tacoma plans, SCL rethinking how they provide services, known constraint for future capacity in Seattle harbor, different power supply systems – energy storage, microgrid, resiliency
  - Reasonable data requests, need time, not pages and pages
- Tried to single out reefer power use in California, not a single meter, freeze load vs chill load, so varied couldn't do it
- SHERM – good to have shovel-ready projects if federal funding available

- NE Tacoma Neighborhood Council – AQSP team could work with them
- Puyallup Tribe and folks who have engaged in subarea plan process
- UW-T – past master’s project, reimagining port admin building (Urban Studies?)
- Desire to make the plan more Duwamish Valley specific.
- Wants to push the port as much as possible as a PCAT member
  - Must prioritize community engagement
  - Must recognize the impacts of COVID, must be really conscientious about how we engage with communities.
- My understanding when participating in the all-Port strategy was that the zero-emission vehicle technology simply didn't exist yet, and what I've learned since is that it does exist, and I'm hearing that it's just too expensive right now. Is that accurate?
- This is a general outline of what you want to do in the future. You will present specific objectives for the knowledge of the community, for example, what projects will you develop annually to achieve this?
- In your plan, you speak of a baseline. This line is updated? If yes, this is public information? Additionally, I assume that the Duwamish Valley has Environment Impact Reports and / or Environmental Impact Statements. Do we have this information?  
I have seen your plan for 2050. This plan is aligned directly to your operations which is great, but how is this plan aligned with Health Risk assessments and / or Health Impact Assessment? It is his plan, none of this is mentioned, which is not aligned with resolution 3767 of the Port of Seattle.
  - I am convinced that the investments that you will make will improve air quality, but in parallel, I think that the Port of Seattle should invest in our community to improve the problems associated with air quality, in a percentage equivalent to the total existing pollution in the Duwamish Valley.
- The Duwamish Valley Community Equity Program (DVCEP) said it would disaggregate data. How can that be addressed?
- What do you all need to make the geographical data possible?
- Agrees that we need more consistent and systematic engagement with near port communities. Also need to prioritize directly interfacing with the people.
- I liked the idea of having a series of conversations -- happy with what we accomplish today
- Can we add in the priorities adding data and baseline?
- Would be great to see equity and environmental justice incorporated as a priority
- How do we measure progress if we don't have baseline and targets? (should this be a priority)
- It would be good if they implement sustainable development indicators where the community can see the impact that the Port of Seattle has been achieving with its investments in this excellent program
- We already know there are env health disparities. what do you mean in your first bullet?
- Good to link this all back to public health – could we track asthma as an indicator? Diesel particulate matter (DPM) is another great indicator.
- Where is rail called out in this plan? Georgetown is completely surrounded by rail, and the emissions encircle us. I would love to see some rail metrics and how much the emit within the boundaries of Georgetown

- Concern about port trucks going through the community for emissions and safety reasons.
- I think we should also link to the Community Benefits Commitment to this action
  - Climate Change. Collaborate with other public agencies, industrial partners, institutions, and the community to participate in local plans to address impacts from climate change. Work with the community to raise awareness and implement climate resilience solutions related to port industries such as maritime, aviation, trade, tourism, and transportation. Continue Port of Seattle efforts to reduce greenhouse gases (GHG). Leverage Port of Seattle and NWSA GHG reduction targets to develop a set of recommendations to reduce operational greenhouse gases. Collaborate with other public agencies and institutions to secure investments promoting climate resilience and greenhouse gas reductions. Work with the community on fostering innovation in areas like carbon sequestration and renewable energy projects across port-related industries and properties, such as the Blue Carbon Project and solar panel installation at port facilities. (2) Air Quality. In coordination with the NWSA, implement programs to reduce air emissions from port and tenant activities that affect community health outcomes, such as the NWSA Clean Truck Program and its future expansion at domestic terminals. Collaborate with the NWSA and other public agencies, stakeholders, and institutions to invest in the equitable distribution of air quality improvements. Collaborate with stakeholders to provide education, training, and resources that build capacity for the community to take action on air quality. Promote community science projects that help identify community-based solutions to address port-related air quality impacts. Equitably engage the community in regular Northwest Ports Clean Air Inventory and Strategy updates and its ongoing implementation. Work with industry partners, the community, and other public agencies to normalize equity best practices, use of disaggregated data, and shared decision-making processes regarding air quality issues. (3) Truck Traffic. In advancement of the NWSA's efforts, collaborate with the community, port tenants, truck drivers, businesses, and other public agencies to reduce impacts from the movement of goods. Use an equity framework to explore modifications to drayage trucking policies and practices regarding movement of goods, public infrastructure and systems, truck routing, driver training, truck parking, road maintenance, and enforcement of traffic rules. Work with public agencies, including the NWSA, and other key stakeholders, such as those most impacted, to commit to a process to address trucking issues locally and involve the community in decision-making related to roadway and infrastructure improvements, truck parking, queuing, idling, and other trucking impacts. More here  
<https://www.portseattle.org/sites/default/files/2020-01/Resolution%203767%20with%20Exhibit.pdf>
- How do we address the question of where emissions are going in the Duwamish valley?
- Comment from many: in our next emissions inventory, it would be great if we could figure out ways to isolate emissions from the Duwamish Valley.
- For infrastructure installation -- could a short-term option be implemented there for rerouting, etc.?
- We learned a lot of lessons from the closure of the West Seattle Bridge, don't want to lose sight of the short-term mitigation measures that were enacted.

