Ship traffic management and the environment

PORT of Vancouver
Vancouver Fraser Port Authority

Marine vessel traffic management

Marine vessels (commercial ships) travel under guidance of a captain and crew, carrying cargo between various origins and destinations across the world. When accessing constrained waters like the Port of Vancouver, the ship's captain is supported by a qualified marine pilot, who determines the safest route, based on their local knowledge and experience of the waterways, to the intended marine terminal. The port authority is developing a new active vessel traffic management system that will prioritize and optimize how piloted vessels and tug-and-barge traffic move within the port authority's jurisdiction. The port authority is designing this new collaborative system to manage marine traffic flow at the Port of Vancouver and in southern British Columbia. This work is being done in cooperation with supply chain partners and industry stakeholders, and with support from the Government of Canada. We are also seeking input from Indigenous groups, various levels of government, and community stakeholders.

As announced by the federal Minister of Transport in August 2021, the new system is intended to strengthen marine safety, make the flow of goods more efficient, manage environmental impacts, and help better manage the effects of marine vessel traffic on local communities.

Interim protocol - guidelines, regulations and compliance

Within the Port of Vancouver's jurisdictional waters, the port authority manages vessel traffic and where these vessels can anchor (called an anchorage) while waiting to access a terminal. Outside of the Port of Vancouver, vessels are free to anchor for a reasonable period of time per the common law right of navigation. In 2018, Transport Canada introduced the interim protocol and requested the port authority assign anchorages around the Southern Gulf Islands. The interim protocol aims to balance usage and distribute vessels more equitably among the 33 designated anchorages so as not to impact any single community more than others.

Vessels at anchor are required to comply with international and Canadian statutes, obligations, and guidelines related to safety, the environment, fisheries, safety, and good seamanship. While the interim protocol guidelines are voluntary, they are fully supported by representatives of the marine community.

Both the interim protocol and the future active vessel traffic management system are intended to complement the safety and navigation services that the Canadian Coast Guard's Marine Communications and Traffic Services provide. The new system will also look to strengthen marine safety beyond primarily safety of life at sea to include making the flow of goods more efficient, managing environmental impacts, and helping to better manage the effects of trade-related marine vessel traffic on local communities and the environment When a complaint about a vessel is received, the port authority will work with Transport Canada to ensure that the party most appropriate to enforce compliance is the party responsible. This could mean that the port authority assumes a larger responsibility for anchorages than we currently have. This could also include expanding the port authority's role to include influencing and monitoring vessels' activities and behaviour while at anchor as well as enforcing required behaviours. A vessel code of conduct is in development to provide expectations for vessels at anchor in the Port of Vancouver and anchorages managed under the interim protocol.

The Vancouver Fraser Port Authority is the federal agency responsible for the stewardship of the lands and waters that make up the Port of Vancouver, Canada's largest port. As a Canada Port Authority, our mandate is to enable Canada's trade through the Port of Vancouver, while protecting the environment, and considering local communities. As cargo volumes in the Port of Vancouver continue to grow, the port authority is working to improve the way we manage ship traffic within the port to support our vision for the Port of Vancouver to be the world's most sustainable port.

Canada

Environment

Protecting the environment is part of our mandate as a Canada Port Authority, and our vision is for the Port of Vancouver to be the world's most sustainable port. To us, a sustainable port supports a healthy environment, economic prosperity through trade, and thriving communities.

While the current process of managing vessel traffic focuses on regulatory marine safety, the new system will expand to consider the needs of communities, customers, and supply chain leaders. It will also help manage environmental impacts and social impacts of ship traffic, such as ambient noise and light pollution.

Higher degrees of efficiencies resulting from a new active vessel traffic management system will reduce vessels' time at anchor, mitigating the impacts of light, and noise to humans and wildlife.

Minimizing noise and light

The procedures in Transport Canada's interim protocol for the use of Southern Gulf Island anchorages ask vessel operators to minimize noise levels and light usage in consideration of local residents, without compromising safety and security, and pursuant to regulatory requirements.

Noise-reduction protocols:
- Keep ship's generator usage to the minimum requirements for operating essential systems and services
- Keep doors and hatches of machinery spaces closed as much as possible
- Use power tools and chipping hammers on deck as little as possible and never on weekends or between 7:00 p.m. and 7:00 a.m. on weekdays

Light-reduction protocols:
- Deck lights must be kept to a minimum and aimed downwards, not outward or toward the shore
- Vessels are still required to follow the Collision Regulations for lighting

Protecting marine ecosystems

We know from our work on the Enhancing Cetacean Habitat and Observation (ECHO) Program over the past five years that by limiting vessel speeds we can reduce noise impacts in southern resident killer whale habitat. We are considering how port optimization initiatives can complement and enhance the important work underway across the port authority and tap into existing advisory networks.

Through the port authority-led ECHO Program, we have access to a large advisory working group comprising government agencies (including Fisheries and Oceans Canada), Transport Canada and the Canadian Coast Guard), members of the marine transportation industry (pilots, shippers, cruise lines, as well as tug, ferry and other vessel operators, Indigenous communities, conservation and environmental groups (including Raincoast Conservation Foundation, Natural Resources Defense Council, and World Wildlife Fund Canada), and scientists.

Transport Canada requires that vessels at anchor treat sewage system discharge and bilge system water before releasing it. Ballast water must also be exchanged prior to entering Canadian waters. Transport Canada, the Canadian Coast Guard and the port authority work together to remind vessels of these requirements when they are in port.

Transport Canada also stipulates that a vessel must track their anchor at all times. A vessel at anchor must have room to swing clear of dangers in the water and of adjacent vessels at anchor. When it changes position or direction, it doesn't always mean the anchor is dragging but any movement outside of the anchor "swing circle" may indicate anchor dragging, and immediate action is required.

Additionally, Fisheries and Oceans Canada (DFO) is gathering information to determine impacts, if any, to the sea bottom in areas where anchorages have been in place for some time. Once this study is complete, the port authority will review the outcomes, and work collaboratively with relevant parties to explore solutions.

Future potential changes in this area would be considered as part of our parallel supply chain collaboration initiative, within the new active vessel traffic management system. Measures specific to anchor dragging would be guided by the current study by DFO and Canadian Coast Guard as part of our broader port optimization initiative.

Collisions and spills

Outside of the Port of Vancouver, the port authority has no jurisdiction over marine collision or spill response. Increased levels of training have been provided to fire and emergency response personnel, and the Canadian Coast Guard has established enhanced readiness requirements under the Oceans Protection Plan. The Western Canada Marine Response Corporation has also increased its spill response capacity and expanded its presence across the southern coast.

Learn more and share your ideas

Throughout summer 2022, we're sharing information about how vessel traffic and anchorages are managed today at and around the Port of Vancouver and seeking input as we develop a new vessel traffic management system. We invite you to:
- Register to attend an online information session
- Complete the survey
- Learn more about ship traffic management
- Watch recording of the online information session

In fall 2022, we'll invite feedback on solutions for:
- How anchorages are assigned
- Minimizing noise and light effects
- Understanding environmental impacts
- Enhancing port efficiency and vessel safety
- Information sharing and complaint resolution

We invite you to be part of this process.
Visit for more information
portvancouver.com/AVTMengagement