

Sharing the water with trade vessels – what you see and what it means

Burrard Inlet is a busy place. In addition to all the cargo ships moving through and anchored here, the harbour is host to seaplanes, cruise ships, pleasure boats, kayakers, tour boats and more.

Port Metro Vancouver frequently receives inquiries about a number of interesting things going on with respect to trade activity in the harbour. Here are just some of them.

What do different ships do?

Port Metro Vancouver is able to handle the most diversified range of cargo of any port in North America so there is a range of ships you can see in the harbour at any given time. They may be in transit, or anchored at one of 20 anchorages in English Bay, eight in the inner harbour and five beyond the Second Narrows and into Indian Arm. Ships will anchor while they wait their turn to load cargo at a terminal in the harbour.



Container ship – for containers used to hold imported consumer goods and machine parts and exported resources such as specialty grains and pulp



Cruise ship – These unmistakable “floating cities” are frequent visitors



Bulk carrier – for dry or liquid cargo, including coal and grain, which can be poured directly into the ship’s hold



Automobile carrier – for Asian cars destined for Canada; known as a “ro-ro”, for roll on-roll off



Breakbulk carrier – for cargo like forest products and steel pipes



Tankers – for oil, gasoline and other petroleum products, these ships have double hulls and require special tug assistance and other safety measures

How well do you know your flags?

Vessels can communicate with one another at sea using flags, though this form of communication has been long replaced by more modern means. There are 26 flags that represents all letters of the alphabet, and 10 flags representing numbers one through ten. The flags are used by ships to spell out short messages, when used individually or in combination, they can represent special meanings.

For example, the letter Q is represented by a yellow flag. When a yellow flag is seen on the vessel it means the vessel declares itself healthy and requests "free pratique", allowing it to be boarded and inspected by Health Canada officials. The letter B is represented by a red flag. Vessels are required to fly the red flag when they are bunkering, or being refueled. The flag can also mean the vessel is taking on or discharging dangerous goods. At night time, when flags are not visible, lights are used instead.

A house flag is often flown by a merchant ship to indicate which company owns the vessel; a courtesy flag is flown by a visiting ship in foreign waters as a token of respect. It is often smaller than the ship's own national flag, which is the biggest flag on board.

What about sound and light signals?

In addition to the normal sights and sounds of an industrial port, vessel horns and deck lights are used by vessels for safety reasons. Part D of the Convention on the International Regulations for Preventing Collisions at Sea (COLREGs) by the International Maritime Organization specifies the safety requirements on sound and light signals for all vessels at sea, including commercial and recreational vessels.

For example, when vessels are in sight of one another, they can alert other vessels in advance of maneuvering. This can be done with either sound and light signals or a combination of the two.

- One short horn blast or light flash means "I am altering my course to starboard"
- Two short horn blasts or light flashes means "I am altering my course to port"
- Three short horn blasts or light flashes means "I am operating astern propulsion"

Vessels are also required to signal their position to others vessels in periods of reduced visibility, which can include fog, snow or rain. Vessels underway or at anchor must sound the appropriate signal to warn others vessels of their position. For example, a power driven vessel must sound a prolonged blast every two minutes.

The rules also differ depending on visibility and the nature of the vessels.

When can ships release ballast water?

You are likely familiar with the role of ballast water and may have seen a ship release massive quantities of ballast through large valves on its hull. Port Metro Vancouver was the first port in North America to prohibit in-port ballast water exchange without prior mid-ocean exchange, to prevent the transfer of invasive species. Ballast water exchange that occurs 200 nautical miles from shore in waters that are at least 2,000 metres deep currently provides the best available option to reduce the risk of introduction and

transfer of alien species. This practice became the basis of government requirements now enforced by Transport Canada and adopted by many other countries.

Anchor cleaning

Ships wash their anchors while they are being hoisted to avoid moving contaminants from one harbour to another, and to reduce risk of crew injury from flying residue. As you can see from the photo, ships pump seawater from the ocean to clean mud and debris from the anchor and its chain. Anchor shackles are marked with different colour paint so the crew can tell how much chain is out.



This is not to be confused with ballast water. People often confuse over-side discharges in English Bay. A deep-sea vessel is almost continuously suctioning seawater for various onboard systems. For example, aside from cleaning, seawater is also used to cool a vessel's main engine and generators. Once the water flows through the pipes and cools the equipment it is discharged.

What do Port Metro Vancouver harbour patrol officers do?

Port Metro Vancouver is positioned on the southwest coast of British Columbia in Canada and is responsible for managing over 16,000 hectares of water. The port authority's Operations Centre monitors all marine activities within Port Metro Vancouver's jurisdiction 24/7. Every vessel entering the port may be subject to a visit from a harbour patrol officer. During a visit on board, the officer may issue orders to accomplish certain tasks and may ask to see certain documents. These will generally relate to sealing of over-side discharge valves, bunker fuel in use, and overall compliance with required practices and procedures. The harbour patrol officers will, upon request, provide the vessel master with information about Port Metro Vancouver.

When it comes to recreational boating, harbour patrol officers and other agencies conduct routine vessel inspections. Vessels not in compliance with safe boating practices may be ticketed by the police. For instance, the officers might ticket a boater obstructing the deep-sea navigational channels or exceeding the speed limit when passing other vessels. Port Metro Vancouver's safe boating practices are there to keep recreational boaters and others safe on waters.

Now you have it, next time you are in a harbour, see if you can identify different ships and tell where they originate.