- We have carbon free, affordable power, city light is ready to go big on electrification
  - Where is the industry, I.e., state of technology, how can the city be supportive?
- County will be doing an equity assessment for the County – focused primarily beyond Tacoma city limits.
- Who is the lead on the port’s Climate Resiliency work?
- How does the American jobs plan affect our plans?
- Are we planning to use green hydrogen?
- T-5 has a huge impact in the DV
- starting 2023 -- California DMV will not allow heavy duty trucks older than 2010 to be registered --> does this mean they are coming to WA?
- Has there been any discussion about creating a larger parking lot for the trucks to park in to keep them out of parking in the neighborhoods? It would also reduce emissions in the short term because it would reduce the number of times they are driving through our neighborhood.
  - Truck parking situation has been an ongoing source of conversation and consternation, we are standing up a working group around parking solutions.
  - Are there any ways DRCC can support the truck parking issue? This is a long-standing issue for the Georgetown Community specifically, folks have been working on this for 5-10 plus years. Want to see this move in a positive direction.
- On truck parking actions timing:
  - Want this to happen as quickly as possible.
- I can ask the community if they have any info about specific abandoned trucks
- The infrastructure needs assessment may need to happen sooner to be prepared?
- Survey from Pierce Transit on transit options on the Tideflats. Should we send it out to tenants?
- Tacoma natural gas resolution passed that pledges no new facilities will be natural gas. For our own buildings. City of Tacoma pledges by next year. Would definitely apply for heating, a bit fuzzier for cooking.
- Assessment of impacts of banning natural gas for commercial buildings will be done in the next year or two.
  - May not cover industrial
- TPU is excited to work with us, frustration from conservations staff that sometimes the projects can get stuck in administrative black hole after assessments are done and sometimes projects die.
- Two and a half years to develop a policy is a long time (natural gas use). Should be accelerating a policy on new buildings.
- Lots of organizations have done costing and feasibility on gas vs electricity for commercial and residential.
  - We should wait for Tacoma’s study
  - City of Seattle and King County have done a lot of research in this area
  - Tacoma Power has run the numbers for residential buildings at one time. It was generally cheaper to heat with a heat pump, especially if you have to run new gas lines.
- Clean building act by 2026-ish, buildings 50k sq. Ft have to hit certain EUI thresholds. There are grant opportunities early on transitions to a penalty early on. Commerce runs this, suggest checking out the webpage.
- Tacoma will be adopting soon and internal policy on sustainable fleet and fuels

- On the roadmap, if possible, can we study building electrification needs?
- For commute trip reduction suggest connecting with Pierce Transit
- Level 3 fast charger at the car museum, could we use public charging?
- Could we consider a central charging hub for our fleet and drayage trucks?
- How was labor engaged?
- Who will be the point person and who will be accountable for implementing the strategy?
- There was a lot of unhappiness around Port of Tacoma not doing RFID
- Perceived a disparity between Port of Seattle and Port of Tacoma as far as our preparation to implement the strategy and that Seattle had better timelines
- Why is rail in all three entities? Most of the emissions are in the Alliance
- It would be good to split emissions out by harbor to help better understand the impacts to local communities.
- The drayage community is a present day example of environmental racism, the scrap and replace program is a great thing.
- Given that the pollution from the sea-going vessels is 50% of the total there should be more focused on reducing their emissions. Don't like seeing vessels blowing black smoke while they're at anchor. We should be working to get shore power in everywhere. Australia just banned one bulker that was exercising poor practices.
- Have witnessed bulkers being cleaned out and grain dust, etc. Is emptied into the bay.